Kava Usage in Aboriginal and Pacific Islander Communities in Australia

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Preventing harmful drug use in Australia

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Executive Summary

Background

In June 2007, in response to reports of growing health and social problems associated with kava in some Aboriginal communities in the Northern Territory, enforcement of import controls on kava were tightened. Under these controls, importation of kava in commercial quantities was prohibited except for medical or scientific purposes. However, in recognition of the traditional patterns of use of kava in Australia by Pacific Islander communities and to maintain limited access for that purpose, provision was retained allowing incoming passengers, aged 18 years or over, to bring into the country no more than two kilograms of kava per person.

There is little information on the current patterns of kava use in Indigenous communities in the Northern Territory or upon Pacific Islander communities residing elsewhere in Australia. In particular, there has been no systematic study of the impact of restrictions on importation enforced since June 2007. However, there are anecdotal reports of increased black market sales and continued use within Aboriginal communities in the Northern Territory.

The Department of Health and Aging commissioned the National Drug Research Institute, Curtin University to review kava use in Australia. The overarching aim of the research was to examine the current health impacts of use among Aboriginal and Pacific Islander peoples within Australia. This report highlights the complexity of understanding and addressing kava use in Australia, and the range of other issues which face kava using populations in Australia. The report aims to address the lack of information about kava among Pacific Islanders in Australia and about use in Arnhem since 2007. The report explains that despite mixed evidence about the health effects, it has the potential for misuse, and that misuse may cause harms to both individuals and communities. In light of this, policy is required which can facilitate moderate use, prevent heavy use and reduce the likelihood of related harms.

Terms of Reference

The terms of reference for the review were as follows.

1. Examine the health impacts of kava use.
2. Examine the current population rates of kava use.
3. Examine the current extent and patterns of kava use (including polysubstance use and reported changes in substance use over time) in Aboriginal communities in Arnhem Land and in Australian Pacific Islander communities.

4. Examine the observed consequences of kava consumption and behaviour related to the access and distribution of kava (e.g. health complications, community participation complications, financial etc.) on individuals and communities.

5. Review intervention options (including treatment, harm and demand reduction strategies) available to reduce harmful consequences of kava use.

6. Examine community awareness of the effects and consequences of kava among both Aboriginal and Pacific Islander people.

7. Examine community and key informant attitudes regarding opportunities for intervention, current available interventions and barriers to interventions.

8. Examine observable trends in kava use and kava seizures since the importation ban.

9. Review the social and cultural context of kava use and how this impacts upon health.

10. Review the range of control measures and their impacts (where detail is available) in Australia (e.g. Northern Territory Kava Management Act) and other countries.

As there is considerable overlap in these terms of reference, responses to them have been combined under related headings in the results section.

**Methods**

To address the terms of reference the current research was undertaken, and is reported, in three parts: review of existing information, a rapid assessment of kava use in Australia and a synthesis of the findings and recommendations arising from findings. Part I (page 3) of the report includes two literature reviews in which both peer reviewed literature and grey literature were considered. They examine, in Chapter 1 (page 3), the current evidence regarding the effects of kava on health and wellbeing, the documented prevalence and patterns of kava use in Australia and the social and cultural context of kava use; and in Chapter 2 (page 86) a review of the impacts of kava control measures and interventions applied.

In Part II (page 109) the mixed-method approach of Rapid Assessment Methodology (RAM) was employed to examine current kava use in Australia. RAM provides the means for rapidly assessing and responding to health problems in the context of diverse social economic and political situations.
(Rhodes, Stimson, Fitch, Ball, & Renton, 1999; Stimson, Fitch, Rhodes, & Ball, 1999), it combines various methods of investigation, using a wide range of sources (Stimson et al., 1999) including sources that may be overlooked in more methodologically constrained studies. RAM principles were used to guide an analysis of existing data (Chapter 4, page 113), assessment of kava use among Pacific Islanders in Australia (Chapter 5, page 131) and assessment of kava use in Aboriginal communities in Arnhem Land (Chapter 6, page 184).

The analysis of existing quantitative information (presented in Chapter 4, page 113) examined population data including: data about individuals’ access to kava in the National Drug Strategy Household Survey, and data related to kava seizures by Department of Customs and Immigration and police.

The rapid assessment of kava use among Pacific Islander people in Australia was conducted using four data collection methods: key informant interviews, focus groups, conference attendance, and questionnaires. The findings are presented in Chapter 5 (page 131). In total 138 people participated in 33 key informant interviews and 10 focus groups, researcher’s notes and abstracts from 13 presentations at a conference discussing kava and Pacific culture were also used as data. In addition, 34 questionnaires about kava use were also completed by Pacific Islander participants. Data were collected in New South Wales, Queensland, Western Australia, the Australian Capital Territory and the Northern Territory. Participants included Tongan, Fijian, Samoan and non-Pacific Islander outsider participants.

The assessment of kava use in Aboriginal communities in Arnhem Land was conducted using two data collection methods. These were key informant interviews and a textual review of NT Police media reports. Whilst other methods were proposed and considered, following consultation in Arnhem Land with community agencies key informant interviews were identified as the most appropriate method. Factors considered in the selection of key informant interviews include geographical and climactic limitations of conducting research across remote communities in Arnhem Land, intercommunity differences, the current socio-political climate due to the Northern Territory Emergency Response (NTER), and the political climate resulting from the import restriction on kava.

In total 75 people participated in key informant interviews. Key informants included: Aboriginal community members, representatives of community controlled organisations, representatives of government and non-government health and welfare agencies, law enforcement officers, and representatives from other government agencies. Police media reports were used to triangulate the qualitative data and also to provide additional context to the NT Police kava seizure data provided in Chapter 4 (page 113).
Key Findings

The prevalence and socio-cultural context of kava use

No data are available from which to estimate the prevalence of kava use in Australia. The only available information at a national level comes from the NDSHS, which asks participants about their opportunity to use kava in the previous 12 months. The results from 2001 to 2010 consistently found that less than 2% of the Australian population over the age of 16 years reported such an opportunity. It appears likely that opportunities to use and kava use itself are rare at the population level in Australia. This conclusion is supported by the review of internet forum and drug information call activity (See Chapter 4, page 113) which demonstrates very little discussion or enquiry about kava.

In Australia kava is primarily used by Pacific Islanders and in limited number of Aboriginal communities in Arnhem Land. Among Pacific Islanders in Australia kava use takes place in three main contexts.

- Ceremonial kava use is ritualised practise often associated with formalising events and as part of celebrations and is common among Tongans, Fijians and Samoans.
- Social use is common among Tongan and Fijian males. Among the former, use tends to occur in organised kava clubs. Among Fijians, social use tends to occur in less formal social gatherings among friends or family. Most social use occurs in the evening and at night.
- Religious use occurs, among some members, within the services of Christian denomination churches, particularly the Free Wesleyan, and is limited to Tongan men.

Among Pacific Islanders, kava is used predominantly by males over the age of 25 years and consumption by women is generally restricted to ceremonial use. The extent of use is variable but linked to the contexts of use. Both the qualitative and questionnaire data suggest that the majority of Pacific Islanders in Australia who use kava do so ceremonially. This may involve drinking kava, presenting kava or being present during a kava ceremony. Such use may occur on several occasions throughout a year and tends to include the consumption of small amounts of kava over a brief period of time.

Kava used in social contexts is consumed in greater quantities. Among Tongans, the proportion of males who drink socially is unclear but in social contexts, particularly in kava clubs, kava is consumed in greater quantities. Tongan kava clubs exist across Australia, including an estimated 80 clubs in Sydney. Such clubs may be linked to a specific church congregation, location in Australia or be a broad social organisation, such as branches of the
international Fofo’anga Kava Clubs. Tongan men who regularly attend kava clubs tend to drink kava approximately 1–3 nights per week for periods of 6–8 hours. During that time it is common for participants to drink more than 400 gm of kava person. Use does vary with some men attending kava clubs only periodically and others attending a kava club nightly.

The majority of Fijians who consume kava do so occasionally, with many suggesting that a common pattern of use is once per month for 3 – 6 hours. However, there are a small proportion of people who use it socially several times a week or more.

Among Aboriginal Australians in Arnhem Land the use of kava use has been, and remains, restricted to a limited number of communities (Yirrkala, Ramingining, Warruwi, Gapuwiyak, Galliwicku, Minjilang, Millingimbi, the Ramingining and Laynhapuy Homelands and to a lesser extent in Maningrida). Kava has been noted at various times in other communities however this is typically related to small groups with links to the main kava using communities. Following the importation ban there have been some shifts in the context of kava use. It is now consumed in smaller groups and has become hidden.

In general, among Aboriginal people, the pattern of use is dependent on the activity of the black market, and for some, but not all, the price of kava. When kava is available it continues to be used in a fashion described in previous research as episodic binge use – where available kava is drunk until it is all consumed. There are few individuals who currently have sufficient access to consume kava daily.

The evidence suggests that kava use in Arnhem Land occurs in a social context in groups including both men and women, and that use is more common among males and those aged over 20 years. Following the importation ban there have been some shifts in the context of kava use. It is now consumed in smaller groups, fewer women drink kava and it has become covert.

Patterns of polysubstance use were investigated in the research. Among Pacific Islander and Aboriginal kava users, although many reported consuming both alcohol and kava, the concurrent use of alcohol and kava was considered rare. Among Pacific Islanders concurrent alcohol and kava use is largely restricted to a Fijian practise of ‘washing down’ kava with beer or wine at the end of kava session. This pattern rarely exceeds the consumption of two alcoholic drinks.

**The health impact of kava use**

An extensive literature review was undertaken of research on recreational kava use and, where appropriate, medicinal kava use. Much of this consists of ethnographic or descriptive studies examining a large number of variables
with opportunistic samples. As a consequence, the levels of evidence are weak and conclusions must be drawn with caution. In examining the health impacts of kava use distinctions are made between acute effects, chronic effects and health impacts related to preparation and method of kava use (indirect effects).

**Acute health effects of kava use**
The acute adverse effects of kava on health are generally mild. As described in the literature and in qualitative findings of this study they include: dizziness, nausea, weeping and irritated eyes, local anaesthesia, muscle relaxation, headache and fatigue. At high doses kava can also cause ataxia and uncoordination. These effects are dose responsive yet there is no evidence indicating at what doses they are likely to occur. There are some concerns that muscle relaxation, ataxia and uncoordination may predispose individuals to accident or injury, particularly if driving or operating machinery. There is mixed evidence from research based on self-reports that kava use causes appetite loss. However, this has not been confirmed in controlled experimental research. Kava may also affect the metabolism of other substances (including medications and alcohol).

**Chronic health effects of kava use**
Research has consistently shown that after prolonged heavy use kava drinkers are likely to experience kava dermopathy – a scaly skin rash – in a dose dependent fashion.

Kava affects liver functioning as demonstrated by increased levels of the liver enzymes gamma-glutamyl transpeptidase (GGT) and alkaline phosphate (ALP) in a dose dependent fashion. The clinical significance of raised ALP and GGT is unclear. No studies to date have demonstrated hepatocellular damage or hepatic failure as a result of changes in liver enzymes. The possibility that prolonged high levels of kava use may permanently affect liver functioning and cause liver damage cannot be ruled out, however moderate and short term use is unlikely to cause irreversible liver damage.

Lethargy, tiredness and fatigue are commonly thought to be a characteristic of both chronic kava use and a ‘hang-over’ effect following an episode of use. These symptoms have not been systematically operationalized or studied.

There is preliminary evidence which suggests that prolonged kava use may have an effect on cardio-vascular functioning, particularly in an exercise context and may result in general poor health. How kava may cause poor overall health is not clear.

Previous research from Arnhem Land suggests that kava use is associated with low body mass index and weight loss. However, this finding has not been demonstrated in the Pacific Islands and may be accounted for by overall
dietary patterns. There is some evidence that very high doses of kava can be related to seizures as a component of either toxicity or withdrawal.

Many of the health effects described raise the question of how to identify what ‘high levels’ of kava use are, and what levels of kava use are safe. A clearer definition of moderate use is required.

To date research has neglected looking at the clinical significance of heavy kava use. There has been insufficient research into tolerance to kava and kava withdrawal. However, there is evidence that some people consume kava at levels consistent with the characteristics of a substance dependence syndrome (See Chapter 1, page 3), including craving, neglect of roles in the family and community, difficulties controlling kava use, and continued use in the face of persistent negative consequences from use. Prevalence of use at this rate is unknown.

**Indirect health effects of kava use**

There are potential health effects related to the way in which kava is consumed and the quality of kava which is used. Sub-standard kava including kava which is harvested from the immature plants, kava powder which includes root stems, kava from non-noble cultivars and kava cut with other substances may constitute a health risk. Health effects related to preparation and consumption of kava include unhygienic preparation of kava, dehydration, and being seated for extended periods.

**Summary of health risks**

To put the incidence of the health effects of kava in context, the findings of the WHO review into kava commented that an estimated adverse event rate from kava may be 1 in 100 000 (World Health Organisation, 2007). The current review of existing information and qualitative findings does not provide evidence contrary to the conclusions of the Food Standards Australia New Zealand (2005) review into safety of kava and the WHO (2007) review which both concluded that there is no evidence that low or moderate use of kava has adverse health consequences. This said there insufficient evidence regarding possible adverse health effects of high levels of use.

**Health impacts related to context of use**

Ceremonial and religious forms of kava use among Pacific Islanders are unlikely to have an impact on health. However, social use of kava may present some risks to health. Tongan kava clubs are self-regulated and as a consequence vary greatly in their operation. The primary risk to health at kava clubs comes from the varying degrees of hygiene in the preparation and sharing of kava and the available toilet and washing facilities. Several clubs have taken steps to minimise harms and most require members to smoke cigarettes away from those drinking kava.
The majority of kava club attendees report driving after drinking kava and this may present a risk. Additional concerns related to health include the impacts of sitting for extended periods of time and the use of sugary foodstuffs, caffeinated soft drinks, and energy drinks while drinking kava. A final concern is the desire by many clubs to attract young males, particularly those under the age of 18, as a means to prevent them engaging in alcohol use and antisocial behaviour. However, use of kava as a diversion strategy itself raises concerns because there is little evidence about the safety of kava for young people.

Fijian social contexts of kava use are less formal than Tongan kava clubs, however similar health concerns arise. In addition, due to additive effects, the practise of ‘washing down’ kava with a small amount of alcohol may present a further risk – particularly in the context of driving.

Harm minimisation practises are ingrained in both Tongan and Fijian social contexts of kava use and include drinking at a slow tempo, eating before and after kava consumption, sleeping after kava consumption, and drinking water to combat dehydration.

The general health effects among Aboriginal people are similar to those for Pacific Islanders. In addition the practise of using paracetamol and sugary foods (condensed milk, ‘red’ cordial) to attain an extra ‘buzz’ from kava has also been reported and may constitute a health risk although the extent to which this occurs is unclear. The use in Arnhem Land of kava purchased on the black market itself may present a health risk as there is evidence that kava is being cut with uncooked flour and possibly other substances to increase weight. Nevertheless, the currently observed health effects of kava in Arnhem Land are considered minimal. Health services are reporting a reduced number of presentations consistent with heavy kava use, including incidences of kava dermopathy and red eyes. This finding needs to be interpreted with caution as many health services report no longer screening for kava use.

**Social impacts of kava use**

The primary observed negative consequence of kava use among Pacific Islanders is the amount of time spent in activities related to kava use by regular kava drinkers and the impact of this on families. This is more pronounced among Tongans than Fijians and Samoans. The results from the qualitative data and questionnaires suggested that for many Tongan women, time spent by men at kava clubs by men creates relationship distress, and increased responsibilities in child caring and household chores.

In Aboriginal communities in Arnhem Land excessive kava use has contributed to a range of individual and community level social consequences since its introduction in the 1980s. The literature and results from the current study suggest that prior to the import restriction the social consequences of kava use were a diversion of money from food, and a
diversion of time from productivity and family. At a community level, when a sizeable proportion of the population engaged in high levels of use for an ongoing period of time the cumulative effects arguably resulted in, or contributed to, the neglect of children, community participation and services, and loss of money from communities. These consequences of kava use are described as currently occurring either not at all or only sporadically when there is high availability of kava.

The evidence suggests that, in Arnhem Land, most current harms related to kava use are linked to black market activity. The key impacts of this are: bringing outside influences into communities, the high cost of kava (now upward of $1000 per kilo) impacting of family budgets, money leaving communities, the legal consequences (fines, court appearances, incarceration, criminal record) of engaging with the black market, and, the direct consequences of black market activity (car accidents when driving at night to traffic kava). Unlike Aboriginal communities, however, the results suggest that consequences of accessing kava through the black market are minimal for Pacific Islanders.

**Community perceptions and awareness**

Many participants in the current research described kava use as a socially valued, pleasant activity in which the consequences of intoxication are described as relaxing with the social effects of fellowship and companionship. For many Tongan men kava clubs provided a space in which they felt accepted and have the opportunity to learn about, and maintain, culture. Whilst regular social use is not considered a ‘cultural’ practice by a large number of Pacific Islanders, the experience of kava clubs for those who attend is one in which culture is supported.

Among Pacific Islanders, experiences of kava dermopathy, and lethargy and tiredness following kava use were common. However, these effects were not considered by participants to be problematic. They were also aware of debate around the impact of time spent using kava on wives and families. However, these consequences were not considered indicative of harm and the potential for kava to cause harm was dismissed by many. This is consistent with views across the Pacific where kava use is often encouraged and there is rarely public discussion about kava and health.

The findings presented in Chapter 6 (page 184) demonstrate that Arnhem Land communities have a reasonable knowledge of the well-established direct health effects of kava use. However community knowledge about the harms associated with indirect health effects of kava use, such as dehydration and sitting for long periods, appear less well developed. Similarly, some participants reported that links between kava use and social harms were poorly understood.
Both Pacific Islander and Aboriginal individuals and groups reported difficulty in knowing what ‘moderate’ use is, at what levels of use harmful consequences of kava use emerged, and how to recognise clinically significant levels of kava use.

The consequences of kava use are understood by many – both Pacific Islander and Aboriginal – in the context of alcohol related harms experienced in many communities. Kava is viewed as having reduced alcohol-related violence and as keeping men in the community. In this context, kava is either not recognised as harmful or it is described as less harmful than alcohol.

Aboriginal communities tended to have a good awareness of the consequences of the complexities of selling kava within the community and making profit from a substance which may cause harm. This was not discussed in Pacific Islander communities despite community kava clubs and churches using kava clubs for fundraising.

**Trends in kava use following import restrictions**

Before discussing Australian trends in kava use, it should be noted that both the literature and participants in this study reported increases in the prevalence and quantity of kava consumption throughout the Pacific.

The import restrictions have had little impact on the kava consumption of the majority of Pacific Islanders in Australia, except with regard to cost and methods of access. The findings suggest that there may have been some decrease in the frequency of use among Fijian men who report occasional social drinking. In addition the findings (described in Chapter 5, page 131 in detail) suggest that kava consumption among Tongan males in kava clubs has been increasing over the past decade and that this trend has persisted despite the import restriction.

There has been little impact of the restriction on ceremonial use with the exception that cultural and community organisations have been prevented from conducting kava ceremonies in public forums.

The evidence suggests that, following the import restrictions, in Arnhem Land there was little change in the demand for kava. However, the decrease in availability led to a decrease in the frequency of kava use (particularly among women), a possible decrease in the quantity of kava used at each episode, and a decrease in indicators of heavy use. There is some evidence that kava use is now increasing as the black market gains strength. However, these increases have not resulted in levels of use and harms which have been previously reported (See Chapter 1, Table 1.4 page 71).

Data provided by the Department of Customs and Immigration (Customs) suggests that there has been an increase in the number of seizures of illegally imported kava made since the import restrictions were implemented, however
the quantity of kava consumed has remained low (below 500 kg per year), with the exception of one four tonne seizure in 2008. The data confirm that most illegal kava enters Australia through NSW, Victoria and QLD.

Police seizure data were requested from both the New South Wales and Queensland Police Services. Both jurisdictions reported no kava seizures since 2007. Police seizure data from the Northern Territory police were examined in Chapter 4 (page 113). There was insufficient data to clearly determine if there have been changes to the amount of kava being seized since the import restriction. However, the amount of kava seized each year by the NT police far exceeds the quantity of kava detected by Customs nationally and anecdotal reports suggest the amount of kava entering the NT illegally is increasing.

NT Police report seizures of kava arriving by air, by mail and by road, and report that the methods of importation change frequently. There is some suggestion that kava is now entering Arnhem Land via remote communities and being trafficked back into larger communities. This is more difficult to police than kava entering major communities and being trafficked to more remote communities. The qualitative data and media review suggest that the majority of kava seized in the NT originates from NSW and is bought in through Tongan networks linking with local Aboriginal people.

**Opportunities for intervention**

The review found few interventions, either nationally or internationally, described in the literature and in qualitative data to reduce harmful consequences of kava use.

**Existing interventions**

There are no documented interventions targeting kava-related harm in the Pacific Islander community in Australia. Existing interventions in Pacific Islander communities make use of internal and informal community connections and support provided by churches, family and community organisations.

There are no existing health promotion resources around kava use known to Pacific Islander communities; however some harm minimisation practices are integral to kava use and taught from generation to generation and some kava clubs have taken steps to minimise harms.

Existing interventions in Arnhem Land communities have been severely limited by a general lack of resourcing to drug and alcohol and primary health care services. To date, the development, evaluation and dissemination of interventions to support people who use kava has been lacking. Health promotion materials that have been developed appear to have been part of short term projects without evaluation or dissemination components. Similarly there have not been attempts to update clinical protocols for kava
use in primary health care and no effort to develop assistance for alcohol and drug service provision around kava use.

As described in Chapter 2 (page 86), the most interventions to date have been primary health care interventions and have included regular screening for kava use, health checks for kava users, and training for health staff about the effects of kava use. However, many of these are no longer conducted.

**Current attitudes, opportunities and barriers for intervention**
Addressing kava use is not regarded – either in Pacific Islander or Aboriginal communities – as a high health or social priority. As described in Chapter 5 (page 131), among Pacific Islander kava users few people describe experiencing negative effects; and, as described in Chapter 6 (page 184), in Arnhem Land, kava use has largely fallen off the health agenda since the restrictions on importation. This said, there is a range of opportunities from which to approach reduction of kava-related harm.

**Health promotion and harm minimisation among current kava users**
The harms associated with kava use which cause the most concern and warrant intervention are indirect harms (such as hygiene practises, consuming alcohol or other drugs, driving after kava use), social impacts of kava use (time away from families) and recognising levels of kava use consistent with harmful use or dependence. In addition, the monitoring of overall health and liver functioning among kava users is worthy of attention.

A number of systemic strengths exist in Australian Pacific Islander communities which can facilitate health promotion and harm minimisation for existing kava users. For the Tongan community, churches and kava clubs provide an opportunity for harm minimisation.

In Arnhem Land, community controlled agencies are best positioned to identify and respond to emerging social harms of kava use. Appropriate resourcing and support of these agencies can ensure health promotion messages are produced, disseminated, evaluated and sustained in a format which best suits the local community.

While there are extensive demands placed on primary health care services, ongoing monitoring and screening of kava use and providing information to new staff about the effects of excessive kava and indirect effects of kava use should be encouraged.

**Treatment for those currently experiencing harm**
General best practise recommendations for alcohol and drug interventions can be applied to kava use and there is no need for kava specific services. Rather, existing services should be supported to address kava-related harms should they emerge. These may include primary health care services, community organisations, churches and drug and alcohol services.
**Prevention of harmful use**

To prevent kava-related harm, use by those under 18 years (except in ceremonial use) should be discouraged without evidence of the safety of kava for young people. However, action to prevent the uptake of ceremonial kava use among Pacific Islanders is not indicated. In Pacific Islander and Aboriginal communities well-resourced alternative strategies to address the social determinants of health are required.

**Control measures and their impact**

Prior to 2002, control measures tended to apply to only Aboriginal communities in Arnhem Land and not to Pacific Islander people in Australia. To date six different periods of regulation have been applied in the NT, only one of which has been subjected to evaluation. Four types of control measures have been applied in the NT: unregulated kava availability, kava bans, controlled availability and the importation restriction.

The limited evidence suggests that unregulated kava availability from the early 1980s until 1990 resulted in a per capita increase in kava consumption in Arnhem Land, the emergence of kava-related harm and increases in personal and community wide economic burden.

The limited evidence suggests that the ban on kava in the NT between 1998 and 2002 may have led to some reduced availability of kava; however it did little to prevent the demand for kava or black market activity.

**Controlled kava availability**

In the Northern Territory licensing systems were in place for two periods. The first of these was from 1991–1993, and the second (under the National Code of Kava Management) was in force from 2002–2007. The objectives of these were: responsible sale of kava, retention in communities of money spent on kava, reduction in the black market, funding of health promotion, intervention and research, and monitoring of kava availability. Only the first of these was evaluated.

In reviewing the initial licensing period d'Abbs (1993) concluded that objectives of the control measures were appropriate, yet failed to reduce per capita consumption. The second period of licensing aimed to address the concerns presented by d'Abbs and was an improvement on the first attempt at licensing. However, kava sales were steadily increasing, community harms were still prevalent, and there was a lack of a coordinated health response. Funds from kava sold during the second licensing period were applied to community development activities.

Despite problems, only controlled supply strategies have included ongoing community consultation, clear objectives, goals and mechanisms to monitor those objectives and goals. Both periods of licensing were terminated prior to
those objectives and goals being adjusted in light of data suggesting increased sales and harms.

**Kava import restriction**

The kava import restriction, like kava bans, relies solely on law enforcement as a strategy to minimise harm. As described in Chapter 2 (page 86) and Chapter 6 (page 184), the lack of consultation prior to the import restriction and the rapid implementation of the restriction had a negative effect on communities.

There were two additional concerns associated with the rapid end to licensing in Arnhem Land. First, the ban was not accompanied by additional or coordinated policing resources to prevent the resurgence of the black market. Second, there were no additional resources provided to health and drug and alcohol services to assist current users of kava. As a stand-alone measure to increase the health and wellbeing of Arnhem Land communities the importation ban on kava appears to have had little effect. Similarly as a stand-alone measure, there is no evidence to conclude it will have a lasting impact. The evidence suggests that following the ban there has been a decrease in kava consumption and associated harms; however the demand for kava remains high and the re-emergence of the black market is resulting in unintended adverse impacts.

**The impact of control measures on Pacific Islander people**

The policy approach to kava use among Pacific Islander people has been to turn a blind eye to both the positive and negative aspects of use. In 2002, under the National Code of Kava Management (NCKM) a person wishing to import and sell kava was required to hold a license. The NCKM included standards on the sale of kava – including not selling kava to people less than 18 years of age and recording all kava sales transactions. There is no evidence to suggest that adherence to the standards on the sale of kava were ever monitored. Findings from the current study suggest that licensed kava importation was adopted without difficulty or complaint from the Pacific Islander community.

The rapid implementation of the current regulations, which were developed without consultation, have had a negative effect on Pacific Islander communities. Since the import restriction in 2007 there have been no seizures or arrests made in the Pacific Islander community with the exception of those involved in trafficking kava into the NT. Therefore the import restriction has presented a conflicting message. It has done little except created a black market for kava, increased cost, and created frustration and anger among sections of the Pacific Islander community. The import restriction has not resulted in observable decrease in use or harms and there is no means by which to monitor how kava is used or sold.
**Recommendations**

This report includes recommendations for the future management of kava in Aboriginal and Pacific Islander communities – justification for these recommendations is to be found in the body of the report. Also – given the relatively low levels of evidence on which current knowledge is based – the report also identifies issues which require clarification and further investigation, and recommends strategies to address them.

**Policy Recommendations**

In developing future policy evidence to date suggests that moderate kava use does not present a significant risk to health or social wellbeing, consequently the aim of policy should be to facilitate moderate use, prevent heavy use and reduce the likelihood of kava-related harms.

*Recommendation 1: It is recommended future kava policy should consider controlled availability or upholding the kava import restriction.*

Neither unregulated availability of kava nor a national ban on kava are indicated.

Discussion might occur with communities and authorities to determine if the current 2kg limit for importation is an appropriate limit. In so doing, it will be appropriate to consider the offence provisions. There is no indication to suggest that there is a need to implement controls around public ceremonial kava use by Pacific Islanders.

If controlled availability is reintroduced, it is recommended that this include consideration of: establishing standards for kava retail, monitoring of kava retail; and support for Arnhem Land communities who wish to not have kava. Discussion might occur with existing structures in Pacific Islander communities such as church and community groups about how best to regulate sale and supply.

*Recommendation 2: The policy needs for Aboriginal communities in Arnhem Land and Pacific Islanders elsewhere in Australia should be considered separately.*

Any changes in policy should be developed and implemented collaboratively with communities who are impacted.

*Recommendations 3: It is recommended that any policy should include an evaluation framework and the capacity to monitor trends in kava availability and kava-related harm.*

*Recommendation 4: Resourcing for health and social wellbeing interventions should be included in any policy pertaining to kava use.*
Recommendation 5: A national response to illegal kava importation and interstate trafficking is required.

Recommendation 6: It is recommended that international policy support be sought and provided.

Prior to the development of future policy evaluation of previous policy is recommended.

Recommendation 7: It is recommended that there be an evaluation of the National Code of Kava Management, its implementation and impact.

Recommendation 8: It is recommended that there be an evaluation of the implementation of the kava import restriction.

Treatment and intervention recommendations

Recommendation 9: In responding to the health and social harms of kava use it is recommended that principles of best practise in reducing alcohol and drug related harm in Aboriginal and Pacific Islander communities is applied.

This should include evidence-based counselling responses and community interventions.

Issues for clarification and investigation

Recommendation 10: More rigorous methods should be employed in both research into the possible health and social effects of kava use and evaluation of strategies to reduce kava-related harm.

This should include international collaborative studies.

Recommendation 11: It is recommended that specific research be undertaken into the prevalence of kava use, the social contexts of such use, and its specific health impacts.
**Introduction**

In response to reports of growing health and social problems associated with kava in some Aboriginal communities in the Northern Territory, enforcement of import controls on kava were tightened in June 2007. Under these controls importation of kava in commercial quantities was prohibited except for medical or scientific purposes. However, in recognition of the traditional cultural use of kava in Australia by Pacific Islander communities and to maintain limited access for that purpose, provision was retained allowing incoming passengers, aged 18 years or over, to bring in to the country no more than two kilograms of kava per person.

There is little information on the current patterns of kava use in Indigenous communities in the Northern Territory or upon Pacific Islander communities residing elsewhere in Australia. In particular, there has been no systematic study of the impact of restrictions on importation enforced since June 2007. However, there have been anecdotal reports of an increase in black market sales of kava and continued use within Aboriginal communities in the Northern Territory.

The Department of Health and Aging commissioned the National Drug Research Institute, Curtin University to review kava use in Australia. The overarching aim of the research was to examine the current health impacts of kava use among Aboriginal and Pacific Islander peoples in Australia. The terms of reference for the project were:

1. Examine the health impacts of kava use.
2. Examine the current population rates of kava use.
3. Examine the current extent and patterns of kava use (including polysubstance use and reported changes in substance use over time) in Aboriginal communities in Arnhem Land and among Australian Pacific Islander communities.
4. Examine the observed consequences of kava consumption and behaviour related to the access and distribution of kava (e.g. health complications, community participation complications, financial etc.) on individuals and communities.
5. Review intervention options (including treatment, harm and demand reduction strategies) available to reduce harmful consequences of kava use.
6. Examine community awareness of the effects and consequences of kava among both Aboriginal and Pacific Islander people.
7. Examine community and key informant attitudes regarding opportunities for intervention, current available interventions and barriers to interventions.

8. Examine observable trends in kava use and kava seizures since the importation ban.

9. Review the social and cultural context of kava use and how this impacts upon health.

10. Review the range of control measures and their impacts (where detail is available) in Australia (e.g. Northern Territory Kava Management Act) and other countries.

To address the terms of reference the current research was undertaken and is reported in three parts: review of existing information, a rapid assessment of kava use in Australia and a synthesis of the findings and recommendations arising from recommendations. The structure of the report and how each section relates to the terms of reference is presented below.

Part I: Review of Existing Information

Chapter 1 Literature review (TOR: 1, 2, 4, 9)

Chapter 2 Review of the impacts of kava control measures and interventions (TOR: 5, 10)

Part II: Rapid Assessment of kava use in Australia

Chapter 3 Overview of study methodology

Chapter 4 Analysis of existing data sources (TOR: 2, 3, 8)

Chapter 5 Kava use in Pacific Islander communities (1, 3, 4, 5, 6, 7, 9)

Chapter 6 Kava use in Aboriginal communities in Arnhem Land (TOR: 1, 3, 4, 5, 6, 7, 9)

Part III: Synthesis of findings and recommendations

Chapter 7 Synthesis of findings

Chapter 8 Recommendations
Kava is the commonly used term for the plant *Piper methysticin* Forst F., a member of the pepper family Piperaceae, and for the psychoactive beverage made from its roots. This beverage is known for preventing or reducing anxiety (anxiolytic effects), relaxing of muscle fibers (muscle relaxant) and numbing the mouth (peri oral anaesthesia) (Cairney, Clough, et al., 2003). Also known throughout the Pacific as awa, kava, kava kava, yqona, grog, tigwa and sakau (Lebot, Merlin, & Lindstrom, 1992; Singh, 2004a), kava has been grown and consumed for over 3, 000 years across many Pacific Islands. This includes parts of Melanesia (such as parts of Vanuatu, Fiji, Solomon Islands), throughout Polynesia (e.g. Tonga, Samoa but excluding New Zealand) and scarcely in Micronesia (Lebot, et al., 1992; Rudgley, 1993). More recently the extract from kava roots has been used in natural medicine in Western countries as a treatment for anxiety (Pittler & Ernst, 2003; Sarris, LaPorte, & Schweitzer, 2011). This review is focused largely on the non-medicinal use of the kava beverage.

The prevalence of kava use in Australia is estimated to be low. Despite this, it is recognised that kava is used by people of Pacific Islander decent across Australia and by Aboriginal groups in Arnhem Land. Importantly, it is not used in all communities in this region, and is largely restricted to eight major and several smaller homeland communities. Although there have been no recent studies of prevalence, a study of kava using communities in the 1990s estimated that prevalence may be as high as 70% of males and 30% of females (d’Abbs & Burns, 1997). There are no current figures regarding the prevalence or the patterns of kava use by Pacific Islander Australians. Whilst they are referred to collectively as ‘Pacific Islanders’ this populations include Fijians, Samoans, Tongans, Cook Islanders, and Niuean among others, and are heterogeneous with diverse cultures, languages and religions (Rodriguez, 2007).

Despite the relatively low prevalence of kava use the regulation of kava has had a complex history. Until recently it has been regulated only in Western Australia, in which it has been banned, and in the Northern Territory. In the past thirty years in the Northern Territory, kava has been banned twice, unregulated twice and been regulated through licensing twice. Most recently, in June 2007, import restrictions were enforced reportedly as a response to reports of health and social problems in some Aboriginal communities (Abbott, 2007; Urquhart & Thompson, 2008). Under these controls, the importation of kava in commercial quantities is prohibited except for medical or scientific purposes. However, in recognition of the traditional cultural use
of kava in Australia by Pacific Islander communities and to maintain limited access for that purpose, provision was retained allowing incoming passengers, aged 18 years or over, to bring in to the country no more than two kilograms per person (Department of Health and Aging, 2007). Since 2007 there has been no examination of the outcomes of the restricted availability of kava on the prevalence of, or harms associated with, use among Aboriginal or Pacific Islander Australians.

There is a lack of clear empirical evidence about the effects of kava. Its limited distribution across the world has meant only a small amount of research has been conducted, and much of this is ethnographic and anthropological in nature. Applying the findings of this research to policy, health and social interventions is complicated by the diversity of contexts and patterns of kava use. Recent research into kava has been dominated by investigations of the safety and efficacy of therapeutic medicines containing kava extract. Much of this research has resulted from European countries imposing a ban on kava products in 2002 (lifted in 2008) due to concerns that they may cause hepatotoxicity (Food Standards Australia New Zealand, 2005; Sarris, et al., 2011).

The focus of the current literature review is on the aqueous kava drink used historically by Pacific Islanders, it will be referred to using the terms ‘kava’ or ‘recreational kava’. Considering the complexities of kava research described above, the present review considers the broader literature on kava extract used in natural medicine, which will be referred to ‘medicinal kava’. It is important to acknowledge that the quantity consumed in recreational kava is far greater than in medicinal kava. An additional consideration when reviewing the literature regarding natural medicine is that it predominantly uses kava from Vanuatu; the majority drunk in Australia is from Fiji and Tonga which comes from different cultivars of kava.

This review presents the link between patterns of kava use and the consequences observed, where available. Both the cultural context of kava use and the health status of users varies greatly between the different Pacific Islander and Aboriginal kava using populations; this is an unavoidable confounding variable in determining the relationship between kava and health outcomes. Like any substance use it is necessary to consider both the effects of the substance kava, and the effects of behaviour associated with kava use. Thus, caution needs to be taken in extrapolating the effects of any research from one sociocultural context to another. Similar caution needs to be exercised when extrapolating findings from laboratory based research to social kava consumption.

The review has considered both peer reviewed literature, as well as grey literature including commentaries, opinion pieces and descriptions of kava in popular media. The review was conducted using the terms: kava, kava kava, sakau, piper methysticum and kavalactones in the search engines PsycINFO,
Medline (PubMed), and ProQuest and was followed by a cited reference search of key articles. Grey literature was sourced applying the same search terms to the Google search engine.

The aims of the literature review are to:

• examine the current evidence regarding the effects of kava on health and wellbeing;
• review the documented prevalence and patterns of kava use in Australia; and
• review the social and cultural context of kava use and how this impacts upon health.

1.1 Kava and kava use

Kava is a non-fermented beverage with complex neuropharmacologic properties made from an infusion of chewed, ground, pounded, or otherwise macerated fresh or dried kava root with either cold water or coconut milk. The taste of the beverage is described as earthy, peppery, acrid and astringent (Lebot, et al., 1992). Kava is soporific and the effects of intoxication are typically described in positive terms including feelings of sociability, peace, harmony, reduced stress and anxiety (Frater, 1976). The major physiological effects include local anaesthetic experienced as a numbing of the mucous membranes of mouth and tongue, muscle relaxation, and sedation (Alexander, Watson, & Fleming, 1987). At large doses, kava can lead to ataxia, paralysis of the extremities without loss of consciousness and finally deep sleep (Tomlinson, 2006).

The kava plant is a perennial shrub which grows in fairly high temperatures; it has a natural range and area of cultivation restricted to tropical Pacific Islands (Lebot, et al., 1992). Kava is not known to grow in Australia (Food Standards Australia New Zealand, 2005). Kava is cultivated via vegetative propagation of selected root stock and has been grown and selectively developed for over 3000 years. There are over 115 known different cultivars of kava (Food Standards Australia New Zealand, 2005). It is likely that kava originated in Vanuatu, and has spread throughout the Pacific largely as a product of human migration and back-migration throughout the region (Singh, 2004a). Kava root for consumption is harvested from plants over 4 years old, as these plants have higher potency (Singh, 2004c). The crown of the kava and the larger roots attached to it are harvested in a labour intensive process; a single plant will yield approximately 10 kg of kava root (Singh, 2004c).

Historically kava has been consumed ‘green’, soon after harvest, where the root is pulped or chewed and mixed with water or coconut milk. This preparation is still utilised in some Pacific Island countries (such as Vanuatu,
New Guinea and Pohnpei) however it is now more common across the Pacific (such as Fiji, Tonga and Samoa) for kava to be dried and marketed as powder (Lebot, et al., 1992; Singh, 2004b). Kava from dried rootstock is typically made by an infusion, using a teabag method where the kava is placed in a cloth (e.g. a sock) and then repeatedly wrung out into water.

Kava use has become integral to ceremony and social life across the Pacific and kava crops now form a significant part of the economies of several Pacific Island nations. Across the Pacific kava is used in medicinal, ceremonial and recreational contexts (Singh, 2004b). In ceremonial use (funerals, marriages, ceremonies related to attaining chiefly rank) drinking practises are often highly ritualised. The consumption patterns of kava vary greatly across the Pacific, yet despite the variations there are some commonalities; it is consumed predominantly by men, and in groups (Singh, 2004b). Internationally kava is used by Pacific Islander migrants in a range of countries but in particular in the United States of America (Utah and the west coast states), and New Zealand. In Australia, it is used by Pacific Islanders in all states and territories and by Aboriginal people in Arnhem Land. The most commonly consumed form of kava in Australia is dried and powdered rootstock from Fiji and Tonga. Kava extract is used in European and North American countries as well as in Australia and New Zealand in alternative medicine as a treatment for anxiety. The acute and chronic effects of kava are discussed Sections 1.3 (page 19) and 1.4 (page 36).

**Kava pharmacology, potency and drug action**

The psychoactive properties of kava come from the chemical organisation of the lipophilic kavalactones (also referred to as kava pyrones). To date eighteen separate kavalactones have been identified, six of these constitute 95% of the lipids derived from dried kava (Ramzan & Tran, 2004; Sarris, et al., 2011). These six are: kawain (kavain), dihydrokavain, methysticin, dihydromethysticin, yangoninin, and desmethoxyyangonin. The kavalactones exist in different proportions depending on genetic and environmental variations of plants (Clough, Burns, & Mununggurr, 2000; Ramzan & Tran, 2004; Sarris, et al., 2011; Teschke, Sarris, & Lebot, 2011). In any kava plant kavalactones are most concentrated in the lateral roots (rhizomes, roots and root stems) of the plant (Mack, 1999) and decrease progressively toward aerial parts of the plant (Ramzan & Tran, 2004). The aerial parts of the kava plant contain toxins and have not traditionally been used in the preparation of kava beverages (Singh, 2004d). The other components of the dried root stock include: fibre, water, sugars, proteins, and minerals (Singh, 2004d).

The potency of kava is difficult to determine because varietals of plant used have different compositions and because the proportion of kavalactones in a sample of root stock varies greatly. Dried root stock is more concentrated than green root; Jowitt and Binihi (2001) have suggested that 100 g of powder is equivalent to 500 g of fresh root. Estimations of the kavalactone concentration
in dried root stock have been estimated as broadly as 3% to 20% across the literature (Lebot et al., 1992), yet the majority of recent research suggests that dried root stock has a kavalactone concentration of between 10 - 15% (Clough, et al., 2000; Jowitt & Binihi, 2001; Ramzan & Tran, 2004). The quantity of kavalactones consumed in a beverage made from dried root depends on the proportion of lactones in the kava root stock and the extraction of kavalactones into a beverage. In the preparation of aqueous solutions of kava, Clough (2000) reported that the extraction of kava lactones in cold water infusions was approximately 82%. The concentrations of the kava beverage are in contrast to medicinal kava products using kava extract which have a higher concentration and contain more than 30% kava lactones (Fu, Xia, Guo, Yu, & Chan, 2008). The potency of kava and concentration of kavalactones is also affected by the quality of kava, kavalactones degrade over time when stored at room temperature (Food Standards Australia New Zealand, 2005). Further variations in potency arise from the type of plant and part of the plant which is used; a more detailed description of this is presented in Sections 1.3 (page 19). Considering the above, it is difficult to get accurate understanding of the typical potency consumed in recreational settings; this has an impact on examining the effects of kava use with specificity.

The metabolism of kava is reasonably well documented. Kavalactones are lipid soluble and are therefore absorbed in the gastrointestinal tract (Fu, et al., 2008). The absorption is described as poor and variable (Food Standards Australia New Zealand, 2005), and can be affected by how it is consumed for example with food. Generally after ingestion it takes 1.8 to 3.0 hours to reach peak serum levels (Mack, 1999). Kavalactones appear to be metabolised by the cytochrome P450 system and are eliminated by in urine and faeces (Aporosa, 2008; Cairney, Maruff, & Clough, 2002). The elimination half-life of kavalactones is estimated as 9 hours (Ang-Lee, Moss, & Yuan, 2001).

There has been little research into the toxicity of kava. Duffield and Jamieson (1991) determined that the LD₅₀ of mice was 700 mg/kg with death due to respiratory failure. Where LD₅₀ is the lethal dose that kills 50% of test animals. There are no long term toxicity studies on animals to date, however considering the available data the toxicity of kava is considered to be low.

Kavalactones have a dose-dependent effect on the central nervous system and affect a range of neurotransmitters (Ang-Lee, et al., 2001). These effects include muscle relaxation, sedation, anxiolytic, analgesia, anaesthesia and anticonvulsant among others (See Sarris, et al., 2011 for a review). The mechanisms by which these effects occur are not clearly understood. In a recent review of the evidence Sarris, et al. (2011) summarised the variety of mechanisms which may mediate the action of kavalactones in the brain: blockage of the voltage-gated sodium ion channels, reduced excitatory neurotransmitter release due to blockade of calcium ion actions, enhanced ligand binding to gamma-aminobutyric acid (GABA) type A receptors,
reversible inhibition of mono-amine oxidase B, and reduced neuronal uptake of noradrenalin and dopamine. These mechanisms involve either reducing the activity of excitatory neurotransmission or increasing the activity of inhibitory neurotransmission.

The hypothesised effects of kava on the GABA\textsubscript{A} system, which is the major inhibitory neurotransmitter in the brain, are the most researched mechanism of kavalactone activity. It is proposed that kavalactones interact with GABA\textsubscript{A} receptors at the same site as benzodiazepines (which act by potentiation of GABA), but support for the hypothesis is mixed (Bruner & Anderson, 2009; Mack, 1999). For example Jussofie, Schmiz and Hiemke (1994) investigated the differential activity of kava on different brain areas and found that kava modulates GABA binding sites in a region specific manner (amygdala and hippocampus) whereas other studies have found that kava has no effect on GABA\textsubscript{A} receptors (Davies, Drew, Duffield, Johnston, & Jamieson, 1992). Impacts on the on the GABA\textsubscript{A} system are consistent with the sedative and anxiolytic effects of kava.

The hypothesised effect of kava by blockage of sodium ion channels may account for the muscle relaxation, anticonvulsive, anaesthetic properties of kava. The muscle relaxation attributed to kava consumption, including spinal muscle relaxation, occurs without depressing central nervous system function (Cairney, et al., 2002). Norton, (1998) has described kava as a spinal depressant that can cause transient ataxia or uncoordinated gait. Interestingly Singh (1983) found that in frogs, kava resulted in muscle relaxation via muscle contractility rather than neuromuscular transmission. Singh (1983) concluded that kava causes paralyses by similar mechanisms to local anaesthetics. Further it has been shown that the anaesthetic effects of kava do not operate through opiate pathways (Duffield & Jamieson, 1991). While the initial research is promising more detailed research is required to be able to explain in more detail how kava acts on the brain.

The effects of the individual kavalactones are poorly understood, as is how they interact with each other. Laboratory research using mice has shown that when kavalactones are administered individually their absorption is slower than when in combination, and they do not exhibit biological activity similar to that found in whole kava extract (Fu, et al., 2008). It is thought that certain kavalactones have different effects and plants are selected based on their lactone profile for natural medicines (Teschke, Sarris, & Lebot, 2011). There is no research which describes the current kavalactone profile of kava currently used in Australia, and no explanation in the literature as to how different variations of kavalactone content may impact on the generalizability of research findings. Consequently all research findings to date must be interpreted with caution; further research is required to clarify the components of kava and their pharmacological properties.
Measurement and assessment of use

Considering that the physical and social effects of a substance relates to dose, it is important to consider the measurement of kava use to examine how kava impacts on health, and at what levels of kava-related harm occur. In a review of the literature regarding the neurobehavioural effects of kava (in both the traditional and non-traditional preparations), Cairney, et al. (2002) noted the difficulty in comparing different studies because the methods of preparation and measurement were vastly different. This is not surprising considering that kava is not controlled by an ‘industry standard’. As discussed above concentrations of kavalactones vary greatly and the populations who use kava do so in different ways. The literature tends to therefore describe kava consumption in various ways. Laboratory studies with both animal and human subjects tend to administer standardised quantities of kavalactones using kava extract. The dose administered is either a set dose or by percentage of subject body weight. Studies with existing users of recreational kava tend to be descriptive where an estimate of how much kava beverage has been consumed is made. Studies which estimate consumption of recreational kava often rely on the self-report; many kava users have difficulty accurately estimating use because kava is typically shared. As previously detailed the potency of kava is not consistent and difficult to estimate because it is determined by the quality of the dried root stock, the amount of water used, and attention given to the infusion process (Mathews et al., 1988). In laboratory studies more precise concentrations of kavalactones can be examined, however, extrapolating these findings to non-laboratory settings and from medicinal to non-medicinal use can be difficult. Consequently, it is difficult to assess with any specificity how much kava participants in descriptive studies use, often prevalence of kava use is the most descriptor across studies.

The most commonly used method of determining levels of recreational use has been to estimate different levels of consumption via grams of dry powder used per week (Brown et al., 2007; Clough et al., 2002; Mathews, et al., 1988). In this method participants are asked how much kava powder they consume or how many cups they consume. Quantity of kavalactones consumed can also be estimated when the amount of dry powder or volume of kava beverage is known. Methods of determining dry powder or kavalactones consumed from liquid consumed are taken from observational research which has not been replicated and relies on several estimated parameters. Following participant observation research Clough, et al. (2002) reported that a typical kava beverage in Arnhem Land contained approximately 33 g/L of dry kava root, where the extraction of kavalactones from the powder was approximately 82%. From these parameters it is then possible to calculate kavalactone content. For example, considering an approximate kavalactone concentration of 12.5%, he calculated the amount of kavalactones typically consumed in Arnhem Land as the weight of dry kava x 82% x 12.5%. Kavalactone concentration can then be used to roughly compare dose with medicinal kava research. In medicinal
Kava research dosage of kava extract is between 140–250 mg/day containing 30 – 55% kavalactones. This amount is small when compared to the amounts ingested in social or recreational kava use.

Considering that kava use is a communal activity and it can be difficult to estimate the amount of powder consumed by individuals Clough proposed that it is possible to estimate kavalactone content if one knows what volume of kava liquid is drunk (from which grams of dry kava can be estimated using the 33 g per litre estimation described above). Across the Pacific kava is consumed from cups made of half coconut shells. While there is considerable variation in the size of these, they range from 100mL to 250 mL (Brown, et al., 2007; Lebot, et al., 1992). Similarly in Australia 100ml size drinks are the most commonly reported (Alexander, et al., 1987), therefore a rough calculation can be made if a participant is able to estimate how many cups of kava they drink.

Another method to determine approximate quantity of kava powder consumed suggested by Clough, et al. (2000) is via the amount of time spent drinking kava. Clough, et al. (2000) observed a steady tempo of kava consumption and suggested that in Arnhem Land approximately seven cups of kava are consumed per hour, while this method had some demonstrated validity for Clough’s study its applicability over time and between communities has not been established. Whether drinking tempo in Arnhem Land has maintained this consistency has not been investigated. (Clough, et al., 2000) identified the following parameters:

- <2 h per week = < 130 g;
- 5 h per week = 140–240 g;
- 9 h per week = 240–425 g per week;
- 14 h per week = 425–610 g per week; and
- more than 16 h per week = > 610 g per week.

The first comprehensive assessment of the effects of recreational kava consumption was conducted in Northern Australia in 1988. In this study the authors distinguished used grams per week to distinguish between categories of drinking (Mathews, et al., 1988). Of note they did not present any rationale for these categories, participants were assigned to categories based on health worker consensus methodology yet the article does not provide detail as to how health workers estimated participants grams per week consumption pattern. They distinguished between:

- occasional user – 100 g per week;
- heavy user – 310 g per week;
- very heavy user – 440 g per week; and
- extreme use – >900 g per week.
These categories have since been adopted by other researchers both in Arnhem Land and across the pacific (e.g. Cairney, Clough, et al., 2003; Jowitt & Binihi, 2001; Kava, 2001; Mathews, et al., 1988). The validity of these categories of use has not been investigated. The use of grams per week as the main descriptor of kava drinking behaviour is not without its critics. Grace (2003) has referred to the grams per week approach as limited considering that the content of kava lactones in the dry root varies from 3–20% and the amount extracted varies between plants, regions and situation. Further, the distinction used by Mathews et al. (1988) assesses net consumption not pattern. Net consumption per week masks the differences between patterns such as irregular heavy episodic use and frequent light use. With the exception of Clough et al. (2000) who categorised different frequencies of kava use through participant observation research, there has been very little research which has asked participants how often they consume kava. While it is important to recognise these limitations, the grams per week method and the categories used by Mathews et al. (1988) provide some opportunity to compare results across studies. Further research into the validity and utility of the different methodologies for assessing recreational kava use are clearly warranted.

1.2 Acute effects of kava use

The following section reviews the literature related to the acute effects of kava use, including the effects of intoxication and effects of kava preparation on health.

Subjective experiences of intoxication

The acute effects of kava consumption have been described by ethnographic and participant observation research. The commonly reported phemenological effects of kava include a numb mouth, sense of euphoria and some alteration of senses, with increased use leading to mild sedation and a sense of muscle weakness (Alexander, et al., 1987; Beaglehole, Beaglehole, & Pangai, 1941; d'Abbs & Burns, 1997; Lebot, et al., 1992). The effects of continued drinking are described as sedation, ataxia, a sense of unreality and fatigue, with acute overdose leading to severe ataxia and sedation, extra pyramidal movements, deafness, dilated pupils, other temporary ocular abnormalities and deep sleep (Lebot, et al., 1992; Lemert, 1967; Singh, 2004b; Tomlinson, 2006).

These observations of elevated mood are consistent across descriptive literature and have been replicated in two laboratory based studies - Foo and Lemon (1997) and Thompson, Ruch, and Hasenohrl (2004). Thompson, et al. (2004) used double blind placebo methodology to investigate the effects of kava on mood and cognition. Mood was assessed using the State Trait Anxiety inventory (Thompson, et al., 2004). Participants in the active group received a
kava extract tablet containing 90mg of kavalactones. Kava consuming participants reported an increase in state cheerfulness. This increase was also greater in those who had a higher trait of cheerfulness at pre-test (Thompson, et al., 2004).

Foo and Lemon, (1997) investigated the effects of kava and alcohol on subjective feelings of intoxication. The experimental design included four conditions: a placebo condition, kava condition, alcohol condition, and a combined kava and alcohol condition. Study participants were blind to condition. Kava consuming participants received a weight correlated dose of kava (1g of dried kava powder per kg body weight). Subjective measures of intoxication included self-ratings on sedation, alertness, coordination, intoxication, and perceived capacity to drive. The effects of kava alone were significantly different to the placebo condition leading to the conclusion that participants felt more sedated, more fuzzy headed, less co-ordinated, more intoxicated and felt their capacity to drive was less than those who had received a placebo. On all ratings the group receiving both kava and alcohol rated consistent with the highest level of intoxication, followed by alcohol, followed by kava, and then the placebo condition. In this study, the g/kg kava dose would result in the consumption of between 50–100g of kava which is more consistent with recreational kava than the dose used by Thompson, et al. (2004). Taken together these two studies indicate provide evidence that the acute effects kava include positive mood. Importantly the two laboratory studies reported no incidences of adverse mood reactions during the studies, thus the feelings associated with kava intoxication are unlikely to cause adverse reactions.

**Cognitive effects**

The acute effects of kava on cognition are important to consider when assessing risks related to kava use and have been examined in the laboratory studies by Foo and Lemon (1997) Thompson, et al. (2004), Prescott, Jamieson, Emdur, and Duffield, (1993), Russell, Bakker, and Singh, (1987), and Saletu, Grunberger, Linzmayer, and Anderer (1989). The laboratory findings have inconsistent results. Foo and Lemon, (1997) examined the effect of kava on perceived cognitive ability, attention and accuracy (digit symbol coding), divided attention (tracking and visual search), and vigilance (Mackworth clock). They found that although participants in the kava condition reported a subjective effect (felt more fuzzy headed than participants receiving placebo) there were no differences between the kava and placebo conditions on the majority of cognitive tests. The exception was digit symbol coding, on this test kava consuming participants performed better than non-kava using participants, suggesting that may have kava facilitated attention. However the results were marginal and the authors recommended they be interpreted with caution. Of importance they found that the combined kava and alcohol condition performed more poorly than those in the alcohol condition. These findings suggest that kava may potentiate the effects of alcohol. They
concluded that overall kava has little acute effect on cognition, alcohol has a stronger effect and the combination of the two had the greatest effect. These findings have not been replicated and further research is clearly warranted to examine the combined effects of alcohol and kava.

Thompson, et al.’s (2004) double blind placebo controlled study examined cognitive performance using both visual attention and short term memory. The results demonstrated that individuals who consumed kava performed better on both tests. They concluded that kava (at small doses) may have improved performance on reaction time and short term memory. Importantly, they caution that these results may have resulted from an improvement in mood, which is known to improve performance, as opposed to the action of kava directly potentiating performance.

Findings in relation to the impact of kava on attention and reaction have been mixed. Consistent with Thompson et al.’s study, Saletu, et al. (1989) also reported that kava improved reaction time. Saletu, et al. (1989) compared cognitive performance on the Pauli intelligence test and the alphabetic cross-out test at three kava doses (200, 400 and 600 mg). Results showed non-significant improvements on attention and overall concentration at all three levels of kava dosage. Conversely, Prescott, et al. (1993) found that participants administered isolated kavalactones kawain and dihydrokawain showed non-significant reductions in reaction time in the Sternberg memory-scanning task, simple and choice reaction time tasks, visual tracking and memory scanning tasks. They concluded that overall cognitive performance was lower in those who had kavalactones compared with controls. Finally Russell, et al., (1987) found that neither low nor moderate doses of kava effected alertness or speed of information retrieval from long term memory using a Posner letter match task. From these studies it can be concluded that kava may slightly improve attention and reaction at low doses. Importantly though Cairney, Clough, et al., (2003) have suggested that the positive effects of kava on attention may be short lived, as it is likely that with continued use and intoxication, sedation will occur and result in impairment of attentional function.

Cairney, Maruff, et al., (2003) investigated cognitive impairment and saccades associated with intoxication in Arnhem Land. Participants in the study included intoxicated kava drinkers and a control group of kava drinkers who had not consumed in the previous month. The kava drinking participants in Cairney, Maruff, et al., (2003)’s study had consumed approximately 200 g of kava powder in a group session which had lasted for approximately 14.4 hours and ended eight hours prior to testing. Of particular note to the current review (Cairney, Maruff, et al., 2003)’s participants the kava powder consumed was equivalent to approximately 25 g of kavalactones – this is approximately 150 times the daily dose in medicinal kava. Cairney, Maruff, et al., (2003) found that intoxicated participants did not show deficits in reaction time tasks or memory and learning tasks but did show deficits in visual
search tasks (visual attention) as task complexity increased. In relation to saccade functioning (rapid small eye movements) Cairney, Maruff, et al. (2003) found that kava intoxicated participants were more likely to show disruption to saccades characterized by dysmetria (impairment of the control of range of eye movements) and slowing of visually guided eye movements. This pattern is consistent with cerebellar abnormalities typically seen in people with degenerative ataxic disorders (Cairney, Maruff, et al., 2003).

The control participants in the study all had a history of kava use and thus the findings are likely to represent the acute effects of kava not chronic effects of kava. Despite the small sample size Cairney, Maruff, et al.’s (2003) study provides valuable information regarding the effect of higher doses of kava on cognition and saccade functioning. Importantly, considering that participants had not consumed kava in the previous eight hours, the results of the research may actually be conservative, and replication of Cairney, Maruff, et al., (2003) findings in both Arnhem Land communities and Pacific Islander communities is warranted.

Consistent with the above summary, a recent review on the neurocognitive effects of kava LaPorte, Sarris, Stough, & Scholey (2011) points out that the majority of studies suggest that kava marginally improved or enhanced performance in attention, concentration, word recognition and reaction time, however the results were not found consistently across the studies. The studies are difficult to compare as they use variable doses and preparations of kavalactones and use different cognitive tests to assess function (Sarris, et al., 2011), further none of the studies use doses of kava comparable to heavy drinking in recreational settings. To date the evidence suggests that, kava may have a minor positive effect, possibly via mood, on reaction time; there are minimal acute effects of low doses on cognition in laboratory settings, and no consistently reported negative effects. There is preliminary evidence that kava may have a negative effect on saccade functioning. Thus the present review concurs with previous reviews (Cairney, 2007; Food Standards Australia New Zealand, 2005; World Health Organisation, 2007), and regards kava as having a benign effect on cognition at low doses. However caution must be noted, we do not have a body of research evidence regarding the effects of high doses of kava on cognition.

**Ocular effects**

In the historic literature kava drinkers are often described as having watery red eyes (Beaglehole, et al., 1941; Frater, 1976). Consistent with this observation, Kava (2001) reported 72% of ‘very heavy’ users and 57% of ‘heavy’ users in Tonga experienced watery eyes from drinking kava (using Mathews, et al., 1988, distinctions between levels of use). Similarly, Ruze (1990) reported that the majority of ‘very heavy’ kava users complained of irritated eyes during periods of heavy drinking in comparison to non-drinkers. Alexander, et al. (1987) reported similar concerns in Arnhem Land. In several
studies it has been reported to cause pupil dilation, blurred vision, and disturbances of oculomotor equilibrium (Frater, 1976; Garner & Klinger, 1985; Wheatley, 2001). Ruze (1990) and Frater (1976) also found that ‘very heavy’ kava drinkers reported photosensitivity. The research to date suggests that ‘heavy’ kava users in both Arnhem Land and the Pacific experience acute ocular effects of kava. The effect of kava on eyes warrants further research; research is needed to clarify the incidence, cause and clinical significance of irritated eyes among drinkers.

**Acute mental health effects**

In a 2002 literature review of the neurological effects of kava Cairney, et al. examined literature describing psychotic experiences related to kava consumption; they noted that psychotic effects have been scarcely described in anthropological literature and not at all in controlled studies or studies of current kava users. On examination of the diverse literature Cairney et al. (2002) found reported effects of kava which varied from kava being attributed to the emergence of, and to the reduction in severity of, psychotic symptoms. On the basis of current evidence, they concluded it was probable that kava consumption does not trigger psychotic episodes.

In the non-peer reviewed literature an observational and commentary paper by McLeod (1994) presented at a research workshop held in Nhulunbuy in the Northern Territory 1994 provides some important anecdotal evidence. As a clinical nurse consultant in rural mental health, McLeod (1994) observed that individuals with a major mental illness often deteriorated and or presented with acute symptoms of mental ill-health following kava consumption. In addition he stated concern that those presenting with schizophrenia or depression were likely to increase their consumption of kava, sometimes as an attempt to stabilise their mental states. These observations require further research and clarification.

**Ataxia and motor co-ordination**

Ethnographic research describes ataxia as a common consequence of kava intoxication (Lebot, et al., 1992), for example Torrey (1948, as cited by Singh, 2004b) describes copious consumption as leading to ‘horribly distorted countenance, loss of use of limbs resulting in rolling around on the ground’. Among descriptive studies, ataxia and unco-ordination are described as acute consequences of use (Alexander, et al., 1987; Cairney, Maruff, et al., 2003; Norton & Ruze, 1994). Laboratory studies confirm these descriptions. Prescott, et al. (1993)’s laboratory study investigating the effects of kava extract on cognition also reported that it significantly increased the extent of body sway after ingestion and in Foo and Lemon’s (1997) laboratory study participants had significantly lower self-reported coordination than those in a placebo condition. Finally, ataxia has also been noted in a case study of medicinal kava intoxication. Perez and Holmes (2005) describe a single case study of intoxication in an emergency medicine presentation following use of
kava extract. They reported the individual experienced difficulty standing and extreme leg weakness with ataxic gait.

Ataxia and lack of motor co-ordination has been described by some as related to the muscle relaxant properties of kava (d'Abbs, 1993; Norton & Ruze, 1994; Singh, 1983) (see explanation in Section 1.2, page 11, pharmacological actions of kava). In addition to this explanation, research by Cairney, Maruff, et al. (2003), who looked at the saccade functioning of intoxicated kava drinkers in comparison to non-intoxicated kava drinkers (as described in Sections 1.3, page 19), concluded that ataxia in kava drinkers may be related to cerebellar functioning. To date the research suggests that ataxia is a common consequence of kava intoxication; it may result from both muscle relaxation affecting coordination and kava impacting on the cerebellum. There is no research to date which details at what doses of kava ataxia becomes present, and the frequency of health risks associated with ataxia (more frequent accidents and falls).

**Other pharmacological effects of intoxication**

As described in Section 1.2 (page 11) kava produces local anaesthetic (loss of feeling) effects experienced as a numbing of the mouth and tongue and analgesic effects (loss of pain) effects without activation of the opioid pathway. These effects are well known across the Pacific and have led to kava being an integral part of traditional medicine (d'Abbs, 1993; Lebot, et al., 1992; Singh, 2004a). There is no evidence in the literature that these effects result in adverse consequences for people who drink kava.

Nausea and dizziness also reported by in other studies in both medicinal kava use (Perez & Holmes, 2005) and recreational kava use (Tomlinson, 2006). Kava is thought to cause nausea through inflammation of the stomach (Ngirasowei & Malani, 2002). Ngirasowei and Malani (2002) found that kava users aged 15 – 24 years were more likely to have gastritis than non-kava users. The 2007 review of kava and hepatotoxicity by the WHO reported that nausea was the most common side effect from trials of medicinal kava (World Health Organisation, 2007). Dizziness has been reported as a side effect of medicinal kava, (Wheatley, 2001) investigated the side effects of kava extract in the treatment of stress induced insomnia and found 12% of participants reported dizziness. There are no studies that provide detailed examination on the prevalence and dose response of kava on nausea and dizziness. Other than being unpleasant these effects are unlikely to represent serious risk to kava users (World Health Organisation, 2007).

All substances have the potential to interact with each other and result in harm, consequently the metabolism of kava is worthy of discussion. Recent research has suggested that it may affect how other drugs are metabolised, for example kavalactones significantly inhibit human cytochrome P450 (CYP450) (Fu et al., 2008). CYP450 enzymes are present in many body tissues, particularly the liver and gastrointestinal tract; they play an important role in
hormone synthesis and breakdown, cholesterol synthesis, and vitamin D metabolism. CYP450 enzymes are also important in drug metabolism facilitating solubility for excretion in the urine or bile (Cupp & Tracy, 1998). Kava inhibits CYP450 which may make it more difficult for other drugs to be metabolised. By inhibiting CYP450, plasma levels of other substances and medications and may lead to concentrations that are toxic to various organs and tissues (Fu, et al., 2008; Mathews, Etheridge, & Black, 2002; Sarris, et al., 2011). Common substances metabolized by CYP450 enzymes include diazepam, caffeine, amitryptiline, imipramine, propranolol, fluoxetine, haloperidol, morphine and beta-blockers (Cupp & Tracy, 1998; Singh, 2004d), thus there may be risks associated with using kava if other medications are being taken. Similarly, Li and Ramzen (2010) argue that a metabolic interaction of kava and alcohol may result in hepatotoxicity.

The dose response of kava on CYP450 is not yet understood fully, therefore there is no guidance on what levels of kava use impact CYP450 to a clinically significant degree. Furthermore the majority of research has been conducted in studies assessing the safety of medicinal kava. Research investigating the effects of recreational kava use and commonly used licit (including medications) and illicit substances is warranted. A further complicating matter related to understanding the effect of kava metabolism is that CYP450 is subject to genetic polymorphisms (Fu, et al., 2008; Grace, 2003). A key component of CYP450 is the enzyme CYP2D6, which is thought to cause much of inter-individual variation in responses to different drugs. In a Caucasian population 7–9% of people are deficient in this enzyme (meaning they are poor metabolizers). In contrast 0% of Polynesians are deficient. Consequently Caucasian individuals may be more susceptible to kava related harm, including hepatotoxicity (Fu, et al., 2008).

In addition to interaction effects related to the metabolism of kava it is also important to consider the cumulative effect substances may have. Given that it acts on the central nervous system Ang-Lee, et al. (2001) presents concerns that kava may act additively with other central nervous system depressants including alcohol and benzodiazepines.

A final potential interaction effect of note is that given that kava has effect on dopiminergetic antagonist it has been suggested that it may compromise medicine for Parkinson’s disease and may exacerbate Parkinson disease symptomatology (Food Standards Australia New Zealand, 2005; World Health Organisation, 2007). Further research is needed to clarify these concerns.

**Market and product effects**

With all unregulated substances there are risks related to the production of a substance, storage of a substance, and sale of a substance. As noted by Clough, et al. (2000), there are many processes between kava producers and consumers and most of these are unregulated. Potential risks related to the production of kava include the use of poor quality plant material which may
include stems, young plants, or kava from inappropriate cultivars (Teschke, Sarris, & Lebot, 2011; Teschke, Sarris, & Schweitzer, 2011). Traditionally Pacific peoples have not used kava stems, yet there is evidence that kava powder today may include stems (Russmann et al., 2003). Nerurkur, Dragull, and Tans (2004) compared the toxicity of alkalines contained in kava stems with kavalactones in kava root and reported that the stem alkalines are capable of causing cell death, whereas kavalactones do not.

In addition to substandard material being used in kava powder there are some concerns that pesticides may remain in harvested kava. The US Food and Drug Administration’s pesticide monitoring program report in 2008 documented kava as an import commodity that may warrant special attention. The FDA analysed seven samples of kava and found 57% violated the safe pesticide residue limits (Food and Drug Administration, 2010). There is no monitoring of kava in Australia for pesticide or other contaminants, yet considering that kava is a largely unregulated crop there is potential for risks associated with contaminated kava to emerge.

The effects of storage on kava are variable because kavalactones degrade over time (Food Standards Australia New Zealand, 2005) making kava powder less potent over time. However this is likely not to present a risk to kava users. Recent research however raises the concern that toxic moulds may be present in poorly stored kava and as a consequence constitute a health risk (Teschke, Sarris, & Schweitzer, 2011). Finally, there is concern that in any unregulated market adulterants may be added to kava to add weight and therefore increase profit margin. There is some anecdotal evidence of this in grey literature (d’Abbs & Burns, 1997; Laynhapuy Homelands Association, 2008a), yet there have been no detailed studies investigating the presence of adulterants in kava powder. The acute effects of cultivation, production, marketing and storage are rarely described in the literature; however it is likely that there are risks related to consuming kava which are a consequence of unregulated supply.

**Effects of kava preparation**

There are also concerns that the manner in which kava is prepared may impact health. There are concerns that unhygienic preparation (Chalmers, 1995; Mathews, et al., 1988) may lead to an increased chance of disease transmission, a sentiment that was shared with participants in the Alexander, et al. (1987) study.

**Kava and driving**

Considering the complex physiological effects of kava, initial evidence that kava may affect visual attention, motor skills and co-ordination (Cairney, Maruff, et al., 2003) it is possible that the acute effects of kava may impede driving ability (Sarris, et al., 2011). Indeed, there are several cases in New Zealand and Southern California in which drivers under the influence of kava
have been detained by police due to erratic driving (California DUI Lawyer Centre, 2008; Pollock, 2009).

There is only one study which has specifically assessed the effect of medicinal kava on driving ability (Herberg, 1993, cited in Sarris et al., 2011), and no studies which have examined the effects of recreational kava on driving ability. Herberg (1993, as cited by Sarris, 2011) conducted a randomized, double-blind, placebo-controlled trial which investigated the effects of 300 mg of kava extract per day over 15 days on driving ability. Participants completed measures of concentration, vigilance, optical orientation, motor coordination and reaction time under stress. Results showed that kava had no effect on measures of driving performance. In reviewing these findings Sarris, et al. (2011) commented that further research is needed to replicate these results and establish the acute and chronic cognitive/driving effects of kava, as it is a crucial component of kava’s risk to benefit ratio when used in the treatment of anxiety. Consequentially consumers of kava are advised to exercise caution when driving or operating heavy machinery (Sarris, et al., 2011; World Health Organisation, 2007). Of note the participants in Herberg’s study received very low doses of kavalactones, at higher doses like those used recreationally, kava may impact psychomotor function and cause drowsiness and as such it is necessary to conduct further research into the impact of kava on driving capacity.

**Summary**

Taken together the results described above demonstrate that the known acute effects of kava are associated with a low risk for harm. At low and moderate doses it is reported to engender discussion and peacefulness and have little negative social or physical impact (Cawte, 1985; Lebot, et al., 1992). The key areas which may constitute risk relate to the effects of kava on the metabolism of other substances, the effect of kava on coordination which may lead to accidents (Chalmers, 1995), the possibility that kava may impact on the capacity to drive and operate machinery and finally impacts related to the quality of kava consumed. There is evidence that kava may exacerbate the negative effects of alcohol and therefore there are risks associated with using both alcohol and kava. More research that investigates high doses of kava use is clearly warranted, particularly in relation to driving ability, ocular effects, drug interaction effects and cognition.

**1.3 Chronic effects of kava use**

The following section reviews the literature related to the chronic effects of kava use, including both health and social effects of use. Prior to turning to specific chronic effects it is worthy to consider the body of literature itself.

As opposed to kava use in Aboriginal communities in Arnhem Land, kava use in Pacific Island communities is often described in the literature as having a
largely benign chronic effect (Cawte, 1985; Grace, 2003; Sarris, et al., 2011). For example (Sarris, et al., 2011) comments:

Heavy kava use, or abuse, has been linked to various health effects in Aboriginal communities in Australia (particularly in the Northern Territory). While heavy use of kava by these communities is... a public health issue, it should be delineated from traditional use by Pacific Islanders in which kava is not imbibed with alcohol, having cultural significance rather than being used solely as an inebriant.

Purported negative effects of kava are largely minimised in the natural medicine literature, and research findings from Arnhem Land are dismissed as an ‘Aboriginal Problem’, with use in the Pacific romanticised as ‘traditional’ and ‘cultural’. It is worthy to note that the majority of peer reviewed research into the effects of recreational kava use has been conducted in Arnhem Land. While the social context in Arnhem Land undoubtedly impacts on the observed consequences of use it does not follow that related harms are not present in the Pacific.

Indeed early ethnographic research has referred to lethargy, red eyes and skin rash as the common effects of chronic kava use in the Pacific (Beaglehole, et al., 1941; Lemert, 1967; Schmic & Power, 2010). For example, Lemert (1967) described a 55 year old man, who began drinking kava at age 19 years. Following heavy consumption he reported tiredness and difficulty in concentrating, and he developed scaly skin and inflamed eyes. Lemert (1967) reported that at times the individual was too lazy to find kava parties and drank alone, he no longer worked and suffered from dizziness. Despite brief anecdotal reports of this nature there has been little to no comprehensive studies of the health implications of kava use in the Pacific. Some descriptive research using self-report has documented differences between moderate users and heavy users. Kava (2001) investigated the self-reported consequences of use among 300 Fijian kava drinkers and found that occasional users experienced very few side effects whereas 'heavy' users reported having poor overall health, watery eyes and loss of co-ordination.

The first comprehensive assessment of the chronic health effects of kava was that by Mathews, et al. (1988) who assessed the health of 39 users and 34 non-users in an Aboriginal community in Arnhem Land. The study was conducted at a time when there were emerging anecdotal reports describing negative impacts of use. This study by Mathews, et al. (1988) has repeatedly been cited for the effects of kava both in Australia and the Pacific, yet it had small sample sizes and cannot be considered a definitive description of the effects of kava. Indeed, Mathews, et al. recognised that their sample contained participants with a high level of morbidity from other causes. There was no description of the premorbid health of the participants. Despite these criticisms this study has provided the foundation from which much of the
current understanding of kava is drawn, and therefore warrants a more detailed examination.

Mathews, et al. (1988) examined the health effects of kava using self-report of health and clinical examination of both using and non-using adults. Clinical examination was conducted by individuals blind to the kava consumption status of the participants and included: self-report of health and wellbeing, clinical observation of health, anthropometric measurement, cardiovascular function tests, plasma biochemistry, respiratory function tests, haematological measurements, urine analysis and Hepatitis B tests. Participants who were current users were separated using health worker consensus methodology (e.g. Clough, et al., 2002), into ‘very heavy’ drinkers (>440 g per week), ‘heavy’ 310 g/week, and ‘light’ 100 g/week (as described in Section 1.2, page 11). The self-reported health of kava drinkers was poorer than that of non-drinkers, and was related to dose. Self-reports of being not healthy were more likely in ‘heavy’ and ‘very heavy’ kava users compared to ‘light’ drinkers and non-drinkers. Self-reported shortness of breath increased with kava usage, as did episodic puffiness of the face, redness of the eyes and rash. The clinical observations revealed that a scaly skin rash, colloquially named ‘crocodile skin’, was common in ‘heavy’ kava drinkers. Further, body mass decreased with increasing levels of usage. Mathews, et al. commented that there was a striking difference between body mass index (BMI) and skin folds of kava using individuals and non-users, they documented a 20% decrease in body weight a 50% decrease in subcutaneous fat between kava users and non-users.

Results from plasma biochemistry found that with increasing consumption there were differences in a range of markers such as increased levels of potassium, gamma-glutamyl transerase (GGT), decreased plasma urea and total protein. Importantly though, of these changes, only elevated levels of GGT were outside the normal range of variation. GGT is a liver function indicator which is also commonly elevated in diseases of the liver, pancreas, renal system, heart and cerebral diseases, and thus is regarded as an indicator of liver function. It does not necessarily indicate liver damage. Finally, cardiovascular function test results suggested that pulse rate increased with kava consumption (Mathews, et al., 1988), but examination of electrocardiographic results were not significant and therefore not considered consistent with ischemic heart disease.

This study has been the benchmark of research to date, and is still one of the most comprehensive studies investigating the effects of kava drinking. Consequently a discussion of the limitations of the study are worthy as the findings are often extrapolated. Mathews, et al. (1988) did use randomisation procedures for selection, but given the small size of the sample and the small community from which the sample was drawn unintentional bias cannot be excluded. In the community from which Mathews, et al.’s study was drawn 80% of adult men consumed kava, consequently the matched sample was
only drawn from 20% of adult males in the community. To achieve matching all non-kava-drinking males in the community were approached, which may have resulted in an unknown confound. Differences between drinkers and non-drinkers were not presented. The small sample size also prevented detailed statistical examination. The study was carried out in an Arnhem community in which very little alcohol was consumed, which led Mathews and colleagues to argue that alcohol consumption would be unlikely to complicate any results; however lifetime alcohol consumption may still have impacted the results. Finally, the study was conducted in a community in which kava had been used only for about six years, consequently the study was not able to determine long term effects of use. From Mathews’ study and anecdotal report the key areas of interest in relation to the effects of kava have been further investigated and are detailed below. The study remains an important starting point from which to consider the chronic effects of use.

**Kava dermopathy**

Kava dermopathy – also known as *kani kani* in Fiji or ‘crocodile skin’ in parts of Arnhem Land – is a scaly skin rash (ichthyosiform eruption) and is the most well-documented consequence of prolonged high levels of kava use both in the literature (Frater, 1976; Gounder, 2006; World Health Organisation, 2007). Kava dermopathy is recognised across the Pacific as a sign of excessive kava use (Tavana et al., 2003). The prevalence of kava dermopathy in kava drinkers has been described in several studies of recreational kava use both in Australia and across the Pacific. Mathews, et al.’s (1988) study in Arnhem Land found the 70% of ‘very heavy’ users had kava dermopathy and Clough, Rowley, and O’Dea (2004) found 45% of ‘heavy’ users were currently experiencing kava dermopathy. Similarly, Kava (2001) reported that 72% of a sample of ‘heavy’ users in Fiji had previously experienced or were currently experiencing kava dermopathy and Russmann, et al. (2003) reported that 60% participants in a sample of 27 regular drinkers in New Caledonia had dry or itchy skin.

Ruze (1990) studied kava dermopathy in excessive kava users (participants consumed kava between 12 – 100 hours per week and consumed approximately 13 litres per drinking occasion) in Tonga. Participants in this study did not complain of any itching or discomfort as a result of the skin rash, but were worried about its visual appearance. While little is known about the long term effects of kava dermopathy on skin or the progression of kava dermopathy, Ruze (1990) concluded that there was a dose dependent relationship between kava use and kava dermopathy and that the condition appears reversible on reduced consumption or cessation of use. There is a widespread belief across the Pacific that exercise and heavy manual labour in which one sweats can minimise kava dermopathy (Ruze, 1990), yet this has not been tested empirically. The mechanism by which kava causes the rash is unknown, although recent hypotheses suggest that it may be due to interference with cholesterol metabolism (Gounder, 2006).
Liver functioning

The effect of kava on liver functioning is one of the more well studied and contested areas of research regarding both recreational and medicinal kava (Brown, et al., 2007; Russmann, et al., 2003; Sarris, et al., 2011; Teschke & Wolff, 2009). Concerns regarding effects on the liver led to medicinal kava being banned between 2002 and 2008 in many European countries. It was suspected that kava extract had caused hepatotoxicity and death in several cases. Later reviews of the cases that triggered regulatory changes found little concordance between the cases and concluded that the banning was premature (Ernst, 2004; Teschke & Wolff, 2009). Interestingly, Stickel et al. (2003) reviewed case studies of kava related liver disease in individuals who had taken herbal preparations of kava and found highly variable results in relation to the dose of kava and concluded that only three cases were certainly caused by kava where the others were possible and probable. They concluded that kava could cause hepatotoxicity but that the mechanism responsible for hepatotoxicity was speculative. They proposed the most possible mechanisms were likely to be idiosyncratic or immunological given the lack of dose dependency. A key complication in generalising these finding to recreational kava is that the kavalactones in natural medicine have been extracted by solvents in some instances, as opposed to aqueous extraction in recreational kava. This means that determining the cause of hepatotoxicity in some cases is very difficult, with acetone extraction of kavalactones thought to have an impact on liver functioning (Clough, Wang, Bailie, Burns, & Currie, 2003; Currie & Clough, 2003). Detailed discussions hepatotoxicity and medicinal kava can be found in Teschke and Wolff (2009) and the World Health Organisation’s review into kava and hepatotoxicity (WHO, 2007).

In relation to recreational kava use, it has been shown to affect liver function in both Arnhem Land and Pacific populations. Mathews, et al., (1988) found that kava users had increased levels of the liver enzyme GGT (gamma-glutamyl transpeptidase), similarly Clough, Bailie, and Currie, (2003) found that kava users had increased levels of GGT and ALP (alkaline phosphatase) and normal levels of ALT (alanine aminotransferase) compared to non-users. Proponents of kava often criticise this research due to the poor health status of many of the participants in Mathew’s and Clough’s studies. Recently, however, more evidence demonstrating an effect of kava on liver enzymes has been published. A study by Brown, et al. (2007) compared the liver function of healthy Tongan kava drinkers in Hawaii with healthy Tongan non-kava drinkers. They found a statistically significant association between kava consumption and an elevation of serum GGT enzyme compared to matched controls, with a probable association between drinking kava and elevated ALP levels. Brown, et al. (2007) also reported that all participants who reported drinking more than 500 bowls per month (of approximately 250 ml, meaning 125 L per month or 31 L per week) had elevated GGT. Like Clough, et al. (2003) they found no association between kava drinking and ALT (Brown, et al., 2007). Similarly Russmann, et al. (2003) reported that 85% of kava
drinking participants in a study in New Caledonia had increased GGT levels, with the increase tending to be greater in those with a higher intake. Considering the findings by Clough, et al. (2003), Brown, et al. (2007), Mathews, et al. (1988) and Russmann, et al. (2003) it is clear that recreational kava use can lead to changes in liver function as indicated by increases in the liver enzymes GGT and ALP in dose dependent fashion. To keep these findings in context it is important to note that none of these studies have demonstrated that hepatocellular damage has occurred as a result of changes in liver enzymes (Brown, et al., 2007; Teschke, Sarris, & Schweitzer, 2011).

The only published cases of clinical liver toxicity associated with recreational kava use have been two case reports by Russmann et al. (2003) in two New Caledonian women. One case reported four weeks of regular use of an unspecified amount of kava with concomitant medications, and the second case reported an intake of four cups (250 ml) of kava per day for a five week period. While the first case was confounded by concomitant medications, the second was not. The second case denied any alcohol intake and was not taking other medications. Russmann, et al. (2003) concluded that in these cases hepatotoxicity was caused by kava use. Currie and Clough, (2003), the World Health Organisation, (2007) and other commentators have noted that despite the claim that hepatic failure has not been recorded in traditionally prepared kava, the controversy remains as to whether the population has been systematically evaluated and adverse events documented.

Further research is necessary to determine the clinical significance of changes observed with increases in GGT and ALP in kava users (Brown, et al., 2007). There is some evidence that elevated GGT and ALP returns to normal on cessation of kava use. Clough, et al. (2003) reported that GGT and ALP elevations appear reversible with improvement and is noticeable within one to two weeks of abstinence from kava or with the reduction of usage to more moderate levels. Similarly, Russmann, et al. (2003) found that liver function tests for both women in his case reports returned to normal after kava had been discontinued. More research is clearly needed to identify at what levels of kava consumption changes in GGT and ALP occur and what this may mean over the long and short term for liver functioning.

Recent reviews by Teschke, Sarris, and Schweitzer, (2011) and WHO have concluded that it is possible, although rare, that any type of kava product may cause adverse hepatic reactions. The mechanism by which it may alter liver functioning is a matter of some debate. Brown, et al. (2007) suggests that raised GGT may be an artefact of GGT induction rather than a sign of liver toxicity, and therefore that changes in GGT are unrelated to liver toxicity. Teschke and colleagues (Teschke, Sarris, & Lebot, 2011; Teschke, Sarris, & Schweitzer, 2011) have argued that the mechanisms by which kava may be hepatotoxic result from problems in production such as harvesting of the wrong parts of the kava plant, inappropriate cultivars and the storage of kava. They specify both the use of poor quality plant material (stems, young plants,
inappropriate cultivars) and the possibility of mould being present in poorly stored kava as particular concerns (Teschke, Sarris, & Schweitzer, 2011). The WHO (2007) review into kava hepatotoxicity concluded that kavalactones may also rarely cause hepatic adverse reactions because of kava-drug interactions, excessive alcohol intake, metabolic IT immune mediated idiosyncrasy, excessive dose or pre-existing liver disease. Given this, the possibility that prolonged high levels of kava use may permanently effect liver functioning and result in liver damage cannot be ruled out. However, at this point the evidence suggests that moderate and short term use is unlikely to cause irreversible liver damage.

**Weight loss and nutrition**

Mathews, et al. (1988) reported findings of low body mass index (BMI) and a low proportion of body fat among ‘heavy’ kava users in Arnhem Land. Similar findings have since been reported by Clough, Rowley, et al., (2004) and Clough et al. (2003). Clough, Rowley, et al. (2004) investigated the interrelationships between the biomarkers of dietary quality, coronary heart disease risk and nutritional status in a convenience sample of 98 people in an Arnhem Land community in 2000. They examined BMI, percentage of body fat, and non-fasting plasma levels of lipids, carotenids and micronutrients. Results suggested that BMI, skin folds and body fats decreased with increasing use which is consistent with the findings of Mathews et al. Clough, Rowley, et al. (2004) however did not find that other indicators of dietary quality between kava users and non-users were significant, with the exception of total cholesterol, which was higher in current kava users than ex-kava users and non-kava users. In 2003, Clough and colleagues reported that continuing users had a lower BMI than previous kava users or non-kava users. Although the kava using sample from the 2003 study included a significant proportion of alcohol consumers (40%), Clough, Jacups, et al., (2003) concluded that kava use was associated with low body fat and dyslipidaemia indicative of poor nutrition.

In contrast, there is much less discussion of the relationship between kava use and low BMI or malnutrition in the Pacific making it difficult to identify the nature of the relationship between kava use and indicators of poor nutrition. There are anecdotal reports that have suggested that some ‘heavy’ users were ‘lean’ (Norton & Ruze, 1994). Kava (2001) reported that ‘heavy’ and ‘very heavy’ kava users were more likely to experience loss of appetite. That said, chronic weight loss is rarely suggested in the literature (Grace, 2003; Jowitt & Binihi, 2001; Kava, 2001). Several anecdotal reports exist of ‘very heavy’ users in the Pacific being ‘skinny’ (Frater, 1976; Ruze, 1990) but these are framed in explanations that they are exceptional cases. Furthermore, the effect of kavalactones and kava extract on body mass is not discussed in detail in the natural medicine literature. Given the relationship observed in Arnhem Land communities it is important to consider the mechanism by which kava may be related to low BMI. Mathews, et al., (1988) concluded that
malnutrition may come from loss of time in food preparation, loss of appetite and some kava induced nausea. Interestingly, Kava (2001) noted that ‘heavy’ kava using participants experienced loss of appetite but not weight loss in a Pacific sample. Thus it is likely that weight loss may be more related to social context of kava use than properties of the substance.

Any discussion around body mass needs to consider the unique health profile Pacific Islander people, particularly Polynesian peoples, who have the highest rates of obesity in the world and highest morbidity from diabetes (Rodriguez, 2007). Not only is more detail about kava required but also consideration of the food available and social patterns of eating as well as kava use. There is not detailed research into the effect of kava as an appetite suppressant. A closer examination of the relationship between kava consumption, appetite and body weight is warranted. The evidence to date suggests that the relationship observed in the Arnhem Land between kava and low BMI and low body fat may be better accounted for by pattern of kava use and overall diet.

**Cardiovascular effects**

In addition to raised cholesterol among kava users in Arnhem Land, there have been concerns related to effects of the substance on cardiovascular health. The Mathews, et al. (1988) study reported that heart rate increased with increasing kava usage, yet this finding has not been replicated. An anecdotal report emerged in the late 1990’s suggesting that kava was related to the deaths of several amateur sportsmen in Arnhem Land (Clough, Jacups, et al., 2003). In response to these anecdotal reports Young, Fricker, Thomson, and Lee (1999) investigated the incidence of sport-related sudden cardiac death related to ischemic heart disease in young Aboriginal sportsmen in the Northern Territory. They identified eight sport-related cardiac deaths, all of which occurred in the wet season at, or after half-time of games (Young, et al., 1999). To put these deaths in context, the incidence of ischemic heart disease (IHD) related death in the Northern Territory is 19–24 per 100 000 players, it is 0.54 per 100 000 player years in Victoria. Of note to the present review, of the eight cases, one of the individuals had consumed kava the night before the game and two had consumed both kava and alcohol. After examining the cases Young, et al. (1999) concluded that kava was a risk factor for IHD in the exercise context. They explain that both kava and alcohol are diuretics which may have contributed to dehydration and therefore increased the cardiovascular stress of exercise (Young, et al., 1999).

In contrast to these findings there is some evidence that two kavalactones (methysticin and dihydromethisticin) have a protective effect against ischemic damage in rodents (Backhausse & Krieglstein, 1992), the applicability of these findings to humans using kava recreationally is unclear. Considering the research completed to date, there is a possibility that kava can have an effect on cardiovascular functioning in the exercise context, but the incidence of this is very low.
Seizures
There have been some concerns raised that kava is related to seizures in chronic kava users. Brunton (1988) first noted that seizures in relation to withdrawal and toxicity were known of in the Pacific Islands. However, there is little information regarding seizures in the ethnographic or descriptive literature, which leads to the conclusion that they are rare. There have also been reported experiences of extrapyramidal side effects following the use of kava extract Schelosky, Raffauf, Jendroska, and Poewe (1995). In Arnhem Land, concern about kava induced seizures emerged in the late 1990's. Spillane, Fisher, and Currie (1997) presented a case study in the Medical Journal of Australia in which a 27 year old male experienced severe choreoathetosis (irregular involuntary movements involving the face, neck, trunk, extremities, or respiratory muscles) on three occasions following heavy drinking sessions. Examination of differential diagnoses ruled out other neurological causes, leading to the conclusion that excessive and prolonged kava use caused the seizure.

Later, Clough, Cairney, Maruff, Burns, and Currie (2001) retrospectively reviewed the medical case notes of 21 individual kava users who had experienced seizures from 1980’s until 1999. Of these, fifteen were known to the local community as ‘very heavy’ kava consumers. From the case notes, a total of 32 seizure episodes were identified, kava toxicity was suspected in 15 seizure cases and withdrawal effects in six cases. Clough, et al., (2001) suggested that the prevalence of seizures among ‘heavy’ kava users was related to the level of kava supply in Arnhem Land communities and they were more likely in times when supply was greatest. The evidence linking excessive kava use to seizures is limited, however it is a finding of concern and more research into the chronic effects of very heavy kava use is warranted.

Pneumonia and immune functioning
Anecdotal report from Arnhem Land has suggested that kava consumption may be related to lower immune functioning and pneumonia. Indeed Mathews, et al.’s (1988) kava using participants reported feeling more unhealthy than non-kava users, as did participants in Kava’s (2001) study in Fiji. Clough, Jacups, et al. (2003) investigated comprehensive health profiles of kava using and non-kava-using people in Arnhem Land and found that kava use was not an independent risk factor for pneumonia. The study did suggest that kava users maybe more susceptible to melioidosis. They also reported that kava using individuals had low lymphocyte levels coupled with high IgE levels which are indicative of poorer immune system response. Clough, Jacups, et al. (2003) suggested that these findings warrant concern about a kava-related immunological predisposition. There has been no similar work conducted in the Pacific Islands. Thus few conclusions can be drawn in relation to the effect of kava on immune functioning, it may be associated with poorer immune functioning and self-reports of poor health.
Ocular effects

Chronic ocular effects are rarely discussed outside of the ethnographic literature which has reported blood shot eyes as a feature of chronic use. For example, Geraghty 1827 stated:

The eyes of the Feejeeans (sic) are usually fine ... Some, however, have them red and bloodshot, which may probably be ascribed to [kava] drinking (Tomlinson, 2006).

The understanding of the effects of kava on eyesight is poorly explored. In Arnhem Land, anecdotal reports in public submissions regarding the effect of kava and opportunities for regulation have highlighted concern that ongoing use may be related to deterioration of eyesight (d'Abbs & Burns, 1997). Despite this comment, research has to date has not investigated if there are ongoing ocular effects of kava use.

Cognition

There are very few studies looking at the chronic effects of kava use on cognition, and very little detail in the ethnographic research to suggest that cognitive impairment was a notable concern in traditional Pacific Islander communities, nor is it mentioned in current research in the Pacific Islands. The only study to date looking at the effects of recreational use on cognitive function is that by Cairney, Clough, et al. (2003) who examined the effects of ongoing heavy use on saccade and cognition function among non-kava users, ex-kava users and current kava users in an Arnhem Land community. In relation to chronic effects the results of the study showed no impairment in cognitive or saccade functioning in ex-kava users compared to non-kava users suggesting that there was no lasting impairment. A recent review of the effects of kavalactones in extract or aqueous beverage on cognition are benign, however the majority of literature reviewed was from low doses of medicinal kava. Further research to replicate and extend the work of Cairney, Clough, et al. (2003) is clearly warranted.

Tolerance, withdrawal and kava dependence

There are conflicting viewpoints as to whether kava is addictive and whether tolerance and withdrawal syndromes for kava exist. The overuse of kava has been documented for centuries across the Pacific in ethnographic research and anecdotal report. Lemert (1967) suggested that Tongans have long thought that there are kava addicts, known in Tongan language as tangata inu kava or big kava drinkers. These drinkers were known for the capacity to imbibe great quantities over long periods of time. More recently in Vanuatu McDonald and Jowitt (2000) have reviewed anecdotal report in which health workers talk of kavaholics. Specific descriptions of and research into excessive use, tolerance and withdrawal are lacking. Acute withdrawal after abstinence
from kava has not been studied satisfactorily (Ang-Lee, et al., 2001). Informants from the McDonald and Jowitt (2000) study reported that kavaholics demonstrate habitual kava use behaviour and show signs of agitation and sleep disturbance without kava. A possible more serious withdrawal effect was suggested by Clough, et al. (2001) who reported several case studies in which kava withdrawal may be associated with seizures. To date our knowledge of kava withdrawal is very limited, more research is warranted.

There is not consistent evidence related to tolerance. Duffield and Jamieson (1991) investigated the effects of both aqueous kava and lipid kava extract on mice and found that mice developed tolerance to aqueous kava but not to the kava extract. This finding leads to the hypothesis that tolerance may have been accounted for by another unknown water-soluble ingredient (Duffield & Jamieson, 1991). The results by Duffield and Jamieson (1991) have not been replicated. d’Abbs and Burns (1997) concluded that users may become tolerant to some effects of kava but not to others. Clearly more detailed laboratory research in animal models as well human research is indicated.

While there is an absence of evidence in relation to tolerance and withdrawal, there is consistent suggestion in the literature that heavy kava users may become dependent. Clough, Jacups, et al. (2003) suggested from participant observation notes that heavy kava users in Arnhem Land had an obsession with kava, and prioritised kava over things like food, leading to less time preparing and eating food. Similarly Cawte (1986) refers to a ‘cult’ of kava use in which groups of people are preoccupied and obsessed with kava. While obsession and cult are emotive terms, they have only been used in research conducted in Arnhem Land it may be of more value to consider heavy kava use through the same framework as other substances of abuse. The World Health Organisation’s classification of diseases – the ICD-10 (World Health Organisation, 1992) describes mental and behavioural disorders due to psychoactive substance. Of importance to the current discussion are the diagnoses of Harmful Substance Use and Dependence Syndrome (World Health Organisation, 1992). Summaries of these criteria are presented in Box 1.1 (page 30). The ICD-10 classification provides clearer terms from which to operationalize and also standardise discussions of heavy kava use. Clough, Jacups, et al.’s (2003) description of obsession with kava is consistent with substance use disorders therefore it may be more beneficial to discuss heavy patterns of use in terms of these criteria. This will also enable behaviours associated with heavy kava use to be conceptualised in the same way as other substances and will allow discussion of preoccupation with kava to be considered as not just an Aboriginal ‘obsession’. From the description of dependence syndrome in Box 1.1 (page 30) it is important to note that only three criteria must be present to diagnose a dependence syndrome which means tolerance and withdrawal are not necessary for substance use to be diagnosed as clinically significant.
Box 1.1: ICD – 10 Codes for Harmful Use and Dependence Syndrome due to psychoactive substance use (Source: World Health Organisation, 1992)

**F1x.1 Harmful use**

A pattern of psychoactive substance use that is causing damage to health. The damage may be physical (as in cases of hepatitis from the self-administration of injected drugs) or mental (e.g. episodes of depressive disorder secondary to heavy consumption of alcohol).

**Diagnostic guidelines**

The diagnosis requires that actual damage should have been caused to the mental or physical health of the user. Harmful patterns of use are often criticized by others and frequently associated with adverse social consequences of various kinds. The fact that a pattern of use or a particular substance is disapproved of by another person or by the culture, or may have led to socially negative consequences such as arrest or marital arguments is not in itself evidence of harmful use.

**F1x.2 Dependence syndrome**

A cluster of physiological, behavioural, and cognitive phenomena in which the use of a substance or a class of substances takes on a much higher priority for a given individual than other behaviours that once had greater value. A central descriptive characteristic of the dependence syndrome is the desire (often strong, sometimes overpowering) to take psychoactive drugs (which may or may not have been medically prescribed), alcohol, or tobacco. There may be evidence that return to substance use after a period of abstinence leads to a more rapid reappearance of other features of the syndrome than occurs with nondependent individuals.

**Diagnostic guidelines**

A definite diagnosis of dependence should usually be made only if three or more of the following have been present together at some time during the previous year:

- a strong desire or sense of compulsion to take the substance;
- difficulties in controlling substance-taking behaviour in terms of its onset, termination, or levels of use;
- a physiological withdrawal state when substance use has ceased or been reduced, as evidenced by: the characteristic withdrawal syndrome for the substance; or use of the same (or a closely related) substance with the intention of relieving or avoiding withdrawal symptoms;
- evidence of tolerance, such that increased doses of the psychoactive substances are required in order to achieve effects originally produced by lower doses;
- progressive neglect of alternative pleasures or interests because of psychoactive substance use, increased amount of time necessary to obtain or take the substance or to recover from its effects;
- persisting with substance use despite clear evidence of overtly harmful consequences, such as harm to the liver through excessive drinking, depressive mood states consequent to periods of heavy substance use, or drug-related impairment of cognitive functioning; efforts should be made to determine that the user was actually, or could be expected to be, aware of the nature and extent of the harm.

Narrowing of the personal repertoire of patterns of psychoactive substance use has been described as a characteristic feature. (e.g. a tendency to drink alcoholic drinks in the same way on weekdays and weekends, regardless of social constraints that determine appropriate drinking behaviour).

It is an essential characteristic of the dependence syndrome that either psychoactive substance taking or a desire to take a particular substance should be present; the subjective awareness of compulsion to use drugs is most commonly seen during attempts to stop or control substance use.

**Tiredness, lethargy and ‘amotivational syndrome’**

It has been suggested that heavy kava use results in tiredness the next day, lethargy and apathy or a loss of interest in other aspects of life. This group of symptoms is often referred to as a kava ‘amotivational’ syndrome. The
presence of lethargy and apathy are widespread in descriptive studies both in Arnhem Land (Alexander, et al., 1987; Clough, et al., 2000) and across the Pacific Islands (Lemert, 1967; McDonald & Jowitt, 2000). For example, McDonald and Jowitt (2000) reported that tiredness the day after kava use and lethargy were reported by both kava users and non-kava users when describing kava users.

Similarly, Aporosa (2008) researched impact of kava consumption on performance among teachers in rural Fiji. He reported that 35% of teachers consumed kava the night before teaching, and it was not uncommon for participants to report drinking for 30 hours per week. Aporosa’s (2008) informants all stated that they felt ‘hung over’ the day after heavy drinking, but that this hangover was different to alcohol hangover. They described experiences of difficulties concentrating and difficulties with memory, lethargy, sleepiness and a lack of energy. Student informants also suggested that they could identify when teachers were hung-over (Aporosa, 2008). Consistent with these findings, a common side effect of kava used in natural medicine includes sleepiness (Wheatley, 2001).

Despite the widespread anecdotal report among kava users and their families that kava results in an ‘amotivation syndrome’ there has been no research which has operationalized and systematically studied the characteristics of an ‘amotivational syndrome’ and its relationship to dose or duration of use. McDonald and Jowitt (2000) caution that there will be great difficulty in determining an ‘amotivational syndrome’. They draw parallels to the cannabis literature whereby cannabis use is often thought to result in an ‘amotivational’ syndrome, yet research has been yet to demonstrate if and how cannabis use is related to amotivation. There is little discussion in the literature as to whether ‘amotivation’ is an acute ‘hangover’ or a pattern which emerges as an effect of chronic kava use. Consequently it may be better to consider lethargy, tiredness and loss of interest in other activities as consequences, and distinguish between acute and chronic effects.

In examining possible mechanisms for acute and chronic lethargy and tiredness, it is important to consider that they may be a consequence of substance use behaviour, rather than of the substance itself. For example drinking sessions may occur over long periods of time resulting in general tiredness in the days following use due to lack of sleep, as opposed to kava itself directly causing lasting lethargy and fatigue. While it is recognised that kava causes somnolence as part of intoxication, whether these effects last into acute hangover or have a chronic effect is unknown. In summary, the anecdote suggests constituents of kava may cause chronic tiredness and lethargy by an as yet unrecognised mechanism.

With regards to the chronic effect of a ‘loss of interest in other activities’ it is important to consider the drinking patterns in which this may occur. At high levels of habitual use, kava may take priority over other activities resulting in
a lack of motivation to attend to other tasks; this is consistent with the description of substance dependence in Box 1.1 (page 30). An alternative view is described by a Northern Territory coroner investigating the death of a baby, detailed by d’Abbs (1993) Coroner Lowndes commented that in an Arnhem Land community kava use was more a symptom of ‘apathy’ than a cause. In this case apathy is part of a broader consequence of colonisation and alienation. Thus, at this stage, while there is no evidence to suggest the exact nature or presence of an amotivational syndrome the pervasiveness of the belief that kava causes chronic tiredness, lethargy and loss of interest and cannot be overlooked. Further systematic research is required to determine the characteristics of these symptoms and the mechanisms by which they may occur.

**Risk to infants in pregnancy and breastfeeding**

There is no research to date examining the effects of kava on foetal development. Modern reviews of the literature relating to kava suggest that is best avoided during pregnancy and while breast feeding (e.g. Food Standards Australia New Zealand, 2005; Sarris, et al., 2011). Interestingly there are variable social prohibitions regarding drinking kava while pregnant in the Pacific. Frater (1976) noted that women may use it in both pregnancy and while lactating to treat various ailments, whereas others have suggested that kava use in pregnancy is taboo.

**Sexual functioning**

There has been some suggestion that male kava users experience impotence and loss of sexual drive as a consequence of kava use (Kava, 2001). To date there is no research, either controlled or descriptive, which has investigated the prevalence and dose response associated with impotence or loss of sexual drive, thus at this stage it is not possible to draw any conclusions regarding the relationship of kava to sexual functioning.

**Effects of alcohol and kava consumption**

In several Pacific countries there is concern about the growing links between kava and alcohol consumption (McDonald & Jowitt, 2000). In Vanuatu and Fiji it is common to drink a few small beers following a kava session, known as ‘washdown’, McDonald and Jowitt (2000) caution that there is an emerging normality to consume both substances in some regions of the pacific. In Arnhem Land, there has been some anecdotal report that alcohol and kava are consumed together (d’Abbs, 1993). A summary of how the two substances interact is worthy of consideration in any discussion about the health effects of kava.

Alcohol has been found to potentiate kava inebriation in mice (Duffield & Jamieson, 1991). The potentiating effect of alcohol and kava has been confirmed in a laboratory setting with human participants by Foo and Lemon.
who found participants using both kava and alcohol had higher subjective ratings of intoxication and impairment, and performed more poorly on cognitive tasks than those using either substance alone or a placebo. The potentiation is consistent with both substances acting on the GABA system and research suggests that kava is unlikely to potentiate alcohol inebriation via inhibition alcohol dehydrogenase (Anke, Fu, & Ramzen, 2006). In addition to potentiating intoxication, as already discussed in 1.3.7 kava inhibits the CYP450 system which may affect the metabolism of alcohol and increase the risk of damage to liver functioning (Li & Ramzen, 2010). Therefore the evidence to dates suggests that using both kava and alcohol may result in potentiating alcohol related harm.

Social consequences of kava use
Consideration of pattern of use, context of use and the proportion of the population who use kava is critical to understanding the social impacts of kava use. There are considerable differences between and within both Pacific and Arnhem Land communities; consequently the exact nature of social consequences of kava use is variable and difficult to define. Examination of the social consequences of kava use in the Pacific are largely anecdotal (Schmich & Power, 2010), however there is a more detailed examination of the social effects in Arnhem Land communities. Social consequences of use will be discussed in more detail in Sections 1.7 (page 67) and 1.8 (page 81), but a summary of the most commonly discussed social effects of kava use are presented below.

Social cohesion
Kava is frequently described as an important component of social cohesion in Pacific communities (Finau, Stanhope, & Prior, 1982; Grace, 2003; Singh, 2004b). Authors argue that the relaxing effects of kava, coupled with little effect on cognitive capacity create a pleasant social environment in which ‘clear minded discussion’ is possible. Social cohesion has not been studied empirically yet it has face validity. Common descriptions of kava intoxication include a sense of calm and peacefulness, consistent with these effects kava has been used historically and is still used currently in the Pacific before meetings to support calm discussion. Similarly, initial reports in Arnhem Land suggested that kava provides fellowship (Alexander, et al., 1987; Cawte, 1986).

Community participation and family functioning
In contrast to the benefits of social cohesion, there is concern that heavy kava use is related to a lack of activity in communities. The primary concern of much of the research in Northern Australia has been an observed decline in community activity and neglect of roles (family roles, traditional activities, community cleanliness, participation in employment and the organisation of sports and other events) related to an increase in the prevalence of kava use.
(Clough, 2003; Clough, et al., 2000; Clough, Currie, Yunupingu, & Conigrave, 2006). Similarly in the Pacific heavy use is linked to neglect of farms (Tomlinson, 2006) and other occupations (Aporosa, 2008). Aporosa (2008) has argued that kava consumption in workplaces in Fiji is likely to result in poor performance. Similarly, d’Abbs and Burns (1997) reported that Arnhem Land informants in an investigation of kava regulation commented that all night kava drinking sessions led to the neglect of community actives. Indeed the collapse of a football competition in Arnhem Land was attributed to high populations of heavy kava use (d’Abbs & Burns, 1997).

In addition to neglect of community duties heavy kava use is related to the neglect of family duties particularly involved with the care of children. In Arnhem Land during periods where use among women and men was high this included neglect of supervision of children, lack of preparation of food and neglect of hygiene (Chalmers, 1995). Use among men in both the Pacific and Australia is linked to less time with family and neglect of child care responsibilities, home maintenance and economic support of the family. McDonald and Jowitt (2000) have argued that increasing lengths of drinking sessions in the Pacific from dusk till dawn are occurring at the expense of family duties and to avoid family duties. Jowitt and Binihi (2001) investigated attitudes of drinkers and non-drinkers in Vanuatu to identify reasons why people drink; patterns in drinking, effects on health, how it affects diet, how it affects family life, how much money is spent, and how it is afforded. They found that kava use was seen as creating family tensions (particularly when men drink in kava clubs with women present), money troubles and neglect of family (Kava, 2001; Nosa & Ofanoa, 2009). d’Abbs & Burns (1997)’s informants in Arnhem Land also commented that kava use was related to family arguments around money.

At the extreme, parental kava use has been linked to child malnutrition, although d’Abbs (1993) points out that despite opinions of health professionals there has been no research that has examined the link between kava use and child malnutrition. d’Abbs (1993) cited the coronial report of a baby in a kava using community in Arnhem Land where the coroner surmised that there was no direct link between kava use and the child’s death arguing ‘... it is too simplistic to attribute the incidence of malnutrition to the consumption of kava’ (Lowndes, in d’Abbs, 1993). The coroner argued that the spending of money on kava may contribute to the lack of money available to spend on food.

Finally, kava is also described as having an impact on intimate relationships. In Vanuatu it is thought that it is linked to promiscuity (McDonald & Jowitt, 2000) whereas the lack of sexual desire is thought to cause relationship problems in Tonga (McDonald & Jowitt, 2000). The effects on intimate relationships appear largely related to the socio-cultural context in which kava is consumed.
Research into the effects of kava on community and social functioning are descriptive and anecdotal, the vast amount of confounds in the social environment (such as policy changes, population changes and economic changes) make it difficult to determine what role it plays in the neglect of community and family roles. Aporosa (2008) and Tomlinson (2006) both suggest that decline in community participation may be a consequence to the purported lethargy resulting from heavy kava use, yet this also may be related to dependence syndrome criteria, such as neglecting alternate activities in favour of substance use.

Of note Clough, (2003) has commented that assessment of how communities and families are disrupted by kava use needs to consider not only the level of use by individuals but also the population rates of kava use. Clough (2003) proposed if more than half the males and 20–40% of females are using kava and 20% of available cash goes to purchasing it, effects on community functioning are likely (Clough, 2003). Considering that this summation has not been investigated over time and across communities (both within Arnhem Land and across different Pacific Islander communities) they cannot be interpreted as firm indicators of when harm will emerge.

**Economic impacts**

There have been several studies in Arnhem Land which have argued that heavy kava use has a negative economic impact on communities. Clough (2003) has pointed out that high prevalence of users in small community’s results in a cash drain on that community. This has wide ranging implications where the money spent on kava in several Arnhem communities is creating a greater cash drain than all other substances (Clough, 2003). The degree of this cash drain is related to the regulatory framework under which kava falls. When kava is bought and sold predominantly through the black market a greater cash drain occurs (d’Abbs & Burns, 1997). Greater detail regarding the impact of black-market kava is presented. Secondary economic impacts arising from purported reduced community participation associated with use have also been documented. For example Local Government Association of the Northern Territory (2005) commented that in a particular community in Arnhem Land heavy kava use was driver for low uptake of employment opportunities and staff retention. These economic impacts on the whole of communities are not described in literature from the Pacific, however economic impacts on individual users and their families have been described (Aporosa, 2008; McDonald & Jowitt, 2000), it is possible then that broader economic impacts may occur in Pacific communities where a high prevalence of heavy kava use exists.

**Alcohol related harm**

The benefits of kava are often discussed in terms of what it does not cause, particularly in relation to the problems caused by alcohol. It is a common belief in the Pacific Islands and in Arnhem Land that kava reduces alcohol-
related problems (Alexander, et al., 1987; Schmich & Power, 2010). It is argued that the consumption of kava results in relaxation whereas alcohol intoxication can result in agitation and aggression, therefore by making kava available alcohol related harm will be diminished. The contrasting possibility that if kava is not available then alcohol related violence will increase is also cited in opinion pieces in popular media (Pione, 2007; Ravens, 2007). There have been no systemic or well-designed descriptive studies in the Pacific or Australia examining the relationship between kava availability and alcohol related harm. Furthermore descriptive studies in Arnhem communities have typically been conducted in communities in which access to alcohol is limited (Alexander, et al., 1987; Mathews, et al., 1988). In these studies alcohol related harm is described as reduced, yet it is not clear if this is related to the presence of kava or alcohol restrictions.

Chalmers (1995) compared alcohol related arrests in two Arnhem communities, one that used kava and one that did not. The kava using community did not have fewer alcohol related arrests compared to the non-kava using community and therefore she concluded that alcohol related consequences occur regardless of the prevalence of kava in communities. It is important to note that although, overall, the physical harms caused by kava are less than those caused by alcohol (Nutt, King, & Phillips, 2010) the reality is there is rarely a situation where only one is available, which makes the use of kava as an agent to minimise alcohol related harm unlikely to be effective. However it is important to acknowledge these concerns as they are areas of great public interest to both Pacific Islander and Aboriginal communities.

1.4 Summary – effects of kava on health and wellbeing

The preceding review has provided an overview of the more commonly hypothesised acute and chronic effects of kava consumption. The research described above is predominantly from descriptive studies that have occurred over a small period of time, by a small number of authors. In many of the studies a small cohort of participants are examined on a large range of variables (e.g. Clough, et al., 2003; Mathews, et al., 1988; McDonald & Jowitt, 2000) which limits the capacity for detailed statistical examination and adherence to methodological rigour. Rychetnik and Madronio (2010) recently conducted a systematic reviewed on empirical studies into health and social effects of kava looking only at recreational kava use. The review allocated levels of evidence based on study design and consistent with the level of evidence specified by the National Health and Medical Research Council (NH&MRC, 1999) (summarised in Table 1.1, page 37) and appraised the evidence for each health outcome using standard epidemiological criteria for causality (Rychetnik & Madronio, 2010). The outcomes of Rychetnik and Madronio’s (2010) review are summarised in Table 1.2 (page 38); the maximum level of evidence detailed by Rychetnik and Madronio (2010) – maximum level is III-2 – underscores the lack of detail known about the effects of kava. The review argues that causality is indicated in the
relationship between kava and kava dermopathy, weight loss, elevated GGT and nausea.

Table 1.1 Levels of evidence allocated to individual studies

<table>
<thead>
<tr>
<th>Level of evidence</th>
<th>Study Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level I</td>
<td>Systematic review of all relevant randomised control trials</td>
</tr>
<tr>
<td>Level II</td>
<td>At least one properly designed randomised control trial</td>
</tr>
<tr>
<td>Level III-1</td>
<td>Evidence is from well-designed from pseudo-random controlled trials</td>
</tr>
<tr>
<td>Level III-2</td>
<td>Evidence is from comparative studies with concurrent controls and allocation not randomised (cohort studies), case-control studies or interrupted time series with a control group</td>
</tr>
<tr>
<td>Level III-3</td>
<td>Evidence obtained from comparative studies with historical control, two or more single arm studies or interrupted time series without a parallel group</td>
</tr>
<tr>
<td>Level IV</td>
<td>Evidence obtained from case studies, either post-test or pre- and post-test</td>
</tr>
</tbody>
</table>

Source: (NH&MRC, 1999)

Rychetnik and Madronio’s (2010) review provides valuable information, although it does not investigate the relationship between social consequences of use and social situations in which they occur. For example loss of time and money and weight loss are associated with kava use according to Rychetnik and Madronio (2010), but these findings must consider the lack of studies that occur outside Arnhem Land, making it particularly difficult to make conclusions about the effects of kava on social wellbeing in a broader context of recreational use. Baker (2011) cautions that cultural variations in how a substance is prepared and consumed can alter its biological profile indicating how it is important to consider the range of contextual and cultural factors which impact on substance use. Thus Rychetnik and Madronio’s (2010) conclusions regarding an association between weight loss may be limited to certain consumption patterns of food and kava and social contexts in the Northern Territory.
Table 1.2 Summary of evidence on the health and social effects of drinking kava

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Symptom</th>
<th>Level of evidence</th>
<th>Consistency across studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Causality indicated</td>
<td>Kava dermatitis</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Weight loss</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Raised liver enzyme GGT</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Nausea, indigestion</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td>Association indicated – causality unclear</td>
<td>Red eyes</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Impotence</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Poor overall health</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Raised cholesterol</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Social effects: loss of time and money</td>
<td>III-2</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Low motivation</td>
<td>IV</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Reduced alcohol and violence</td>
<td>IV</td>
<td>Yes</td>
</tr>
<tr>
<td>Association hypothesis</td>
<td>Fits/seizures</td>
<td>IV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Meliodosis</td>
<td>IV</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ischemic heart disease</td>
<td>III-2</td>
<td>No</td>
</tr>
</tbody>
</table>

Source: (Rychetnik & Madronio, 2010)

The present review, and that by Rychetnik and Madronio (2010), emphasises that there are few firm conclusions that can be drawn about the effects of kava on health. Notable exceptions are the effect of prolonged use on liver enzymes and on the skin which have been shown consistently in both Pacific and Arnhem Land populations.

It is possible that heavy recreational use does have more serious effects including: impaired motor co-ordination, ocular ill health, seizures, heart attacks, appetite loss and poor overall health. In understanding the risks posed by kava these possible effects need to be understood in relation to the pattern and social context in which they occur (Baker, 2011) and also their incidence rate. The World Health Organisation’s review into the effect of kava on hepatotoxicity comments that an adverse event rate is difficult to identify considering that the exposed population to kava is very large. They estimate an adverse event rate from kava may be 1 in 100,000 (World Health Organisation, 2007) and acknowledge that moderate and low levels of kava use have little to no ongoing health or social risks. Similarly d’Abbs (1993) comments that heavy use has harmful effects in Aboriginal communities whether as a result of kava or a combination of kava with other factors, but
d’Abbs (1993) explains that these dangerous are relative, and that kava can be used in such a way that harms are negligible.

When the health effects that may be the consequence of other environmental factors are taken into account, it can be concluded that ‘heavy’ kava users and ‘very heavy’ kava users are likely to be underweight (in Arnhem Land only), have kava dermopathy, not be participating effectively in community and family life, to be diverting finances away from needed items for kava and may be at risk for infection as a consequence of lower immune functioning and unhygienic preparation of kava. There is the likelihood that kava may affect driving and other work practises due both to the soporific effects of intoxication and the delayed effects of feeling tired. In summarising the harms and benefits of kava use it can be understood that in both Australia and the Pacific Islands that there appears to be a dose related effect of kava on self-reported health and on social functioning. Food Standards Australia New Zealand (2005) has concluded that in contrast to heavy users there is no evidence that moderate use of kava has adverse health consequences.

These conclusions raise the question of how to identify what ‘high levels’ of kava use are. In examining all the available evidence in Arnhem Land, Clough has argued that if more than 400 g of kava is used per week an individual is likely to suffer more serious consequences, and if more than half the males and 20–40% of females are using it and 20% of available cash goes to purchasing it, effects on community functioning are likely (Clough, 2003). Considering that this summation has not been investigated over time and across communities (both in Arnhem Land and across different Pacific Islander communities) the dimensions specified by Clough cannot be interpreted as firm indicators of when harm will emerge. However his summary clearly puts harm into context; there are individual harms and community harms and how these emerge depends on both how much kava individuals are using and what proportion of the local population are using.

In weighing up the evidence the WHO report that for medicinal kava taken in doses up to 210 mg of kavalactones has been associated with few negative consequences. They argue that doses of 400 mg daily and above are associated with the development of kava dermopathy and other negative adverse effects (World Health Organisation, 2007). Theses doses are small compared to the amount of kava consumed by recreational kava drinkers, so how much recreational kava is safe to use is still unknown, the 400g suggestion by Clough (2003) remains the most popular best estimate.

The present review raises more questions than it answers, similarly in a review of kava regulation d’Abbs (1993) questions whether there is sufficient evidence about kava from which to design appropriate policy. A need for continued research that examines the effects of both recreational kava and medicinal kava in controlled and well-designed experiments has been a recommendation from a range of inquiries and reports (d'Abbs, 1993; d'Abbs
& Burns, 1997; Food Standards Australia New Zealand, 2005; Jowitt & Binihi, 2001; Rychetnik & Madronio, 2010; Sarris, et al., 2011; World Health Organisation, 2007). Interestingly in the US, kava has come to the attention of the National Toxicology Program (NTP) because its use in natural medicine is increasing and little is known about the carcinogenicity of kava and its constituents (Fu, et al., 2008). Fu, et al. (2008) explained that indications that kava extract may cause damage to the liver, kidney, brain and hematopoietic system were of concern. They also recommended that reproductive and neurotoxicity studies be conducted. The results of the NTP studies are not yet available but although their focus will be medicinal kava the results may provide more information regarding the dose effects of kava on health.

1.5 Regulation in Australia

It is important to consider the regulatory context in which kava is used, and within which research has been conducted in Australia prior to examining the prevalence, patterns and social context of kava use and any changes in use over time. Given the difficulty in clearly determining the impacts of kava on health and wellbeing, regulation has been a challenge for both state and Commonwealth governments. In the relatively short period of time in which kava has been used regularly in Australia by non-Pacific Islanders there have been 19 policy milestones (summarised in Table 1.3, page 41) resulting in six different periods of regulation which are described below. These regulations have predominantly affected the Northern Territory. The regulation of kava in Australia is complicated by the need to regulate both recreational kava (aqueous beverage) and medicinal kava (kava extract and kava powder used in natural medicine). The focus of the summary below is in relation to the regulation of the recreational kava. An overview of the impacts of these regulatory approaches is contained in Chapter 2 (page 86).

1982 – 1990: Unregulated kava use

Kava was initially classified as a food in Australia and was freely available to be bought and sold. In 1982 kava use emerged in several areas in Arnhem Land in the Northern Territory. During this time some communities adopted self-regulatory approaches including restricting sales, banning children from using kava, and banning it entirely Clough and Jones (2004). Despite these attempts at self-regulation some communities had difficulty in exercising control over sales. In Western Australia, there were concerns that kava use would emerge as sellers extended their influence across the border. Aboriginal elders in conjunction with the WA Government sought to limit kava; the WA Government then banned the sale and supply under the WA Poisons Act. This ban did not prevent possession of kava use which enabled use of kava by Pacific Island communities to continue.
<table>
<thead>
<tr>
<th>Year</th>
<th>Jurisdiction</th>
<th>Event</th>
<th>Legislation</th>
<th>Implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre 1980</td>
<td>Commonwealth</td>
<td>Kava is classified as a food substance.</td>
<td></td>
<td>No regulations on sale or supply.</td>
</tr>
<tr>
<td>Late 1981</td>
<td>NT</td>
<td>Introduction of kava to Aboriginal communities in East Arnhem Land.</td>
<td></td>
<td>Self-managed by communities.</td>
</tr>
<tr>
<td>1988</td>
<td>WA</td>
<td>Following concern of local Kimberly Aboriginal elders after attempted introduction of kava into WA, sale and supply of kava is restricted in WA.</td>
<td>Section 22 of the WA Poison Act</td>
<td>The sale and supply of kava is restricted, but possession of kava is allowed.</td>
</tr>
<tr>
<td>1990 Feb</td>
<td>Commonwealth</td>
<td>Kava is listed as a Schedule 4 drug by the National Health and Medical Research Council (NHMRC), thereby placing kava under the Therapeutic Goods Administration.</td>
<td>Therapeutic Goods Administration</td>
<td>It is expected that states and territories will enact corresponding legislation, which only occurred in WA and NT.</td>
</tr>
<tr>
<td>1990 May</td>
<td>NT</td>
<td>NT Government invokes Consumer Protection Act to prohibit the sale of kava. Kava is declared a dangerous good, and kava supply is regulated in the Northern Territory.</td>
<td>Consumer Protection Act</td>
<td>Sale and supply of kava prohibited – except with written approval of the minister. Kava using communities are able to apply for kava to NT government. Amounts of kava were restricted to 50 g per person per day and only sold to residents over 18 and sold by local council or other not for profit.</td>
</tr>
<tr>
<td>1991</td>
<td>Commonwealth</td>
<td>Kava extracts are officially listed as Schedule 4 drug.</td>
<td>Therapeutic Goods Administration</td>
<td>As a Schedule 4 drug kava is subject to a range of requirements and restrictions at a national level.</td>
</tr>
<tr>
<td>1992</td>
<td>NT</td>
<td>Review of the 1990 NT legislation.</td>
<td></td>
<td>Finds that the system at work is not reducing the consumption of kava use in East Arnhem communities.</td>
</tr>
<tr>
<td>1993 August</td>
<td>Commonwealth</td>
<td>National food Authority drafts kava as a prohibited botanical</td>
<td>Food Standards Council Australia and New Zealand</td>
<td></td>
</tr>
<tr>
<td>1993</td>
<td>Commonwealth</td>
<td>NHMRC rescinds decision to place kava extract as a schedule 4, TGA follows suit and declares kava not a therapeutic good.</td>
<td>Therapeutic Goods Administration</td>
<td>Kava extract is no longer declared a therapeutic good, and therefore control is returned to the states.</td>
</tr>
<tr>
<td>1994</td>
<td>Commonwealth</td>
<td>Kava is gazetted as a botanical plant prohibited for sale as a food.</td>
<td>Food Standards Council, National Food Authority (NFA)</td>
<td>The importation of commercial supply is banned. It cannot be imported as a food. This disrupts the goal of the NT legislation which was not to use prohibition.</td>
</tr>
<tr>
<td>Year</td>
<td>Location</td>
<td>Event</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>----------</td>
<td>-------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1994</td>
<td>NT</td>
<td>NT govt suspends all kava licences to bring NT into line with NFA and Commonwealth law.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>NT</td>
<td>NT government seek formal exemption to kava law to allow a continuation of a kava licensing system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>Commonwealth</td>
<td>Draft Kava management strategy developed by National Food Authority.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>NT</td>
<td>Draft kava management bill is tabled following consultation. A complete ban would not be effective in eliminating black market. The goal of the legislation to regulate not use prohibition.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct 1997</td>
<td>Commonwealth</td>
<td>National Code of Kava Management was endorsed by Federal and State Territory Ministers. This code with amendments to customs and food regulation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 1998</td>
<td>NT</td>
<td>Kava Management Act is passed in the NT government.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>May 2002</td>
<td>NT</td>
<td>Four retailers and one wholesaler were approved to sell kava in licence areas in the Northern Territory. Changes are made to Kava Management Plans to further prevent the heavy use of kava.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>NT</td>
<td>Review of the Kava Management Act.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Commonwealth</td>
<td>FSANZ recommends the continuation of the regulation of traditional kava beverage to be allowed under Standard 2.6.3.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Australia Wide</td>
<td>The Federal Minister for Health calls for the ban on the importation of kava.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1990 – 1993: Kava licensing trialled in Northern Territory – unregulated outside NT and WA.

In May 1990 in response to growing consumption of kava in Arnhem Land and the emergence of research outlining consequences of kava use (i.e. Mathews, et al. 1988) the Commonwealth and NT governments classified kava as a dangerous good and a kava licensing system was established in the NT, the laws did not influence kava availability outside the NT. Under the licensing system kava sales were permitted if the NT Minister for Health granted approval, at which point kava could only be sold by community-controlled organisations. Five communities decided to sell licensed kava. Sale restrictions included age restrictions (only over 18 years) and a daily maximum of 50 g (d’Abbs, 1993). Under this legislation the sale and supply of kava in the NT outside licensed areas was illegal but possession was not, consequently it was particularly difficult for police and prosecutors to effectively prevent the black-market continuing (d’Abbs, 1993). The goal of the legislation was to reduce the per capita consumption of kava. Nationally, in the wake of Mathews, et al.’s (1988) research the Australian Government’s Ministerial Council Drug Strategy endorsed the recommendation that kava use should be actively discouraged, yet there is little record of what steps were taken at this point to discourage kava use outside the NT and WA. There is no record of consultation with the Pacific Islander community in Australia regarding kava use at this time.


In 1994 the Commonwealth Government gazetted kava as a prohibited botanical under the Food Standards Act. This meant that the licensing laws in the NT contravened the Food Standards Act and as a consequence licensed retails were no longer permitted to sell kava. Thus the licensed trade ceased. The Commonwealth did not undertake to enforce the new prohibition on importing kava meaning that non-authorised suppliers were somewhat immune from any danger of prosecution. Clough and Jones (2004) describe this period as a ‘regulatory hiatus’ and the ban arguably created an opportunity for black marketers to emerge in the NT because people were able to import kava with minimal threat of prosecution (Clough, 2003; Clough & Jones, 2004; Urquhart & Thomson, 2008). In 1995 the NT government requested an exemption from the Commonwealth decision in order to maintain the licensing system, in response the National Food Authority (NFA) conducted an inquiry into kava that sought national submissions.

The NFA’s inquiry culminated in November 1995 with the release of a Draft National Kava Management Strategy. The draft was tabled in Federal Parliament in 1996 and a final National Code of Kava Management (NCKM) was endorsed by Federal, State and Territory Ministers in late 2001. The goal of the legislation was to regulate not prohibit use, and to ensure provision for
cultural use (Urquhart & Thomson, 2008). The draft national strategy comprised four components:

1. a national system for restricting and monitoring the importation of kava;
2. a National Code of Kava Management by which all importers, wholesalers, retailers and distributors must abide;
3. a new addition to the Food Standards Code, which would apply only to kava. This would prohibit kava’s use as an ingredient in other food and require labelling on packages of kava; and,
4. an option for States and Territories to impose their own, more restrictive legislation to address public health concerns and follow up with education and monitoring (National Food Authority (Australia) 1995).

1998 – 2001: Kava illegal in the NT and WA: development of the National Code of Kava Management

From 1998 – 2001 the legislation to enable the NCKM was established. During this time the sale of kava was illegal in the Northern Territory and remained illegal in Western Australia. Between the NCKM being developed and coming into effect, the NT government used authority granted in the draft strategy to develop kava legislation application to the kava situation (Urquhart & Thomson, 2008). In 1998, the NT government passed The Kava Management Act, which was founded on harm minimisation and prohibiting the sale of kava except when in licensed premises, the licensing system did not come into force until 2001 when the NCKM was finalised.


Under the NCKM, the Australia and New Zealand Food Standards Code described kava as a permitted food and was regulated under Standard 2.6.3. (See Box 1.2, page 46). The NCKM aimed to restrict the sale and advertising of kava (with natural medicines containing kava also subject to the Therapeutic Goods Administration (TGA) and the National Drugs and Poisons Schedule Select Committee (NDPSC) in Australia. The NCKM included provision for the states to apply more restrictive measures if they required. In WA kava remained banned under the Poisons Act. In the rest of Australia (with the exception of the NT) kava was listed as a controlled substance under the Customs (Prohibited Imports) Regulations Act. It was only to be imported into and sold in Australia under license. A person wishing to import kava was required to hold both a License to Import and a Permit to Import a Controlled Substance. In addition travellers to Australia who are aged 18 years or over can bring in up to two kilograms of kava (for nontherapeutic purposes) without a license or permit, provided it was in their accompanying baggage (Urquhart & Thomson, 2008).
In the NT, the licensed sale of kava commenced under the Kava Management Act in 2002. Communities were able to apply for a kava retail licence if they developed a kava management plan. Under this Act kava was not to be consumed outside a licensed area. The Act stipulated that retail licensees could only purchase kava from one designated wholesaler. The contract to be the kava wholesaler in the NT was awarded to Ganybu, a division of the Laynhapuy Homelands Association in Yirrkala. Initially under the Kava Management Act, areas that applied for a retail licence were Laynhapuy Homelands, Yirrkala, Warruwi (Goulbourn Island). Ramingining applied for a license in 2004 and Minjalang (Croker Island) in 2006. Importantly the mechanism for managing the Act was through the requirement of the licensing commission for licensees to have a kava management plan in place.

Management plans could vary but the key headings were: boundary of licensed area, any areas where the possession of kava should be prohibited, times and place of purchase, purchase limits, community expectations or rules and actions to monitor and modify kava’s negative impacts. The views of the Departments of Health, communities and Police were also formally considered (Urquhart & Thomson, 2008). Two of the four communities initially licensed areas proposed to allow sale from Monday to Saturday with trading restricted to afternoon or evening hours. The other two proposed to trade on specific days during the working week and to avoid paydays. Three communities proposed to keep a register of drinkers. They chose to limit consumption to 800 g per week which is of concern as it is well above the max of 400g recommended by Clough (2003).

2007 – current: Restriction on the importation of kava

In 2007, the Australian Government in conjunction with the Northern Territory Emergency Response (NTER) imposed restrictions on kava importation (Northern Territory Licensing Commission, 2007; Urquhart & Thomson, 2008). As a result, all legal sales in the NT and other jurisdictions ceased after stock was exhausted (except WA, where it was already banned).

Although there is a ban on the importation of kava use, the Kava Management Act is still in force in the Northern Territory (Northern Territory Licensing Commission, 2007); this includes the provision of punishments for possession and supply. Possession without a license carries a fine of up to $10 000 and two year’s imprisonment for between 2–25kg. Amounts less than 2kg can be confiscated and disposed of by the Police without prosecution. Kava supply (quantities greater than 25 kg) carries a penalty of up to eight years imprisonment or fourteen years if supplied to a minor (Northern Territory Licensing Commission, 2007).

Currently kava remains on the prohibited and restricted imports list under the Customs (Prohibited Imports) Regulations 1956 Act. Under the Act, an exemption to the Act exists allowing a passenger on a ship or aircraft, aged 18 years or more, to import up to 2 kg of kava in either root or dried powder form.
in their accompanied baggage without a permit. This exemption does not apply to kava being imported via post, courier services or unaccompanied baggage.

Finally it is currently listed in Australia as a Schedule 4 drug by the Therapeutic Goods Administration (TGA) in relation to the use of kava extract in natural medicine. The wording of the Schedule has been debated within the TGA for some time and aims to specifically avoid including whole or peeled roots which may be diverted for illegal use (National Drugs and Poisons Schedule Committee, 1997, 2004, 2007). The schedule applying to kava is listed below in Box 1.3 (page 47).

Box 1.2: Standard 2.6.3, Food Standards Act

<table>
<thead>
<tr>
<th>STANDARD 2.6.3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KAVA</strong></td>
</tr>
</tbody>
</table>

**Purpose**

This Standard regulates the sale and distribution of Piper methysticum (kava) in Australia and New Zealand. It also provides for labelling requirements and restrictions on the parts of the Piper methysticum (kava) plant which may be sold under food legislation.

In Australia, this Standard should be considered in conjunction with the Customs (Prohibited Imports) Regulations 1956 and certain State and Territory restrictions on the supply of kava which seek to minimise the detrimental effects associated with kava abuse. Where kava is permitted for supply, the requirements in this Standard complement those restrictions.

**Table of Provisions**

1 Interpretation
2 Prohibition
3 Labelling

1 **Interpretation**

In this Standard -

- **cold water extraction** means the aqueous suspension of kava using cold water only and excludes the use of any organic solvent.

2 **Prohibition**

(1) Piper methysticum (kava) or any derived substance must not be sold unless it is –

(a) a beverage obtained by cold water extraction; or

(b) the dried or raw form of the peeled root and/or peeled rootstock of plants of the species Piper methysticum.

(2) Kava must not be used as an ingredient in foods.

3 **Labelling**

(1) There shall be written in the label on or attached to a package containing kava, the following statements –

(a) ‘Use in moderation’; and

(b) ‘May cause drowsiness’.

(2) Where kava is other than in a package –

(a) the name and business address in Australia or New Zealand of the supplier of the food; and

(b) the statements under subclause 3(1); must be displayed on or in connection with the display of the food.

Box 1.3: Schedule 4 listing of medicinal kava

<table>
<thead>
<tr>
<th>Schedule 4 (Prescription Only Medicine)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIPER METHYSTICUM (kava) in preparations for human use except when included on the Australian Register of Therapeutic Goods in preparations:</td>
</tr>
<tr>
<td>(a) for oral use when present in tablet, capsule or teabag form that is labelled with a recommended maximum daily dose of 250 mg or less of kavalactones, and;</td>
</tr>
<tr>
<td>(i) the tablet or capsule form contains 125 mg or less of kavalactones per tablet or capsule; or</td>
</tr>
<tr>
<td>(ii) the amount of dried whole or peeled rhizome in the teabag does not exceed 3 g; and, where containing more than 25 mg of kavalactones per dose, compliant with the requirements of the Required Advisory Statements for Medicine Labels;</td>
</tr>
<tr>
<td>(b) in topical preparations for use on the rectum, vagina or throat containing dried whole or peeled rhizome or containing aqueous dispersions or aqueous extracts of whole of peeled rhizome; or</td>
</tr>
<tr>
<td>(c) in dermal preparations.</td>
</tr>
</tbody>
</table>

1.6 Use among Pacific Islanders

Regulations in Australia have tended to recognise that kava has traditional ceremonial and cultural uses for people of Pacific Islander descent, and have allowed for the continued availability of small amounts to kava. For example, in detailing the current legal status of kava the Federal Department of Health and Aging website states:

Recognising that kava has traditional ceremonial and cultural uses for people of South Pacific Islander descent, the existing approval that allows for the import of up to 2 kg of kava in the accompanied baggage of an incoming passenger (aged 18 years or over) to Australia will continue


Despite these assertions, the discourse regarding kava use in Australia has largely neglected the opinions and patterns of use of Pacific Islander Australians, and has overlooked determining what ceremonial and cultural use of kava is. Consequently an examination of use in the Pacific is relevant to any discussion about kava use in Australia.

Much of the early discussion in Australia the effects of kava use has romanticised the traditional use in the Pacific Islands communities, and inferred that there are few negative consequences associated with its use (Cawte, 1985). When the idea that kava might provide a risk free alternative to alcohol in the Northern Territory was losing its appeal (e.g. Mathews, et al.,
1988), commentary began suggesting that Aboriginal people did not use kava in a traditional way (e.g. Sarris, et al., 2011; Cawte, 1986). The assertions here are that traditional kava use has few negative effects and that Pacific Islanders continue to use kava in a traditional way. These questions then must be asked, ‘what is ‘traditional use’ in the Pacific?’; ‘do Pacific Islander peoples still use kava in the same way?’ and ‘is it rare for Pacific Islander people to overuse kava?’ The terms ‘traditional’ and ‘cultural’ are frequently used in the discourse around kava use, yet these are complex terms. Traditions and cultures are not static constructs and in particular they change over time and vary vastly across the pacific. It is important to note that Pacific Island nations have all experienced dramatic change through various experiences of colonisation, and the introduction of new religions, spiritual beliefs and governance structures. The current review will use the term ‘ceremonial use’ to describe kava drinking that occurs as part of official ceremonies.

While a comprehensive review of the historical patterns and consequences of kava use in the Pacific islands is beyond the scope of the present review, a brief summary is presented below. Although it is used widely across different Pacific Island communities, the discussion below centres on kava use in Tonga, Fiji, and Vanuatu, A large proportion of kava research has been conducted in Vanuatu, while this research highlights important evidence about the changes in kava consumption over time, considering there are relatively few ni-Vanuatu residing in Australia, the specific social context of use in Vanuatu has little direct relevance to Australia. The majority of Pacific Islanders in Australia are Fijian, Samoan and Tongan. Consequently the literature available on kava use in the Pacific is able to provide only glimpses of what individual communities and groups have used at certain points in time, with scant detail on prevalence, pattern and context of use, however it can provide insight into the diversity of issues that are related to kava use.

**Pre-colonial patterns and contexts of use**

Both before and after European contact, kava using societies have had different patterns of consumption, have used different cultivars of plant and have prepared the beverage in different ways. Different societies have different myths regarding the origin of the plant, which has had an impact on patterns of consumption (Lebot, et al., 1992). Kava has had medicinal, ceremonial, spiritual, political and recreational functions in most kava using societies, with the different functions governing different patterns of kava use (Cawte, 1985; Norton & Ruze, 1994; Urbanowicz, 1975). Kava consumption is a predominantly male activity across the Pacific (Cawte, 1985; Lebot, et al., 1992; Tomlinson, 2006; Urbanowicz, 1975) however women are known to use kava for medicinal purposes, in specific ceremonial circumstances and often have a key role in the preparation of kava for men (Urbanowicz, 1975).
The etiquette and protocols for serving and drinking kava have done, and continue to, differ across the Pacific, they also differ according the context or function in which kava is being used. Detailed descriptions of these practises are not warranted for the current review however a summary of the commonalities of kava serving is presented below. Kava is historically served in a ceremony in which different roles in preparing and serving kava belong to different people, often according to rank. Typically, in pre-colonial times the green kava root was prepared and then made into an aqueous beverage by one or two individuals who mixed the kava in a central bowl, around which other members of the kava drinking group sit in a circle. Kava was typically served in cups made from polished half coconut shells, and served in an order appropriate to the setting and accompanied by particular phrases. Cups of kava were taken all in one gulp, and in many cases preceded with a clap (Beaglehole, et al., 1941; Pratt, 1922; Singh, 2004b; S. P. Smith, 1920; Urbanowicz, 1975).

As an example of the different functions of use, kava use in pre-colonial Tonga was distinguished into three different drinking events: Fai Kava – drinking by the common people; Ilo kava – kava drinking by high ranking individuals and Taumafa kava – the monarch’s kava (Singh, 2004b). Fai kava is an informal gathering for men to drink which would occur in the evenings typically at the house of a young unmarried girl, who would prepare the kava. Lemert (1967) argued that the importance of Fai kava was that it provided opportunities for casual social interaction and the formation of public opinion in a feudal society that had few other opportunities for social interaction. It is important to note that in this social context of drinking kava the pace of consumption and the size of the beverage was largely regulated by the group. In contrast Taumafa kava and Ilo kava were highly formalised and ritualised (Lemert, 1967; Palace Office Tongan Monarchy, 2011; Pratt, 1922). These ceremonies were not restricted to the evenings and high ranking females did consume kava if appropriate. Ilo kava or Taumafa kava were significant in reinforcing rank in society (Lebot, et al., 1992; Urbanowicz, 1975). These distinctions remain important in Tonga and have relevance in considering modern kava consumption.

In Fiji the pre-colonial consumption also followed a hierarchical and strict ceremonial form that regulated its use. It was used as a supplication to gods and ancestral spirits, as ritual offering or form of payment, and in mediation ceremonies (Kava, 2001; Tomlinson, 2006). In Samoa, kava ceremonies were solemn ritualised events for welcoming guests and other events of ceremonial and political importance. Smith (1920) describes that kava facilitates talking and dialogue in Samoan society. Brunton (1988) explains that in nearly every society in which kava was used consumption was limited in terms of sex, age, rank or social contact with many instances being restricted across all four of these domains.
According to some authors excessive use was generally frowned upon in Pacific societies as a sign of disrespect (Taylor, 2010) and that moderate use was the norm. The social context of use and rituals of use also served to moderate use and minimise harm. In many societies feasts occurred before or after kava consumption, that Singh (2004b) suggests minimised the risks associated with the purported effects of a dulled appetite. Not only was kava consumption bound by cultural norms but strict practises dictated the part of a kava plant which was harvested, the cultivars grown and the age of the kava plant to be harvested (Lebot, et al., 1992; Teschke, Sarris, & Lebot, 2011). Despite this, early anthropological reports of heavy drinking, and drinking resulting in harms exist across Pacific (Brunton, 1988). Brunton (1988) cautions against assuming that all kava consumed in pre-colonial times in the Pacific was done so without harm.

Experiences of intoxication, related to quantities consumed and potency of cultivar used, also vary across the Pacific. In Fiji, Samoa, Tonga and Northern Vanuatu following kava consumption there was typically discussion and singing, in contrast, in southern Vanuatu and in Pohnpepi people believed that noise and bright lights would prevent or limit their intoxication and people preferred to be silent and ‘listen’ to the kava (Singh, 2004b). Gregory, Gregory, and Peck (1981) explains a connection with the spirit world and altered state of consciousness was desired outcomes of kava consumption in Vanuatu, and suggested that a greater level of intoxication was attained in Vanuatu compared to other Pacific societies.

It is important to note that kava was a revered plant across the Pacific; its importance existed beyond the use of the plant in making a beverage. The giving and receiving of kava itself was of importance to many social obligations in village life. This brief overview demonstrates that kava drinking in the Pacific was largely male activity which was strongly guided by custom practises, when, how and who consumed kava was closely regulated. Context and pattern of kava use was largely governed by the function which it served.

**Impact of colonisation of kava consumption**

Colonisation of the Pacific Islands by the British and French occurred largely during the early 1900s, this saw a dramatic period of social change across the Pacific and was accompanied by extensive missionary activity. Colonial governments and missionary activity changed every facet of life in the Pacific Islands, including kava use. Attempts by missionaries to ban kava saw use decline dramatically in most Pacific Island societies, with kava disappearing completely from many communities (Tomlinson, 2007). More recently, the declining influence of missionaries and the independence of nations from the French Government and British Commonwealth have seen resurgence in use alongside a rise in national identity (Gregory, et al., 1981). For example, drinking in some areas of Vanuatu was abandoned for almost 100 years due to Christian missionary activity. It has re-emerged since Vanuatu’s
independence in 1980 and it has become as a symbol of cultural identity (Gregory, et al., 1981). This is important because in many communities in the Pacific kava use has not been continuous from traditional times to present day. Arguably this discontinuity has altered the consumption patterns, functions of kava use and practises around kava consumption.

In developing an understanding of the role of kava in contemporary Pacific Islands, the impact of colonisation and missionary activity need to be acknowledged. As an example, Gregory, et al. (1981) described in detail the changing patterns of kava use on Tanna in Vanuatu from the arrival of missionaries to the 1970s. They describe the efforts of missionaries to ban kava, which were frequently conducted outside British Law. During this period drinking kava became a symbol of the differences between the ‘new believers’ of Christianity and those ‘who did not believe’. Kava use was labelled as a heathen practise by the ‘new believers’ and continued use was considered a declaration of adherence to the old ways (Gregory, et al., 1981). The bans ultimately became successful and it was rarely used. Those few who did use would do so during the day to avoid detection thus altering context of consumption.

Following the Depression in the late 1930s the cargo cult of John Frum emerged on Tanna and was accompanied by a reconnection to traditional ways of living including resumption of kava use. The remergent use of kava was not governed by the same traditions as previously, for example it was no longer drunk only at sundown (Gregory, et al., 1981). In the 1950s, the British commissioner agreed to place regulations around the sanitary use of kava and the prevention of drinking by youth and recent mothers, following repeated requests from the Presbyterian Church. At the time this law was passed, it was seen as a problem within Tannanese culture and it was argued that the Tannanese culture did not regulate use (Gregory, et al., 1981). While this example is specific to Tanna, Vanuatu, the adoption of Christian religion across the pacific has had a great impact on kava use. Tomlinson (2006) suggests that the relationship between kava and the spirit world made Churches uneasy, leading many to advocate strongly against kava use, thus many initial converts to Christianity ceased using kava. While different denominations of Church have different relationships to kava in the present day, during colonisation Churches were actively involved in trying to prevent kava use (Feldman, 1980; Tomlinson, 2006).

Similar disruption and changes in the pattern and function of kava use was noted in Fiji, Thompson (1908 cited in Tomlinson, 2006) states:

... in the old days kava was not drunk in every house nor on every night, but only in the chiefs’ houses by the chief and his retainers. Now, however, it is drunk in the houses of the common people whenever they can obtain a supply of the root.
These comments suggest changes had occurred in the way people drank and the social structures which governed use during colonisation. The colonisation experience in Fiji not only altered all facets of cultural life but also included dramatic changes in population composition. During colonial rule the British contracted large numbers Indian labourers to work on Fijian plantations. Indian Fijians have become a significant proportion of the population. Currently the Fijian population is estimated to be 57% Fijian and 38% Indian (Department of Immigration and Citizenship, 2010b). The population of Indo-Fijians adopted kava use into daily life. Fijians working in colonial positions also adopted some of the practises of the British, this notably included the tea break (Lebot, et al., 1992) kava use became used in a manner similar to the English ‘tea break’ and as a consequences has now become ingrained in work practises.

Kava use in Pacific nations has been influenced by colonisation and processes of independence. Kava use has not been continuous in many societies; it is now governed by different practises and social regulations than before colonisation. New patterns of use and functions of use emerged after colonisation. Despite these changes and disruption to kava use, kava is regarded by many as to remaining integral to ceremonial functions in the Pacific primarily for men including those that facilitate the transmission of genealogies, stories and taboos (Finau, et al., 1982).

**Current patterns of use in the Pacific**

With the exception of the most recent census in Vanuatu (Vanuatu National Statistics Office, 2011) there is no systematic data collection regarding the prevalence of kava use in Pacific nations. Consequently, prevalence data can only be reported from a few small scale studies that have investigated kava use and larger multinational studies which have collected information on kava secondary to other research questions. In the absence of good quality data from which to track changes over time, much discussion around the prevalence, patterns and social context of kava use comes from qualitative sources, descriptive studies, opinion pieces and commentaries.

Kava is currently consumed by the majority of the male adult ni-Vanuatu population (Schmich & Power, 2010). The most recent Vanuatu census estimated that; 53.5% of men aged over 15 reported using kava, whereas 8% of females over the age of 15 years used kava (Vanuatu National Statistics Office, 2011) Similarly, Grace (2003) conducted a study looking at current kava drinking habits in a convenience sample of 150 people in a hospital setting in Port Vila, participants included both patients (n=100) and hospital staff (n=50). They reported 58% of men and 15% of women used kava. Grace (2003) found that men drank more than women per drinking session (4.3 shells compared to 3.3 shells, where a shell is approximately 100ml). Eighty eight per cent of the males who drank did so at least weekly (27% consumed daily), and 75% of women who drank kava did so at least weekly. He
concluded that, if the data are representative, 50% of males use kava at least weekly, these conclusions are consistent with the Vanuatu census data. Grace (2003) found no differences in kava use between age groups, nor between patients and staff. However when comparing residents of Vanuatu’s main island with residents of outer islands, he found no female residents of outer islands drank suggesting urbanisation is linked to increased consumption among women.

In Tonga, Finau, et al. (1982) looked use in urban and rural Tonga in 1973 (n=417 in capital, n=392 in rural) as part of a larger cardiovascular research project. They found that 48% of males and 1% of females consumed kava, further they found that it was consumed predominantly in rural areas and alcohol use was more prevalent in urban areas (Finau, et al., 1982). Finau, et al. (1982) categorised participants into low frequency (1–3 times per month), moderate frequency (1–2 times per week) and high frequency (3–7 times per week), and non-drinkers (never or less than once per month). 51% of urban and 37.6% of regional male participants were categorized as non-drinkers, it is important to note that individuals in this category were likely to consume kava infrequently for ceremonial purposes rather than being lifetime abstainers of kava (Finau, et al., 1982). Both in rural and urban Tonga approximately 18% of males drank at high frequency, no women drank reported consuming kava more than low frequency. Finau, et al.’s (1982) results showed that despite much social anecdote that kava is the prerogative of older men, kava was popular among males from age of 20 and up. There was trend towards greater prevalence among older men in regional areas but it was not described as significant. Consistent with this Lemert (1967) comments that kava use in Tonga is no longer just the domain of older men. While Finau, et al.’s (1982) findings are over 30 years old they are the only detailed findings regarding prevalence of kava use in Tonga, and demonstrate the high prevalence of consumption among males, yet only around half the male population drink more frequently than once per month. In examining kava dermopathy Ruze (1990) surveyed 32 kava drinkers, while Ruze’s study does not reflect prevalence, the pattern of use among participants is worthy of note. Participants, who were all male, consumed kava between 12 – 100 hours per week, the average being 50 hours. Participants reported consuming approximately 13 L per evening. Participants consumed kava predominantly in village kava clubs and did so in the evening. These findings emphasise that heavy kava drinking does occur in Tonga, prevalence of this level of consumption is unknown.

There is little data which summarises the level of kava use in Fiji. In terms of patterns of use Kava (2001) investigated the drinking patterns of 300 drinkers from different regions in Fiji. Kava, (2001) utilised Mathews, et al. (1988) classifications of use and found that 42% of males in the sample could be classified as ‘very heavy’ users, only 17% male of kava drinkers were classified as ‘occasional users’ whereas 61% of females who used were ‘occasional users’. Kava (2001), found 25% of Indo-Fijian kava users to be ‘very heavy’
users’, in contrast to 60% of Fijian kava users. The results suggest males who drink kava do so at high levels, whereas females are likely to only drink occasionally and that both Fijians and Indo-Fijians drink kava regularly but more Fijians drink in a ‘very heavy’ fashion. Unlike the findings in Tonga and Vanuatu, Kava (2001) found no difference between urban and rural regions. Despite the finding that women are drinking less than men, the fact women are drinking regularly suggests a change from traditional consumption patterns. Recently, a Fijian School of Medicine academic, Mo Salusalu, was reported commenting that kava use is on the rise in Fiji among women and secondary and tertiary students (Australian Broadcasting Corporation, 2010). There have been several recent studies supporting the comments that kava use is emerging in school-age youth in the Pacific.

Kava use was documented by Smith, Phongsavan, Bauman, Havea, and Chey (2007) in a cross-sectional study examining the prevalence and frequency of alcohol, smoking, kava and illegal drugs in a sample of 11–17 year olds in the Pacific nations of Pohnpei, Tonga and Vanuatu. Consistent with custom, males were more likely to have consumed kava than females in both Tonga and Vanuatu. Among Tongan boys, 45% had tried kava, with 18% of those who had tried kava reported using weekly or more. Eleven percent of ni-Vanuatu boys and 29% of boys from Pohnpei had tried kava. In contrast to boys, no girls in any of the three countries reported daily use. Smith, et al. (2007) explain that a limitation to their study was that it only investigated school-attending students which is variable across the Pacific (high school enrolment in Tonga is 70% and in Vanuatu 30%). A UNICEF study in 2001 looked at substance use in both school attending and non-attending youth in Tonga (UNICEF, 2001). They found that among school attending youth 30% had tried kava and 8% used weekly or more often, in contrast to 57% of out of school youth who had tried kava, with 75% boys using more than weekly. Taken together these findings demonstrate that kava use is common among school-age children in the Pacific. These patterns of use suggest a departure from pre-colonial use in which only older males drank kava, however the gender differences between males and females are still apparent.

An alternative index for examining changing kava use is through the examination of kava agriculture. Despite the increase in use of kava in therapeutic goods, most of kava grown in the Pacific is consumed in the Pacific (Pollock, 2009). Consequently, expansion of farming is an indicator of kava consumption. In many Pacific economies, kava represents an important cash crop (Pollock, 2009; Sofer, 2009). Pollock (2009) explains that in 2000 around 800 hectares of Tonga was kava plantation and this has grown about 20% per year. Similarly, Sofer (2009) detailed the economy of a small Fijian island and explained the majority of the economy was based on kava demand; he noted 95% of farms in the region grew kava as a cash crop in 1982 growing to all farms in 2005. This expansion of kava growing suggests that the quantity of kava consumed in the Pacific is growing, whether the increase in product is related to more people drinking kava or greater consumption by
those who already use kava is unclear. Thus the availability of kava has increased in the Pacific. Across the alcohol and drug field substance availability is acknowledged to have an impact on use (Gray, 2000).

From the limited data that do exist, it can be surmised that kava is commonly used across the Pacific and by over 50% of adult males in Tonga, Fiji and Vanuatu. The findings also suggest that kava consumption is increasing. There are no detailed descriptions of use in Samoa. It appears that there has been a marked increase in females drinking kava and an increase in excessive drinking by males (Taylor, 2010), the youth data also suggests that prevalence among young people is growing, yet there is no longitudinal data to support these assertions.

**Social contexts of kava use in the Pacific**

In addition to little available detail regarding the prevalence of kava use, examination of the current function, context and consequences of kava use in the Pacific is scant. Although, considering the apparent increases in the number of women drinking kava, it is clear that there have been changes in context of use.

Modern social contexts of kava use have been most comprehensively described in Vanuatu. In Vanuatu’s main island the increase in females drinking kava is quite pronounced (Grace, 2003). Taylor (2010) attributes this to the emergence of kava bars in Port Vila. Kava bars are common in Port Vila, and Taylor (2010) emphasises that there is a difference between consumption in traditional *nakamals* and the kava bars in the capital. Drinking in the kava bars largely undermines the traditional practises, as it is a social environment very different to quiet *nakamals* in which men ‘listen to the kava’. Jowitt and Binihi (2001) argued that the ritualised custom of kava use is no longer a dominant feature of kava use in urban Vanuatu. Currently people are likely to go to kava bars and purchase individual kava drinks in 50–100 ml or 100–200 ml containers, as opposed to sharing a bowl of kava (Jowitt & Binihi, 2001). The bars welcome anyone regardless of gender and traditional constraints. Drinking at a kava bar arguably changes the traditional controls and taboos that have governed kava use in the past. In kava bars excessive drinking is not frowned on and drinking is not controlled by the order in a kava circle (Jowitt & Binihi, 2001). Consequently heavy consumption is more likely, Schmich and Power (2010) reported that regular customers in urban Vanuatu kava bars are consuming between 2–25 coconut shells per night. This new social context of consumption arguably undermines the generally purported positive effects of kava on community functioning including maintaining culture and improving social cohesion (Finau, et al., 1982; McDonald & Jowitt, 2000). The emergence of kava bars is not detailed in the literature in other pacific countries.

Jowitt and Binihi (2001) investigated the reasons for drinking among drinkers in Vanuatu and found that drinking to feel the effects of kava (intoxication)
was the most commonly reported reason to drink kava. These reasons for use are not linked to ceremonial or traditional use, which suggests changing function of kava use. This finding is an interesting contrast to the commonly held notion in Western literature that Pacific people do not drink for intoxication but only for culture. Jowitt and Binihi (2001) argues that the results indicate that kava use has become secularised, further suggesting that much use is no longer linked to the same social regulations as prior to colonisation. Despite this it is also important to acknowledge that drinking in kava bars is not the only drinking context in Vanuatu, and ceremonial kava consumption still forms an important part of modern life (Grace, 2003). Jowitt and Binihi, (2001) concluded that harm minimisation strategies for heavy use were necessary in the Vanuatu.

The results from Vanuatu demonstrate shifts in drinking practises, or rather a broadening of drinking practises, yet these changes cannot be taken at face value as representative of the Pacific. In contemporary Fiji Tomlinson (2006) states that important events (particularly weddings, funerals and the arrival of important visitors) demand kava drinking much as it has done previously. He also suggests that the definition of important events has also broadened with it being consumed at graduations and for fundraising as well. While kava use is still important in ceremonial contexts for Fijians Lebot, et al. (1992) comments that Indo-Fijians use kava in the work place and in social settings in a similar manner to Fijians, yet do not use it ceremonially unless invited. The context of kava consumption among Indo-Fijians is considered secular. There is, however, evidence that heavy kava use and non-ceremonial kava use among Fijian men is increasing. Tomlinson (2006) and Aporosa (2008) have both noted that in rural Fiji many adult men drank for many hours each night unrelated to ceremony and at rates that were previously not described as common in the ethnographic literature.

Lebot, et al. (1992) describes that consumption in the workplace during ‘tea breaks’ is common. The consequences of this, as explained by Aporosa (2008) may include sub-par work performance. Thus there is a broadening of the situations in which kava is drunk, and the timing now includes drinking during the day and the night. Despite the broadening of situations in which kava is drunk in Fiji, many of the rituals associated with use are maintained and it is still largely drunk in small groups of men sitting in a circle, with consumption being taken in turns and preceded with a clap. The context of a kava circle provides social controls around the pace of consumption, yet there are few commentaries as to how long a kava sessions last and the quantity of kava consumed is determined in the context of kava circles. Kava (2001) asserted that the amount of kava an individual contributes to a kava circle is equivalent to the amount they drink, which suggests that a drinking session is only terminated when the kava is finished. Considering then that there is an increase in the availability of kava it follows that the length of sessions may have also increased. More research into the patterns of kava consumption is clearly warranted.
In Tonga the distinctions between *Fai kava*, *Ilo kava* and *Taumafa kava* continue to provide a framework within which to understand the social context of kava. *Ilo kava* and *Taumafa kava* continue to play important roles in the continuity of traditions and is integral in welcoming important visitors to Tonga and in the coronation of Monarchs (Finau, et al., 1982; Palace Office Tongan Monarchy, 2011). These ceremonies are highly ritualised, guided by etiquette and rarely involve acute or prolonged intoxication. In contrast *Fai kava* has seen great change since colonisation and also independence. Beaglehole, et al. (1941) noted that in their short stay in a Tongan village of 50 households that 45 *Fai kava* parties occurred, with an average of three occurring each night, and only on one night was there no kava prepared. Beaglehole, et al. (1941) noted that very few were in relation to welcoming visitors and that they were predominantly social events. Whilst there is no evidence to corroborate the Beaglehole, et al. (1941) notes they do suggest that *Fai kava* had become popular. Similarly, Lemert (1967) commented that the majority of kava drunk in Tonga was in the *Fai kava* context. He noted that they tended to occur in the houses of unmarried girls, where possible, but did occur even when a girl to serve the kava had not been found. He described *Fai kava* as occurring occasionally during the day but mostly in the evenings and lasting from between five hours to up to two days. By the 1970’s Finau, et al. (1982) noted the emergence of kava clubs in villages where men would gather for discussions, which removed kava from inside households.

*Fai kava* now takes on two distinct forms in Tonga; private kava parties and kava clubs (Feldman, 1980). Private kava parties may be intimate gatherings where people are invited and someone provides the kava. This occurs both socially and in courtship rituals and tend to be still held in the household of an unmarried girl who will serve. Drinking in kava clubs on the other hand does not require kava to be sourced as the kava club provides the kava at a charge (Feldman, 1980). Feldman (1980) notes that kava clubs often have their own premises that are open at least a few evenings per week, the clubs may pay women to mix and serve. *Fai kava* is also often used as a fundraising activity for community services or Churches. In both private (where courtship is not the intention) and kava club *Fai kava* drinking is accompanied by talk, singing, watching sports on television or card games. Feldman’s (1980) descriptions of *Fai kava* and the emergence of kava clubs is important yet to date there is very little documentation of how many kava clubs operate in Tonga and what functions they provide. The social contexts of *Fai kava* appear to have both broadened in context and reduced in the formality of the kava ceremony.

It is also important to note the emergence of kava consumption tied to Church activities in Tonga, while not defined as *Fai kava* its presence is noted by a few commentators (Feldman, 1980; Lemert, 1967), however there is little detail as to how kava consumption is related to Church practises. Undoubtedly kava holds great importance to Tongan culture, Finau, et al. (1982) comments that it has an integrative function which can maintain a

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continuity of traditions and enables the recitation of genealogies and traditional songs. How this importance fits with the broadening of contexts in which kava is used is unclear. Because kava is regarded as an agent of cultural identity Finau (1982) notes that its use is continually reinforced by Tongan society. It is unlikely that many messages to moderate consumption or to examine kava use are welcomed.

In Samoa, kava continues to be used in a highly ritualised manner for ceremonial events. In a review of substance use across the Pacific Schmich and Power (2010) noted that kava use has important functions as a business and social lubricant in modern Samoan society, and have suggested that consumption patterns have changed. Lemert (1967) noted some concern that it was being consumed by young men but there is little information in the literature to confirm or deny these comments.

The changing social context and function of use has been described in terms of the democratization and commercialisation of kava use (e.g. Pollock, 2009). It is important to recognise that this has occurred in a context where it is still an integral part of ceremonies and custom and is emerging as a symbol of cultural identity. There is a lack of empirical data detailing the range of social contexts of kava use in modern Pacific societies. Important changes in cultural and social make-up of Pacific societies have changed the relationship between kava and custom. It is important to note that this includes both the commercialisation of cultivation and of consumption. Kava is now packaged and consumed much like alcohol in western countries as a social beverage (McDonald & Jowitt, 2000). In Vanuatu kava drinking now takes place in a commercialised environment in which drinking to intoxication is a more commonly reported goal of consumption than tradition. The commercialised environments are not likely to regulate consumption in the same manner as traditional structures. The main concerns that accompany the change in drinking context are firstly that controls against excessive use are no longer evident, secondly that positive effects of drinking kava on community wellbeing (ceremony, recital of genealogy) may be undermined and, as a consequence, thirdly the negative effects of kava on community wellbeing (neglect of family and farms) that may arise. There is a need for more research into the prevalence, patterns and consequences of use across the Pacific.

**Debate in the Pacific**

It is important to recognize that in contemporary Pacific societies there is debate about health and social effects of kava and the role of kava in maintaining cultural practises and cultural identity. It use has arguably grown in significance as a cultural emblem and as an economic hope, which adds complexity to any discussion around the effects of kava and health. Kava (2001) comments that in Fiji because missionaries tried to wipe out kava use some proponents of kava use downplay the side effects and dismiss criticisms as old missionary and colonial attitudes.
McDonald and Jowitt (2000) describe present anecdotal evidence of a groundswell of concern about kava among health workers, community leaders and women’s groups in Fiji. While there is little policy movement beyond this groundswell, it is important to take note of the concerns of community health workers. According to McDonald and Jowitt (2000) health workers have argued that ‘kavaholics’ are presenting to health clinics in increasing numbers, they express concern at a dependence syndrome characterised by lethargy and displaying poor hygiene. This groundswell is also evidenced in new media at the online forum Pacific Kava Bowl (McDonald & Jowitt, 2000) and the Facebook page Say No to Kava [http://www.facebook.com/pages/say-NO-TO-KAVA-CLUB/147088578256].

This debate is not new, an article in the Pacific Islands Monthly in 1994 (Parker, 1994) describes emerging concern around the effects of kava in Fiji, where it was being discussed openly by politicians. The article cites the concerns of the Ministry of Fijian affairs, which was concerned that excessive drinking was being linked to health and nutritional problems, a drop in food crop production and pressures on family life. Similarly, Tomlinson (2006) in summarising his ethnographic work in Fiji suggested that kava was seen by many in Fiji as a force that weakened bodies and social order, ‘numbing and nudging Fijian society along its slow and persistent path of decline’.

Schmich and Power (2010) comment that it is not unusual for communities to ban kava at a local level in Tonga and Fiji, they cite a newspaper article about a village in Tonga in which elders placed a six year ban on alcohol and kava. The elders reported that less income was diverted, there were fewer crimes and family problems and fewer people neglecting their farms as a consequence of the bans. In contrast, commentators like Pollock (2009) argue that Pacific economies have much to gain from establishing a stable market for kava and that the commercialisation of kava and expanding the kava market is important economically and argue against limitations on use, these arguments however fail to consider health and social impacts of heavy use. Similarly kava is endorsed by many Pacific Island Governments as a national symbol and a symbol of culture. The Vanuatu Tourist Bureau actively promotes kava use to tourists (Vanuatu Tourism Office, 2009) and new business ventures capitalising on the properties of kava, such as kava-based soft drinks (Dorney, 2010), are emerging. Further, kava is being actively promoted as an alternative to alcohol in Tonga and other countries (Finau, et al., 1982; Schmich & Power, 2010), which means that kava consumption is being encouraged outside of the traditional kava drinking patterns. Despite the concerns about the effects of kava use, the close relationship between kava and Pacific cultural heritage and Pacific economic wellbeing have made it difficult for any policy or health promotion initiatives to commence beyond initiatives at local community levels.

The current social context of kava consumption appears to be a mix of the expanded traditional contexts and the new commercialised and less restricted
consumption. The implications of these findings are that the negative social effects of use are being felt in the Pacific. While the health effects of kava use may be minimal and reversible and still not seen as a burden on health care in the Pacific, Grace (2003) argues that there is a social burden associated with kava use in the Pacific which is largely overlooked. The debate around kava is similar to debate across the world regarding intoxicants, as Lebot, et al. (1992) states ‘the importance of kava in many Pacific Island societies it is similar to that of wine in southern Europe: a sacred drunk, a social drink, and a cash crop’.

The preceding discussion is important yet the quality of the evidence is presented is inconsistent and dated. There is a dearth of current objective research investigating the prevalence patterns and contexts of kava use in the Pacific with which to inform policy debate in the Pacific. What we can take from the debate in the Pacific is recognition that despite literature referring to the traditional kava use as benign and traditional, there is ongoing and active debate around the role of kava in culture and the impacts of kava on health.

**Pacific Islanders in Australia**

Before turning to the use of kava by Pacific Islanders in Australia an overview of Pacific Islanders population in Australia, and the issues facing Pacific Islanders is warranted. It is hard to establish the population of Pacific Islanders in Australia, Pacific Islanders have been described as ‘statistically invisible’ because many have migrated from or through New Zealand, and are identified in Australian Census data as New Zealanders (Rodriguez, 2007). In addition, it is difficult to separate ‘Pacific Islander’ into more precise groupings partly due to high rates of intermarriage between members of the different population groups (Rodriguez, 2007).

Nevertheless, data from the most recent Australian Census (2006) suggests that Pacific Islanders, are moving to Australia in increasing numbers. The combined figures Samoan, Tongan, Niuean and Cook Islanders in Australia is 72,082 (people with ancestry of these countries was estimated at 71,991), and it is estimated that there are 44,040 Fijians living in Australia (Australian Bureau of Statistics, 2007). Fijian, Samoan and Tongan populations are the largest Pacific Islander populations in Australia (Donato-Hunt et al., 2008).

Fijian-born people make up 0.2% of the Australian population, Fijian-born comprise people of Fijian (Melanesian), Indian, Chinese, European and other ancestries. Most Fijians in Australia are of Indian-Fijian origin (29,750), Fijian (10,460) and English (2,780) decent (Department of Immigration and Citizenship, 2010b). Fijian-born people live predominantly in NSW (59%), QLD (18%) and VIC (16.4%). Forty seven per cent of Fijian born people report Hindu as their religion, 9.4% Catholic and 7.0% Uniting Church.

As a snapshot of Samoan people in Australia, the latest Census in 2006 recorded 15, 240 Samoa-born people in Australia, distribution by state and
territory and shows the majority of Samoan-born people live in NSW (45.2%), followed by QLD (31.9%), and Victoria (19.9%). The majority of Samoans reported a religious affiliation with ‘Other Religion’ accounting for 42% (includes various congregational Churches), Roman Catholic (22.9%), Uniting Church (10.9%), Latter Day Saints (13.7%) and Pentecostal (9.8%) (Department of Immigration and Citizenship, 2010c). For Tongans in Australia, the 2006 Census recorded 7,580 Tonga-born people, 65% living in NSW, 15.7% in VIC and 14.4% in QLD (Department of Immigration and Citizenship, 2010a). The major religious affiliations reported amongst Tonga-born were Uniting Church (34.8%), Catholic (24.3%), Other Protestant (10.1%) and Latter Day Saints (9.7%). In relation to religion only 2.0% of Samoan born and 1.9% of Tonga-born stated ‘No Religion’, this was significantly lower than that of the total Australian population (18.7 per cent) (Department of Immigration and Citizenship, 2010a, 2010c). It is important to note that the most dominant religion in Tonga is Free Wesleyan, it is not clear if Free Wesleyan is categorised as ‘other protestant’ or ‘Uniting Church’ in the census.

Pacific Islanders in Australia have specific health profiles, Chand (nd) recently examined the health characteristics of Pacific Islanders in Queensland and found that compared to the to the Queensland population:

- the Samoan-born population has a mortality rate 1.5 times higher for total deaths and 2 times higher for avoidable deaths, and for hospitalisation rates between 7 times and 2 times higher depending on the condition;
- the Tongan-born population has hospitalisation rates between 2 times and 1.5 times higher depending on condition; and,
- the Fiji-born population has hospitalisation rates 2 times higher for coronary heart disease and for diabetes complications.

In addition to poor health status, Rodriguez (2007) comments that despite our geographic proximity Australia is largely unfamiliar with the languages and customs of the South Pacific region. For many Pacific Islander migrants in Australia, their experience is that of the ‘Outsider’ to the dominant white, nuclear ‘Mainstream’. A consequence of this marginalisation is reflected in social data: for example Tongan born males have the highest imprisonment rate in Australia, followed by Samoan males (Australian Bureau of Statistics, 2009). This underscores not only that Pacific peoples experience marginalisation in Australian society but that Tongan and Samoan males have specific needs and challenges in Australian society. Donato-Hunt, et al. (2008) have noted that there is a lack of Australian research focussed on the health needs of Pacific Islander communities, specifically in relation to alcohol, tobacco and other drugs.
Returning to kava, only three studies in Australia, all of which were in New South Wales, have documented the use of kava among Pacific islanders and only one of these has specifically addressed kava use. Maneze, Speizer, Dalton and Dennis (2008) published a brief descriptive study of kava use among Tongan men in Sydney South West. The other two studies have been conducted by the Drug and Alcohol Multicultural Education Centre (DAMEC) Donato-Hunt, et al. (2008) and Toms (2003). It is important to note that all studies were conducted prior to 2007. Maneze, et al. (2008) conducted a survey of 73 Tongan men living in the Macarthur area of Sydney southwest in 2006 (approximately half the population of Tongan males living in the area based on census data). The study provides important information about the patterns of use among Tongan males. They reported that 90% of their sample were regular drinkers, who started drinking at age 21 years. In examining frequency in more detail they reported 16% of the sample drank kava only on ceremonial occasions, whereas those who reported drinking regularly did so on average 2–4 times per week (Maneze, et al., 2008). Of those who drank regularly 24% reported drinking between 24–49 cups per session and 24% reported drinking more than 50 cups per session. Maneze, et al (2008) reported that those who drank more frequently also drank more kava per session. This suggests that those who only drink kava occasionally for ceremonial reasons consumed less than those who drank more frequently and in social situations. Maneze, et al also suggested that those aged over 41 years were more likely to drink more frequently and in larger quantities.

Maneze, et al (2008) noted few harms associated with use with the exception of hangover effects which included headaches and sleepiness, although they did not examine harms in detail. They also reported that 70% of the participants drove home following a kava session. Of concern to the authors was the level of smoking and consumption of fatty and sugary foods and drinks while drinking kava with 26% of the participants smoking tobacco and 60% consuming high fat or sugar content foods (Maneze et al., 2008). The study sample was recruited through a variety of means including attending Church and kava groups; this may have biased the sample toward recruiting participants who were more likely to be kava drinkers. Indeed the authors note that many respondents belonged to a particular Church which prohibited alcohol consumption. Thus the study provides a good description of a small population of Tongan males who drink kava it is not clear if the sample was representative and therefore what the overall prevalence of kava use among Tongan males in the area is. The authors concluded that Tongan males who drink kava do so in a binge fashion in prolonged sessions.

In 2003 Toms conducted a qualitative study investigating drink driving and drink walking in Pacific Island communities in NSW. The study included information about kava use and contexts of kava use. While Toms did not collect prevalence data, her findings demonstrate that kava use in NSW was common among Fijian and Tongan males who drank for Church activities, ceremonial events and social fellowship. Among Sydney participants Toms
(2003) reported that drinking occurred mostly among older males and that people were more likely to drink at church functions and activities, with drinking sessions lasting for long periods of time. In contrast in regional NSW most male social activity in these communities was linked to kava, with both younger and older males reporting that they drank kava. Kava drinking occurred mainly in ‘kava clubs’. Toms (2003) found that many individuals drove home after consuming kava, but did not comment on any other social or other consequences of use. She reported that participants had little understanding of the health and social effects of kava. Although she noted that some people in the community were worried about kava drinking males driving.

More recently, Donato-Hunt, et al. (2008) investigated alcohol, tobacco, illicit and licit substance use among Pacific Islanders in NSW (N=241) as part of a broader study on substance use among culturally and linguistically diverse groups. Participants were selected based on census collection districts using multistage clustered sampling design. It is important to note that more than one third of the respondents were born in New Zealand and included Māori respondents. Considering kava was not traditionally consumed by Māori, the data needs to be interpreted with caution. Results showed that: kava was the second most commonly used legal drug with 54% reporting having ever used; 6.5% used daily to weekly; 11% had used in the last 12 months but less frequently; and 27.8% reported not having used in the previous 12 months. A higher proportion of men (27%) had used kava in the previous 12 months compared to women (14%). When New Zealand born participants were removed from the data 51% of participants reported a lifetime prevalence of kava use. When prevalence of kava use was examined amongst only Fijians in the sample 72.3% reported having used kava, and 40% had used in the last 12 months (Donato-Hunt, et al., 2008). These data emphasise that prior to 2007 kava was commonly used across the Pacific Islander community in NSW.

The only other references to kava consumption among Pacific Islander communities in Australia exist in the popular media and in submissions made to government in relation to the labelling laws and kava standard. An influential opinion piece in the Sydney Morning Herald argued that import restriction on kava has led to an increase in alcohol and alcohol-related crime (Pione, 2007). While there is no evidence to support this assertion, it has been repeated in other media commentary and research (e.g. Schmich & Power, 2010). The Sydney Morning Herald article (Pione, 2007) suggests that more than 100 kava circles operate twice a week across Australia where no alcohol is allowed and alcohol intoxication is forbidden, yet there is no independent examination or empirical evidence to support these claims.

In summary, from the limited research available, it appears that kava consumption by Pacific Islanders in Australia is common among Fijian and Tongan males, and that kava is typically consumed for social activities,
ceremonial events and Church activities. Considering the diversity of kava drinking patterns in the Pacific Islands it is likely that consumption of kava and attitudes toward kava among Pacific Islanders in Australia are similarly diverse. While there are some comments that heavy kava use can impact on family functioning there are no documented harms related to kava use in Australian Pacific Islander communities.

**Migrant Pacific Islander communities in New Zealand and USA**

Considering the dearth of Australian research it is important to consider the use of kava by Pacific Islanders migrants in other countries. In addition to Australia, Pacific Islanders have migrated extensively to the US and to New Zealand. Scant reports exist in US regarding the prevalence and consequence of kava use, however recent research from New Zealand may inform the local debate. In considering data from New Zealand it is important to note that in there is no regulation against the use of kava in New Zealand.

In 1997, the New Zealand Ministry of Health (Sector Analysis Ministry of Health, 1997) reported that the frequency of both alcohol and kava consumption is increasing among Pacific Islanders. They investigated substance use among Pacific ethnic groups and reported that 63% of Tongan men and 16% of women had tried kava, 21% had consumed in the previous 12 months. Typical drinking frequency among males was at least once per week. Participants were asked if kava consumption impacted home life, 22% of those who had drunk in the past year reported that had it had negatively affected home life. In this survey Tongans consumed more kava than people from any other Pacific island ethnic groups.

More recently, the Pacific Drugs and Alcohol Consumption Survey interviewed 1,103 Pacific Island people (Pacific Research and Development Services & SHORE/Whariki, 2004). In total, the results showed the 23% of those interviewed had consumed kava, and that those who drank kava did so more than twice a week (survey did include participants from non-kava using countries such as Niue). When participants were asked about positive or negative effects on lifestyle, those using kava rated its effect on home life, church life, health, work, and finances as harmful, yet beneficial to friendships and social life. To examine prevalence more closely the data of Tongan and Samoan migrants is useful. For Samoans kava consumption was highest among males aged 30–65 years. For those who had drunk in the previous year, frequency of consumption tended to be over three times per week, occurring at home or at a kava club. Tongans were more likely than Samoans to drink kava, and males aged 30–65 were the highest consumer group. Average frequency of consumption was over once per week. Tongans were more likely to regard their own kava use as having a negative impact on home life and church life (Pacific Research and Development Services & SHORE/Whariki, 2004).
A recent brief qualitative study by Nosa and Ofanoa (2009) was conducted in 2009 to investigate kava use among Tongan men who were born in Tonga, living in New Zealand. Participants in the study were 12 married men, Tongan born living in NZ between 2 and 18 years, most were employed and belonged to a church. Consumption patterns were predominantly long drinking sessions lasting either from 9pm to 4am or from 9pm to 10am in kava circles. When asked about reasons for drinking kava, the men stated that it was social substance, and that kava drinking was the only social activity in Tonga outside of church functions. Respondents described that kava was important in establishing and reaffirming relationships, and an alcohol alternative. In discussing the consequences of use, participants reported that negative social effects include: makes you lazy, need to sleep to recover, negative impacts on relationships with wife (related to reduced sexual functioning). The positive social effects reported by respondents include: the kava gatherings built good relationships between men. When asked about economic effects two themes emerged, these were that kava was cheaper than alcohol, but that it still affected family income (Nosa & Ofanoa, 2009). When asked about health effects the participants reported that kava use made people tired, fatigued the following day, that nausea was common, and sitting too long lead to haemorrhoids. It is important to note that the older participants recognised that there were changes in kava drinking patterns, stating that the younger generation consumes more kava than was used in the past. Nosa and Ofanoa (2009) concluded that kava is still an important part of Tongan culture and used by Tongan men in New Zealand during traditional ceremonies and also social occasions. Kava has little stigma attached to it, and is an accepted part of the lives of Pacific Islander migrants, and is discussed openly in the media with little stigma. For example some Rugby Union players openly discuss using kava as a post-game drink which assists with relaxation (Wiki, 2006).

These studies provide some indication that in New Zealand kava may be of particular importance to cultural identity particularly for Tongan migrants. Kava consumption is argued to provide social benefits through maintaining relationships and identity; but there is recognition that heavy drinking can result in negative social effects. Kava use was also linked closely to Church functions as well as being a method for socialising outside of Church activities. Indeed the most recent Pacific Action Plan of Alcohol Advisory Council of New Zealand (Alcohol Advisory Council of New Zealand, 2009) for 2009–2012 acknowledges kava use. The action plan states that during consultation, community stakeholders emphasised the importance of educating communities on the harms of both alcohol and kava and the need to provide information on responsible consumption. The ALAC action plan aims to release an information brochure about the effects of both alcohol and kava, to encourage responsible drinking and aims to conduct research into kava with specific focus on combined use with alcohol.

In mainland USA there is no research specifically addressing kava use by Pacific Islander peoples. Discussion regarding kava exists in some media
outlets and internet forums. The exception to this has been reports of drink driving arrests in southern California, in which two men have been arrested after failing sobriety tests and under the influence of kava. In addition there is some evidence that ‘kava bars’ operate in there are several kava bars across the USA who sell kava as a relaxing drink in a bar setting. In Hawaii, there has been some acknowledgement of the prevalence of kava use, particularly by Tongan residents. It is interesting to note that when Brown, et al. (2007) investigated the effects of kava consumption on liver functioning, they used a convenience sample of Tongan males drinking at a kava club. The study aimed to use matched controls for the kava using sample to ensure methodological rigour, however they were unable to recruit a sample of male Tongan non-kava drinkers, which indicates a high prevalence of kava consumption among Tongan males in Hawaii.

**Other populations of interest**

There are few groups in the world other than Aboriginal people in Arnhem Land who have adopted the recreational use of kava. Consequently there is little international research from which to compare the prevalence and consequences of kava use. The other non-traditional consumers of kava include the Pacific Island nations of Kiribati and Tokelau, and Fijians of Indian ethnicity.

A recent report into drug use in the Pacific identified that in Tokelau there was an increasing prevalence of kava use among youth (Schmich & Power, 2010). The same report described an emerging prevalence in Kiribati. It is interesting to note that kava use is actively being promoted by the government and missionaries as an alternative to alcohol in Kiribati, but there is currently no prevalence data available. Pollock (2009) has suggested that kava use is being adopted into traditional custom in Kiribati, and is also supported by the Catholic Church and missionaries who regard kava as an alternative to alcohol (Pollock, 2009).

**Summary**

From the existing literature we have a poor understanding of the current prevalence, context and consequences of kava use by Pacific Islanders in the Pacific, Australia and New Zealand. The evidence that is available suggests that kava use is increasing in popularity across the Pacific, yet largely remains the domain of men. Kava availability has increased across the Pacific and there appears to be a democratization of use. Kava is now used by males throughout all levels of society for social, ceremonial, religious and medicinal reasons. Kava use can be now regarded as occurring on a continuum from ceremonial use bound by strict traditions to secular recreational use (Baker, 2011). In Australia, no research has been conducted outside New South Wales, we do not have an accurate picture of kava use by Pacific Islanders in Australia this includes the prevalence, pattern, and social context of kava use.
in Australia, or an understanding of how kava use impacts on social and physical wellbeing.

1.7 Aboriginal use in Arnhem Land

Since kava used emerged in Arnhem Land in the Northern Territory there have been a number of research reports which have examined the prevalence and social consequences of kava use. In considering the research conducted it is important to consider how the social and geographical context of Arnhem Land impacts on conducting and interpreting research. There are great inter-community differences in Arnhem Land and intra-community variability over time which can limit the generalizability of findings, for example seasonal variation in population size across Arnhem Land communities makes it difficult to draw firm conclusions regarding prevalence. The small population sizes of Arnhem Land communities mean most studies are conducted with small sample sizes, which limit their generalizability and the capacity for detailed statistical analysis. It is also important to note that Arnhem Land communities are subject to frequently changing regulation of alcohol and other government intervention which confounds many of the studies. Despite these limitations on research, the number of studies completed by 2002 amounts to considerable collection of data in a small population and provides a useful description of the prevalence and changes in kava consumption in the region. Research has been conducted as concern about the effects of kava use grew during the mid-1980s until 2000. This research has informed policy and debate for the last 20 years, and has primarily been conducted by Alan Clough, then from Menzies School of Health Research, and colleagues. Clough and colleagues have produced up to 15 papers including research, review, commentary papers and letters. Of note, these papers largely draw from the five different data sources collected from 1989 to 2002. While these papers are considerably important and, considering the complexity of conducting research in small communities, are of high methodological standard, it is important to consider the limitations associated with drawing extensive conclusions from a small amount of data. The five data sources are summarised below.


2. Case-control data collected in 1999: individuals from hospital admissions and matched cases (Clough, et al., 2002; Clough, Wang, et al., 2003).

3. File review of 689 people in the Miwatj region in Arnhem Land in 1999 (Clough, Guyula, Yunupingu, & Burns, 2002).

4. Cross sectional data (interview and health worker consensus data) collected in March 2000 where N=101 people were interviewed in one east Arnhem Community (Clough, 2003; Clough, et al., 2002; Clough, et al., 2003; Clough, Jacups, et al., 2003; Clough, Rowley, et al., 2004).

Prior to Clough’s work, research by Mathews et al. (1988) and Alexander et al. (1987) and reports by d’Abbs (1993, 1997) have also been instrumental in describing the effects of kava in Arnhem Land. There has been little to no research conducted since the early 2000’s that has addressed kava use. Consequently all the data regarding prevalence and patterns of use, including data collected incidentally in a cannabis research project (Clough et al., 2004), was collected prior to the commencement of the National Code of Kava Management in 2002, and the later import restriction kava in 2007 with the exception of a letter published in the Medical Journal of Australia in 2006 (Clough, et al., 2006).

Kava use is present in communities in both East and West Arnhem Land, yet it is not present in all communities. The majority of research that has been conducted is in the East Arnhem statistical subdivision. In terms of the East Arnhem population, it was estimated that there were 8,549 Aboriginal people in the East Arnhem statistical subdivision in the 2006 census, of which 5,723 are over 15 years old. Eight major communities have a history of kava use: kava was introduced to Yirrkala and spread to the East Arnhem communities of: Ramingining, Milingimbi, Galiwinku (Elcho Island), and Gapuwiyak (Lake Evella), and the West Arnhem communities of Minjilang (Croker Island), Warruwi (Goulbourn Island), and Maningrida. It is also used in a number of Homelands communities near Ramingining and in the Laynhapuy Indigenous Protected area and has also been noted at times on Groote Eylandt (d’Abbs, 1993; d’Abbs & Burns, 1997). It is important to acknowledge that at various stages between 1982 and 1991 kava was banned in five of the eight communities as part of local community decision making. At the onset of the first period of licensing only three communities elected to use kava but as d’Abbs & Burns (1997) notes this was not a unanimous decision in any community. The current distribution of kava use is not accurately documented. The following review provides a summary of the entry of kava to Arnhem, a review of the prevalence, the patterns of use and social consequences of kava use documented to date.

**Introduction of kava to Arnhem Land**

The introduction of kava in Arnhem Land occurred during a period of rapid social change in Arnhem communities that is well documented elsewhere (Alexander, et al., 1987; Clough, et al., 2000). Elements of change that are noteworthy include the commencement of bauxite mining in the 1970’s, which resulted in a dramatic population increase of approximately 3,300 non-Aboriginal people residing in the township of Nhulunbuy in Arnhem Land. During this time, the influx of the workers also led to the introduction of alcohol (Clough & Jones, 2004); this occurred despite the requests from
Elders to ban alcohol from the area. This period of time also saw the emergence of the Homelands Movement in which many Aboriginal people left the mission towns such as Yirrkala and returned to their ancestral lands.

Kava was introduced to Arnhem Land at Yirrkala in 1982 (Alexander, et al., 1987). Following a cultural exchange excursion of a group of Yolgnu people to Fiji, it was thought that kava may provide an alternative to alcohol and thereby reduce alcohol-related harm. Kava imports were facilitated by the Uniting Church who subsequently attempted to manage the supply of kava to Arnhem Land (Anonymous, 1993). Kava use quickly became common in Yirrkala and Warruwii (Goulburn Island) and by 1984 had spread to Minjilang (Croker Island), Groote Eylandt and inland and coastal outstations. Cawte (1986) argued that by 1986 kava had become a ‘social epidemic’. As the popularity increased local sellers were unable to meet the demand and profitable kava trade emerged. When non-Indigenous traders entered the market the capacity of communities and the Church to control use was weakened (Clough & Jones, 2004).

Initially as kava use spread throughout Arnhem Land, both Aboriginal and Non-Aboriginal people encouraged kava use as an alternative to alcohol (Alexander, et al., 1987). Commentators at the time argued that the kava bowl was considered a good ‘focal point’ that could provide a sense of fellowship similar to ‘sharing a carton of VB beer’ but without the harms (Cawte, 1986; Ellis, 1984). Others suggested that preceding community meetings by drinking resulted in social cohesion and more productive discussion and that the kava trade would lead to economic benefits for Aboriginal communities (Ellis, 1984). Alexander, et al. (1987) commented that although Fijian and Pacific Islander people facilitated the introduction of kava, and the Department of Health provided tacit approval of kava, it was Aboriginal people who requested and encouraged its use. Whilst the support of kava use in Churches and government undoubtedly had an impact on prevalence and pattern of kava use. It also set the social context as people were encouraged to use kava and during meetings and ceremonially, kava was regarded as a safe and socially acceptable substance.

In contrast to the Arnhem Land experience, in the late 1980s when non-Indigenous traders attempted to expand the spread of kava use into the Kimberley region in Western Australia (WA) (Urquhart & Thomson, 2008). Local elders were concerned about the effects of kava and requested that the WA Government ban it. The WA Government complied with this request and banned the sale and supply of kava by amending the Poisons Act (d’Abbs & Burns, 1997). Arguably this rapid action including condemnation by Elders and support through regulation prevented kava use from taking hold in WA.

**Prevalence and pattern of kava use between 1986 to 2003**

There has been great variability in kava use prevalence between and within Arnhem communities since introduction of kava. Consequently, aside from
measurement issues related to assessing kava use and assessing use in small communities, it is difficult to summarize the prevalence of kava use in Arnhem Land (Clough, et al., 2002). Table 1.4 (page 71) presents a summary of the kava use data recorded by the different studies conducted in Arnhem Land since 1986. It is important to note that the data presented in Table 1.4 (page 71) does not include data from the rapid expansion of kava use between 1981 and 1987.

As noted earlier, the measurement of kava use is imprecise and as a consequence it is difficult to compare the studies on quantity and frequency of use. In interpreting the findings Clough, et al. (2002) caution that the changing status of kava from legal to illegal, which occurred during the course of some research, impacted on participants’ comfort in responding to questions about use. Nevertheless, it is evident from these data that kava use was more common among males than females, and prevalence among females increased over the period of the studies. In communities in which kava use was present the prevalence of kava use among males was typically reported at around half or more than half of the male population. More striking than the prevalence findings are the data related to pattern of use. In several studies summarised in Table 1.4 (page 71) (Clough, Wang, et al., 2003; d’Abbs, 1993; Mathews et al. 1988) the majority of males drinking kava report levels of consumption categorised as ‘heavy’ and ‘very heavy’ use using Mathews, et al.’s (1988) grams per week criteria and is at the level of use described by Clough (2003) to be indicative of harms. This suggests that those who drink kava are likely to do so at high levels, moderate and occasional kava consumption is less likely. This has an impact on the level of harm experienced in communities.

Quantities of kava consumed in individual drinking sessions also appear have changed over time. Alexander, et al. (1987) and Fleming, Watson, McDonald, & Alexander (1991) reported the average drinker would consume 1.6 litres of kava per sitting, comparatively research by Clough et al. (2000) approximately seven cups of kava per hour (700ml), and drank for periods of periods greater than 3 hours. The amount reported by Clough is likely to result in higher drinking levels than those described by Alexander, et al. (1987) suggesting increases in heavy consumption. There is insufficient detail from the data to examine if changes in frequency of kava consumption occurred. Two reports in Table 1.4 (page 71) (Burns, d’Abbs & Currie, 1995; Clough et al. 2002) were looking specifically at younger adults, kava prevalence in these studies is somewhat lower than those in the broader adult community suggesting that kava use may be more prevalent among adults over the age of 30 years compared to adolescents and those under 30 years. Consistent with reflections by d’Abbs & Burns (1997) the data presented in Table 1.4 (page 71) demonstrate that since the late 1980’s there has been a steady increase in the number of kava drinkers and the average amounts consumed by drinkers in single sessions and over the period of a week.
Table 1.4 Summary of findings of Arnhem Land kava use research

<table>
<thead>
<tr>
<th>Year</th>
<th>Location</th>
<th>Sample</th>
<th>Prevalence consuming kava (current)</th>
<th>Average Consumption</th>
<th>Regulatory framework</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>Arnhem Land</td>
<td>Kava using Arnhem Land communities</td>
<td>42% of adults over 15 years</td>
<td>70% of drinkers drink more than weekly.</td>
<td>No regulation</td>
<td>(Alexander, et al., 1987)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Males: 71%</td>
<td>1.6L consumed per occasion.</td>
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<td></td>
<td></td>
<td></td>
<td>Females: 20%</td>
<td>20% report drinking daily</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Total: 26%</td>
<td>1.6L with 112 g kava per 4L of water:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Males: 42%</td>
<td>44.6 grams per drinking session</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Females: 12%</td>
<td>No details regarding average sitting per week</td>
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<td></td>
<td></td>
<td></td>
<td>Known Kava using communities</td>
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<td></td>
<td></td>
<td></td>
<td>70% of males</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>8–50% of females</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Males in community: 80%</td>
<td>Among kava drinkers (N=39)</td>
<td>No regulation</td>
<td>(Mathews, et al., 1988)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Females in community: 20%</td>
<td>Occasional: 10% 'heavy': 38% 'very heavy': 51%</td>
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<tr>
<td></td>
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<td></td>
<td></td>
<td>145 g per week (occasional drinker)</td>
<td></td>
<td>(Clough, et al., 2000)</td>
</tr>
<tr>
<td>1986–87</td>
<td>Arnhem Land</td>
<td>10% of adults across all Arnhem Land</td>
<td>Current Consumption overall</td>
<td></td>
<td>No regulation</td>
<td>(Fleming, et al., 1991)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Total: 26%</td>
<td></td>
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<td></td>
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<td></td>
<td>Males: 42%</td>
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<td></td>
<td></td>
<td></td>
<td>Females: 12%</td>
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<td></td>
<td>Known Kava using communities</td>
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<td></td>
<td></td>
<td></td>
<td>70% of males</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>8–50% of females</td>
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<tr>
<td>1988</td>
<td>Single community in East Arnhem Land</td>
<td>Random sample of kava users and matched non-kava users. N= 73</td>
<td>Males in community: 80%</td>
<td>368 g per week (heavy drinker)</td>
<td>Initial Licensing</td>
<td>(Clough, et al., 2000)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Females in community: 20%</td>
<td></td>
<td>period</td>
<td>(Clough, 2003)</td>
</tr>
<tr>
<td>1990–91</td>
<td>Single community in Arnhem Land</td>
<td>Participant observation of whole community (N=125)</td>
<td>Total: 66%</td>
<td></td>
<td>Initial Licensing</td>
<td>(d'Abbs, 1993)</td>
</tr>
<tr>
<td>1992</td>
<td>Two East Arnhem communities (A and B) with licensed sales</td>
<td>Sales data</td>
<td>A. 68% Males, 51% women</td>
<td>A: Mean consumption per week: 618 g</td>
<td>Initial Licensing</td>
<td>(d'Abbs, 1993)</td>
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<td></td>
<td></td>
<td></td>
<td>B. Of 50 kava drinkers, 58% were</td>
<td></td>
<td>period</td>
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<td></td>
<td></td>
<td></td>
<td>male</td>
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<td></td>
<td></td>
<td></td>
<td>Males: 38%</td>
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<tr>
<td>1992</td>
<td>Maningrida</td>
<td>N=58 young males aged 13–32, who were identified as petrol sniffers</td>
<td>66% Males</td>
<td></td>
<td>Initial Licensing</td>
<td>(Burns, D'Abbs, &amp; Currie, 1995)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Health service data</td>
<td>33% Females</td>
<td></td>
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<tr>
<td>1992</td>
<td>Outstation communities, Miwatj health N=149</td>
<td>Health service data</td>
<td>66% Males</td>
<td>Drink 4 times or more per week:</td>
<td></td>
<td>(d'Abbs, 1993)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>33% Females</td>
<td>32.4% males</td>
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<td></td>
<td></td>
<td>25% of females</td>
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<td>Drink 8 cups (12 0 g or more per sitting):</td>
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<td></td>
<td>28% males</td>
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<td></td>
<td></td>
<td></td>
<td>13% females</td>
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<tr>
<td>Year</td>
<td>Location</td>
<td>Methodology</td>
<td>Gender of Users</td>
<td>Use of Kava</td>
<td>Notes</td>
<td></td>
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<td>----------------------------------------------------------------------------</td>
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<tr>
<td>1994–97</td>
<td>East Arnhem Land</td>
<td>Case control study including 226 cases from hospital and 431 matched controls</td>
<td>Total: 46%</td>
<td>Of kava users: Occasional: 16% ‘heavy’: 38% 'very heavy': 46%</td>
<td>Regulatory hiatus (Clough, Wang, et al., 2003)</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>Miwatj Region East Arnhem Land</td>
<td>File Audit of 689 health clinic consumers</td>
<td>Males: 46%</td>
<td>Kava illegal</td>
<td>(Clough, et al., 2002)</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Single community in East Arnhem Land</td>
<td>Sample of 30% of population of 15 years (N = 101)</td>
<td>Females: 18%</td>
<td>Kava illegal</td>
<td>(Clough, 2003; Clough, et al., 2002)</td>
<td></td>
</tr>
<tr>
<td>2001–02</td>
<td>Single Community in East Arnhem Land</td>
<td>Sample of 136 young people aged 16–34 years</td>
<td>Males: 52%</td>
<td>Kava illegal</td>
<td>(Clough, et al., 2002)</td>
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</tr>
</tbody>
</table>
Polysubstance use is also worthy of discussion, in particular the use of both kava and alcohol. Clough, et al.’s 2002 case control study collected data about both alcohol and kava. Examining prevalence they reported 31% of all their participants used neither kava nor alcohol, 23% used alcohol but not kava, 30% used kava and alcohol and 17% used kava but not alcohol. This suggests that 63% of those who were kava users also used alcohol. These findings suggest that it was not uncommon to use both substances despite widespread belief that people choose kava or alcohol. There is not detail as to how the two substances are used to together; whether alcohol and kava are consumed at the same time or used but at different times, but the findings suggest that there is potential for harms associated with consuming both alcohol and kava to occur. Kava use has also been documented among people using petrol and cannabis. As described in Table 1.4 (page 71), Burns et al. 1995 found that 38% of a sample of petrol sniffing young people reported kava use. In a letter to the Medical Journal of Australia Lee, Clough and Conigrave (2007) report interview data from 106 adults in Arnhem communities, the interviews were centred around cannabis use but participants were also asked about kava. Lee et al. (2007) found that 15% of cannabis users also reported kava use and that 7% of cannabis users would look for kava if cannabis was unavailable. Clough, et al. (2002) notes that a dynamic substance-use complex exists in Arnhem Land involving changing patterns of different substances, including kava, alcohol, petrol and cannabis. These data collected to date demonstrate that kava use does occur with other substance use which has implications for harms experienced, further research is clearly needed to clarify how different substances are used together.

In summary, the data show that in kava using communities there is variability of kava use. However many of the studies reported that over half the male population were using kava, and of even more concern is the studies that suggest that those who do use kava are more likely to use at heavy levels. Polysubstance use is also noted as present, however given the differences between communities regarding substance availability it is not clear how common it is. Across Arnhem Land some communities allow alcohol and not kava, others kava and not alcohol, and despite what is permitted varying degrees of black market in each exist in most communities. From the research conducted to date we know little about the course of kava use and pattern of substance use beyond the grams consumed per week. In reviewing prevalence from the 1980s until 1992 d'Abbs (1993) found that the proportion of women using kava increased as did overall quantity of kava used per week, a finding which is reported in the current review.

**Alternative measures of kava availability and consumption**

Given the complexities of assessing kava use at the individual level alternative indices of consumption warrant attention; alternative indices of kava
availability include amount of kava imported into Australia and seizures of illegal kava. In order to examine the overall quantity of kava being used in Arnhem Land Clough, et al. (2006) combined the data from a range of sources including import data and police seizures:

- 1982–1997 population surveys of kava use from various sources;
- 1998–2005 estimated use from kava seized by police and licensing: seizures calculated to account for 14% of the illegal kava supplied; and,

Clough, et al. (2006) presented the combined data graphically in a letter to the Medical Journal of Australia, (reproduced above Figure 1.1). They suggested that police seizures represent 14% of the black market, yet caution must be used when interpreting the data as policing resources fluctuate and kava trafficking may not be a consistent priority for police. Thus there is some lack of detail as to whether the amounts estimated during 2000 and 2001 are accurate. Further the letter did not include detailed methodology of how the different data sets were collated. Despite this, the information provides a useful estimate of kava use and demonstrates great fluctuations in kava consumption with a peak occurring during the late 1990s and an increasing trend upwards during the early 2000s. It is important to note that Figure 1.1 illustrates that there is an ongoing market for kava regardless of the regulatory framework, and Clough, et al. (2006) points out that a consistent level of black-market kava was present during the licensing period.

**Social contexts of kava use and documented kava related harms**

Much of the information regarding social context and harms of kava use comes from anecdotal report and commentary; the majority of research has focused on the health impacts of use. There is very little research from which...
to examine any changes in context of use and harms over time. The context of kava use is likely to have been impacted on by changing regulations, although there is little detail in relation to this.

The introduction of kava to Arnhem Land communities followed a cultural exchange visit to Fiji by Yirrkala community members; as a consequence some aspects of the Fijian social context of kava use were introduced at the same time as kava use. This included drinking prior to political discussion and drinking at ceremonial events. The Fijian Church Minister who assisted the introduction of kava to Yirrkala reportedly arranged for people to meet and drink kava for two to three hours in the evening after work, he also taught Fijian customs surrounding serving and preparing kava (Anonymous, 1993). After the initial introduction of kava, Alexander, et al. (1987) noted that both men and women in groups of various ages sat together to share kava each evening. These groups typically comprised of around 11 people, ranging from about four to 30 (Alexander, et al., 1987; Fleming, et al., 1991). Alexander, et al. (1987) went on to report that as availability increased small groups in each community who used kava daily for long periods of time emerged.

The effects of early kava drinking on communities were described by Alexander, et al. (1987) as having cohesive effect because community members were together and there was little conflict during consumption. This lead to comparisons between alcohol and kava and the conclusion that kava may be a solution to the region’s difficulties with alcohol. There is further suggestion that a decrease in gambling coincided with kava use Cawte (1986), however the longevity of this decline has not been investigated and recent reports suggest that kava and gambling occur together (Clough et al. 2000). The relaxing effect of kava coupled with the lack of detrimental cognitive effects was also said to assist with the telling of traditional stories during kava circles. Ellis (1984) argue that community meetings that were preceded by kava use resulted in more productive discussion.

Despite these positive comments there was some early commentary that kava was being consumed at high levels and resulting in harms. Cawte (1986) describes the observations by community members that people were neglecting community business after consuming kava and people reporting that they were ‘drinking to get drunk’. The links between Fijian customary practises and kava use in Arnhem Land were arguably short lived. Cawte (1986) contrasted Aboriginal consumption patterns with Pacific patterns and reported that Arnhem kava sessions lacked the formality of Pacific ceremonies, he commented that people moved from kava circle to kava circle during the night, kava parties lasted for over 24 hours and that both men and women drank.

In the 1990’s Clough, et al. (2000) described the kava drinking contexts he observed in participant observation research. These included kava drinking as part of: ceremonial and celebratory gatherings; tribal elders circles; household
groups; card games; close companions and friends; and drinking alone. They observed that these social contexts were linked to different drinking styles. For example he reports that those drinking heaviest were more likely to drink alone. Further, he found that the heaviest drinking was unlikely to occur during card games and elders circles. He proposed that kava consumption was lower when it was secondary to another activity Clough, et al. (2000). While these categories are useful in recognising that different contexts of use occur, there is little comment as to the cross-over between categories and they have not been replicated in later studies. Consequently whether these distinctions and their associated consequences have changed over time is unclear.

As noted by Clough, kava use is typically a group process, yet there is little research regarding how kava drinking sessions are terminated and how drinking is moderated in both regulated and non-regulated environments. Further, there is little detail as to how kava is prepared and shared. Clough and Jones (2004) report that the group process of kava use has an effect on consumption levels because people share rounds. This means when kava is scarce it is shared and when it is plentiful it is shared. The same mechanism that encourages restraint also encourages abuse, which is tied to availability. Clough (2003) notes that in his observations kava use was linked closely with availability, he suggested the more that kava is available the more likely it is to be consumed and consumed at high levels. He notes that this pattern of kava consumption is consistent with other commodities in the 1980s.

Examination of the social effects of kava suggest that kava intoxication causes little harm, however concerns about the ongoing impact of kava use have been described in research examining a broad range of social determinants of health, in particular the neglect of community and family responsibilities. For example, evaluation research investigating outcomes of a child growth intervention highlighted the impact of drinking kava as one of the activities that impacted on the care of children in a particular community (Smith et al., 2004). Similarly, McLeod (1994) cites the concerns of elder women who were worried that young parents were not teaching traditional knowledge and skills, which they perceived to be due to lack of motivation and tiredness brought on by kava. McLeod (1994) also suggested that parental kava use leads to a lack of parental supervision and may result in incidences of petrol sniffing. An informant of Cawte’s (1986) commented:

... the family is no good anymore. Parents are away too long and the children are not looked after, steady drinkers are too tired to give thought to food or preparing meals. Kava drinkers are not violent but they are selfish.

There is also suggestion that kava has impacted on the organisation and participation of important community events such as football competitions (Clough & Jones, 2004). These commentaries demonstrate that the social context of use in which large groups of people are drinking kava for long
periods has a flow on effect to the community functioning at large. This was noted in the early research in Arnhem Land. (Alexander, et al., 1987) asked community groups if kava was causing any problems for the community, key themes that emerged were the impact of time spent in kava-related activities leading to the neglect of other duties, impacts on health, impacts on children and impacts on finances. Participants in Alexander, et al. (1987)’s research also commented that there was a need for controls and rules. The participants also noted positive impacts about ‘clear minded discussion’ and that kava was preferable to alcohol. Taken together the studies to date suggest that high levels of social harm related to kava use in Arnhem Land are arguably more related to the pattern of use in which there is little regulation around timing and purpose of kava drinking.

There is a complex interrelationship between kava and other substances, which is poorly understood. Whilst the interaction between kava and alcohol is discussed in more detail in Chapter 6 (page 184), it is important to note that kava is still regarded by some as preferential to alcohol, or as a method to reduce alcohol-related harm (Laynhapuy Homelands Association, 2008a). There are several communities that have reported that violence (against people and property) declined when kava was introduced, yet there is no evidence to support this assertion. McLeod (1994) suggests that in addition to kava being related to increases in petrol, due to lack of parental supervision, that kava was seen by petrol sniffers and their families as a viable alternative to alcohol. This suggests that people who use petrol may have been encouraged to switch to kava. He argues that the lack of substance use services and whole of community health approaches has led to kava being used to treat petrol sniffing and alcohol use instead of addressing the underlying concerns. Despite these comments, there is much data to suggest that many people consume both kava and other substances and there is very little commentary regarding the exact nature of polysubstance use and substance substitution.

**Reasons for kava use**

Individual decision making is also an important component in understanding the social context of use, patterns of consumption and harms experience. Across the substance use literature reasons for using substances predict different patterns of consumption, contexts of use and harm or benefits experienced from use. Understanding reasons for use help understand the functions that kava can serve, yet there are few studies which have directly investigated reasons for use in Arnhem Land.

Alexander, et al. (1987) asked people the main reasons they had for drinking kava where they were prompted by interviewers and the responses were ranked. Among women the most important reasons to use in order of rank were: to keep relationships strong, they liked the feeling, and it helped them forget worries and problems. For men the main reasons in order were: the
feeling it gave, they were bored, and to keep relationships strong. It is important to note that the reason of ‘instead of grog’ was not rated as an important item for individuals.

Alexander, et al., (1987) also asked what reasons for not drinking were important. Among women, their most highly ranked responses were: bad for health; bad for family; and don’t like taste. For men the most important reasons for not using kava were: don’t like taste; bad for health; and afraid of what might happen. Of note, men did not rate ‘bad for family’ highly as a reason to not drink suggesting that there was not a perception that kava was bad for family, or less likely, that family was not an important component of the decision. It is important to consider that reasons men gave for not drinking ‘not like the taste’ are unlikely to result in not using, whereas the reasons given by women are more consistent with decisions not to consume.

**Economic impact of kava use**

A well-known consequence of heavy substance use is the economic impact of prioritising purchasing a substance over other important items such as food, household goods and bills. Substance abuse can result in a large cash drain on communities, particularly when a large proportion of community members use a substance. This cash drain affects the whole of communities as the money available for purchases at local businesses is reduced (Clough, et al., 2006). As the consumption of kava increases the amount of money leaving the community also increases. Consequently a key argument for the community control of kava use has been to keep money within communities to use for whole of community benefit. In contrast when the kava trade is dominated by black marketing (during periods where kava has been illegal) the cost of kava is greater and a greater proportion of money leaves the community.

In Clough’s participant observation study he found that during the 1989–1990 period 2% of the community income was spent on kava, whereas by the 1990–1991 period (Clough, et al., 2000) 19% of the community income was spent on kava with 11% of that leaving the community. Clough commented that during the period when kava was illegal, it was the substance that caused the greatest financial damage to Arnhem Land communities (Clough, 2005). The impact of kava on finances then has a flow on effect to other areas of community wellbeing such as money available for food. Amount spent on kava depends not only on amount consumed but also the cost of kava. Table 1.5 (page 79) summarises the cost per kilo paid in Arnhem Land by consumers and shows great variation over time.
Table 1.5 Cost of kava per kilo from 1986 – 2006

<table>
<thead>
<tr>
<th>Year</th>
<th>Cost per kilo</th>
<th>Regulatory Framework</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1986</td>
<td>$50</td>
<td>Unregulated</td>
<td>(Cawte, 1986)</td>
</tr>
<tr>
<td>1987</td>
<td>$55 (and up to $140)</td>
<td>Unregulated</td>
<td>(Alexander, et al., 1987)</td>
</tr>
<tr>
<td>1990</td>
<td>$200*</td>
<td>Unregulated then Licensed</td>
<td>(Hughes, 2007)</td>
</tr>
<tr>
<td>1997</td>
<td>$400*</td>
<td>Regulatory hiatus</td>
<td>(Hughes, 2007)</td>
</tr>
<tr>
<td>2000</td>
<td>$269</td>
<td>Kava illegal</td>
<td>(Clough, et al., 2000)</td>
</tr>
<tr>
<td>2006</td>
<td>$150</td>
<td>Licensed</td>
<td>(Laynhapuy Homelands Association, 2008b)</td>
</tr>
</tbody>
</table>

*Note: these figures provided by Hughes are in an unreferenced opinion paper so their accuracy has not been corroborated.

As with all substances of abuse there are effects related to the use of a substance and effects related to the supply. Regardless of the health and social effects that have been experienced by communities and regulations that are in place, there is a market for kava, and as a consequence the way in which kava is supplied can have an effect. In periods in which kava has been banned or unregulated the black market for kava has risen and results in higher prices and little control over when and where kava is bought and how the profits are used. This then has a great impact on a community’s capacity to minimise kava related harm. There are reports that black marketer used aggressive sales and marketing tactics of kava emerged and that these groups were able to provide 24 hour accessibility to kava (Anonymous, 1993).

The introduction of the Kava Management Act and licensed sale of kava occurred following the black market already being strongly established across Arnhem Land. The pervasiveness of the black market kava is evidenced by the Reasons for a Decision in a licensing dispute between the Kava Wholesaler and a kava retailer related to a disruption in kava supply. The coordinator of the Yirrkala Dhanbul Community Association commented that he had not realised how big the black market for kava was until a particular local person had been arrested. He provided evidence to the hearing that, following the arrest, retail sales of kava shot up (‘Yirrkala Dhanbul Association inc v Laynhapuy Homelands Association Inc.,’ 2003). In addition to the effects on Aboriginal communities the black market also has an economic impact on the wider communities and on police resources.

**Debate in Arnhem Land**

There has been extensive and ongoing debate about the effects of kava on Arnhem Land communities. In 1986 Cawte summarised interviews with local people regarding the effects of kava and reports that supporters of kava were often involved in the sale of it and the most commonly promoted reason for using kava was to minimise alcohol-related harm. Those not supporting kava
tended to be totally opposed to it arguing that it was causing the neglect of family and community.

The issue of alcohol is reviewed in more detail in the next section, however it is important to note that much debate in Arnhem Land has surrounded the benefits of kava as a harm minimisation approach to alcohol and alcohol related violence. In addition to alcohol the debate about kava in Arnhem is intrinsically tied to economics. One of the most sensitive issues in managing kava is the involvement of Elders, community leaders and community-controlled agencies in the trade of kava. This complicates a range of matters including relationships with key community members to local police when kava is illegal (Delahunty & Putt, 2006) and the management of the kava sales when it has been licensed. The other important implication is that under licensing regimes community controlled agencies can feed the profits of kava sale directly back into communities, thereby funding roads, child health programs and providing jobs. A previous kava license holder commented that the funds raised through the sale of kava were the only funds in which the community could decide itself on what to spend (Rota, 2011).

Many communities have seen great benefit from the money that kava use generates and as a consequence are ambivalent about the harms associated with use (Delahunty & Putt, 2006). A key example of this conundrum is in a report prepared for the Warruwi community by (Local Government Association of the Northern Territory, 2005) regarding the opportunities and barriers for employment in the community. The report notes that a barrier to achieving employment among community members is extensive kava use, yet the report later recommends that expansion of the kava shop because kava business will provide more work opportunities and make the community more economically viable. It is important to note that Clough and Jones (2004), McLeod (1994) and Urquhart and Thomson (2008) have all reported that there are communities that have positive experiences with kava management and when managed carefully it cannot impact negatively on the community.

While the sale of kava, a substance which causes harm, can be seen as a conflict of interest for Aboriginal community-controlled agencies, Chalmers (1995) notes that, for any government, the sale of alcohol and tobacco is a similar issue. More recently (Laynhapuy Homelands Association, 2008a) compared the known harmful effects of kava to tobacco, soft drink and unhealthy foods and argued that kava is safer. They point out however that there is no clear kava morbidity or mortality data. While they do not consider the social harms of use in this discussion it leads to an important debate about the rights of communities and individuals to use substances which may cause harm. The impact of debate surrounding kava use and the changing kava regulations themselves have arguably had effects for communities. McLeod (1994) noted that the ongoing issues around kava, kava management and licensing and changed regulations dominated local politics and community meeting agendas in some communities for years and this occurred
to the neglect of other issues. In addition to the lack of detailed research which has occurred into the social contexts of kava use over time, research has been complicated by the frequently changing regulatory context. Not only does this affect the willingness of participants to discuss kava use, but it also has a great impact on communities who have to adjust to the frequently changing regulation.

**Summary**

There has been no comprehensive collection of data around kava use in Arnhem Land since 2002, making it difficult to draw conclusions about the current prevalence, pattern, social context and harms associated with kava use. What can conclude from the evidence to date is that in communities using kava that kava use is more common among males, with many studies reporting that over 50% of males use kava. Examination of grams of kava used per week suggests that ‘heavy’ and ‘very heavy’ kava use are the more common patterns of use. Kava appears to have few acute effects on community wellbeing but over time there is evidence suggesting that ongoing heavy use in communities is associated with an economic drain on communities and a decline in community participation. Further kava is a divisive issue in Arnhem Land with the advantages and disadvantages of substance availability being actively debated across most communities.

**1.8 Kava and alcohol**

There is a complex relationship between alcohol and kava in both Aboriginal and Pacific Islander communities and in the political and policy discourse that surrounds kava use. It is widely suggested that kava is a positive alternative to alcohol in Arnhem Land, and that kava use should continue and be encouraged in Pacific Islander communities and the Pacific Islands to prevent the uptake of alcohol use (Finau, et al., 1982). Early research and commentary papers (Alexander, et al., 1987; Cawte, 1986) also tend to compare the consequences of alcohol with the consequences of kava use. Considering how pervasive these arguments are, they are worthy of further discussion.

In Australia, when discussing the community benefits of kava consumption in Arnhem Land it is commonly reported that there is less violence and aggression in communities that use kava compared to those that use alcohol, and that kava prevents young men leaving the community to drink alcohol (e.g. Alexander, et al., 1987; d'Abbs, 1991; d'Abbs & Burns, 1997). These points have not been examined empirically yet considering the devastating impact alcohol has had on some Arnhem Land communities, these experiences cannot be dismissed (Chalmers, 1995). d'Abbs (1993) comments that there is no population data to either confirm or deny these widespread beliefs.
Chalmers (1995) provides an interesting summary of the impact of kava on alcohol, she states that kava may have had some value in some communities initially as an anti-alcohol strategy but that it is not universal. Chalmers (1995) observed three different relationships between alcohol and kava in Arnhem Land communities. Firstly, for some communities, kava means the absence of petrol sniffing and reduction in people drinking in town or going to Darwin, less violence and people enjoying sitting around together. It is worth considering in this case if these are benefits of kava or benefits of reduced alcohol availability. In these communities Chalmers (1995) comments that some people drink too much kava, get a rash and do not go to work and even those in these communities who do not like kava agree with these points. Secondly, in some communities, kava drinking has resulted in parents neglecting their children, which could lead to resurgence in petrol sniffing. Thirdly, in some communities, kava has little impact on alcohol use and its consequences, and many alcohol drinkers consume both kava and alcohol. These distinctions are useful as they demonstrate the variability between communities and recognise the genuine reprieve from alcohol-related harm that some communities experienced when kava was introduced. She concluded that the introduction of kava has more likely added another mood altering substance to those that were already available rather than providing overall relief from alcohol related harm.

Implicit in the proposal that kava can reduce alcohol-related harm is the suggestion that people will choose either alcohol or kava, yet this is a somewhat naïve assumption. Data from Pacific Islander communities in New Zealand and among Aboriginal communities in Arnhem Land in which people have access to both substances have shown that people who use alcohol are more likely to consume kava. Therefore how kava and alcohol may be used together in a single setting, and how people use kava and alcohol at different times is of importance. There is little research to date that investigates how alcohol and kava are used together in a single setting. In Fiji and Vanuatu it is common for people to have an alcohol chaser after drinking kava – a practise is known as wash down. In contrast, commentators from Tonga report that alcohol and kava are kept separate. In Arnhem Land there were early reports that people mixed alcohol and kava together, but there has not been any evidence to suggest that this is an ongoing or common practise (d'Abbs, 1991).

Key to any discussion about the relationship between kava and alcohol and social harm is the question of substance substitution. For example it is commonly thought that in kava using areas (both Aboriginal and Pacific Islander) that if kava is not available then people will turn to alcohol and conversely that the kava availability prevents the uptake of alcohol use (Laynhapuy Homelands Association, 2008b; Pione, 2007). To date there is little evidence that substance substitution is a given. It is highly likely that some substance substitution may occur for some individuals; however the relationship is not one to one as the broader international evidence indicates.
(Saffer & Chaloupka, 1999). As an example of substitution Burns, et al. (1995) found that in communities where petrol sniffing was rife some people successfully encouraged family members to use kava instead of sniffing. However there is not consistent evidence that people have swapped from alcohol or other substances to kava as a harm minimisation strategy. Chalmers (1995) notes the proportion of women who use alcohol in Arnhem Land remains low while the number using kava grew steadily from the late 1980s to the mid 1990’s, which emphasises the differences between kava and alcohol use.

Any understanding of substance use needs to take into account the different decisions people make about consumption. The reasons a person may have for drinking alcohol may not be the same as the reasons for drinking kava. Not only are the substances different, they often have different legal statuses and different social contexts of use. Indeed, Sector Analysis Ministry of Health (1997) in New Zealand and Finau, et al. (1982) in Tonga suggest that kava and alcohol fulfil different needs. They argue that kava is an agent of cultural identity and linked to activities whereas alcohol attracts youth by temporarily releasing them from social responsibilities in a confining social system. It is interesting to note that alcohol prevalence in Finau et al.’s (1980) study was more likely in younger participants a total 30% of kava drinkers reported alcohol consumption.

In contrast to the suggestion that kava may minimise alcohol related harm, there is some suggestion that kava drinking practices have influenced the emergence of heavy episodic alcohol consumption in Pacific communities. It has been suggested that kava drinking has been a prototype for alcohol drinking (Lemert, 1967; Toms, 2003), which has led to the over-use of alcohol. This sentiment has been echoed by New Zealand research and health authorities (e.g. Sector Analysis Ministry of Health, 1997; Sundborn et al., 2009) however evidence is limited to transcripts of interviews where participants have commented that alcohol consumption occurred in a circle, that alcohol is consumed ‘all in one go’ and that when drinking alcohol sessions stopped when alcohol was all gone. While this is an interesting observation, how this differs from heavy episodic drinking among people from non-kava using backgrounds is unclear. Thus there is little evidence to suggest that people who drink kava are more susceptible to engage in heavy episodic alcohol drinking.

In Pacific Island nations, particularly Vanuatu, there is increasing concern that the marketing, packaging and sale of kava are tending to follow the same path as alcohol (Jowitt & Binihi, 2001; McDonald & Jowitt, 2000). In this sense there is concern that kava is being used like alcohol. That is, it is being marketed to target the same drivers of use as alcohol. Kava in the Pacific Islands has value in maintaining cultural identity and custom and facilitating the transfer of cultural knowledge; when kava use for these functions is largely regulated via the social context of use and rituals associated with use.
In contrast the use of kava in kava bars is not regulated by the same social controls and rituals. This use may result in the undermining of the traditional role of kava within culture. Indeed the discourse in online forums argues against the broadening use of kava, yet supports its ceremonial use (SayNotoKava, 2010). In applying these concerns to Arnhem Land communities, an alternative concern may be that the deliberate marketing of kava as a substitute and alternative to alcohol may have undermined potential benefits of kava being used in ways consistent with Pacific Islander custom.

Thus, while there is value in understanding that in some Arnhem Land communities drinking kava may have initially resulted in the reduction of alcohol-related harm, this substitution cannot be considered a clear relationship nor one that has necessarily persisted over time. Further, there is no evidence to suggest that reduced availability of kava will result in an increase in alcohol and alcohol-related violence in Pacific Islander communities. It is important to explore these issues further as they are widely held beliefs in Aboriginal and Pacific Islander communities, and therefore any policy interventions will need to consider these attitudes.

1.9 Summary

The preceding review has provided a critical summary of the literature on: the current evidence regarding the effects of kava on health and wellbeing; the documented prevalence and patterns of kava use in Australia; the social and cultural context of kava use and how this impacts upon health; and the range of control measures in Australia. Much of the research related to kava is in its infancy and there are many unanswered questions presented in the review.

It is clear from the literature that at low doses kava is a largely benign substance with few negative consequences. At higher doses kava may cause kava dermopathy and impact on liver functioning as indicated by elevated liver enzymes. It is possible that heavy recreational use does have more serious effects including: impaired motor co-ordination, ocular ill health, seizures, liver damage, heart attack, appetite loss and poor overall health, however the incidence of these are unknown and are likely to be low. Social harms related to kava use have been documented in both Arnhem Land and across the Pacific and tend to relate to time and money spent on kava at the expense of other priorities. More research is needed particularly in relation to the prevalence of these harms among Pacific Islander peoples in Australia and the Pacific.

In Australia kava is used predominantly by people of Pacific Islander decent and Aboriginal people in the Arnhem Land region of the Northern Territory. Kava regulation in Australia has a complex and confusing history with frequent changes in regulation impacting on patterns and contexts of use as
well as the willingness of communities and individuals to participate in research.

There is scant documented evidence related to the current prevalence, context and consequences of kava use by Pacific Islanders in the Pacific, Australia and New Zealand. The evidence that is available suggests that kava use is increasing in popularity across the Pacific, yet largely remains the domain of men. In Arnhem Land there has been detailed examination of kava use since the early 2000’s. Prior to 2003, in kava using communities in Arnhem Land almost 50% of males used kava, of those a significant proportion were using at levels indicative of harm.

Kava is an emotive topic in both Arnhem Land and Pacific Islander communities with the socio-cultural benefits of ceremonial kava use and economic benefits of kava sales being weighed up against the social and physical harms associated with kava use. The debate is made more complicated by the lack of quality evidence from which to inform debate. Further, the impact of alcohol on both Arnhem Land and Pacific Islander communities and the hope that kava will minimise or prevent alcohol related harm complicates any discussion related to kava use.
2 Control and Intervention

Interventions to reduce harms related to substance use are typically described as either supply reduction, demand reduction or harm reduction. To date most interventions to reduce harms associated with kava have been control measures aimed at supply reduction. Whilst numerous countries have regulations pertaining to the distribution and sale of medicinal kava use, only Australia has regulated recreational kava. Consequently in reviewing the impacts of control measures, only control measures in Australia are considered below. It is beyond the scope of the terms of reference to provide a detailed review of the regulations, however presented in Section 2.1 (page 86) is a summary of the documented impacts of kava control measures to date. Impacts on both kava availability and kava related harms are presented where possible. Impacts of the most recent regulatory framework are summarised briefly but will be addressed in more detail throughout Part II and Part III of the current report. There is very little peer reviewed literature from which to assess the impacts of regulations, consequently the majority of the evidence presented below comes from grey literature, opinion pieces and non-peer reviewed summaries. There are few interventions targeting kava related harms that are not control measures, and there are no details of outcomes or impacts of these measures. A summary of the documented kava prevention, treatment and health promotion interventions is presented in Section 2.2 (page 105).

2.1 Control in Australia

To date, control measures in Australia have been implemented in response to concerns about health and social effects of kava use in Arnhem Land (Abbott, 2007; Department of Health and Ageing, 2007; Urquhart & Thomson, 2008) and not in response to the use of kava by Pacific Islander peoples in Australia. A summary of the different regulatory frameworks used in Australia was presented in Section 1.6 (page 47). The discussion below details the known impacts of these regulation frameworks; there is a dearth of information as to how these frameworks have affected Pacific Islander peoples in Australia. With the exception of the review into the initial period of kava licensing in the Northern Territory (NT) by d’Abbs (1993) there has not been evaluations of the control measures applied to date. In considering the summary below it is useful to consider the Clough, Currie, Yunupingu, and Conigrave’s (2006) estimation of kava availability presented in Figure 1.1 (page 74).

Unregulated and unsupported self-regulation of kava supply

Kava was unregulated in Australia prior to 1990. Per capita consumption of kava increased dramatically during this period (See Figure 1.1, page 74) as did the emergence of concern that kava use was contributing to poor health
and community problems (Clough, Burns, & Mununggurr, 2000; Urquhart & Thomson, 2008). This increase is understood as both an increase in number of people consuming kava and amount of kava consumed by individuals (Clough, et al., 2006; d’Abbs & Burns, 1997). Initial research by Alexander, Watson, & Fleming (1987) commented that the extent and patterns of kava use did not warrant prohibition or restriction. Alexander, et al. (1987) suggested that social controls had evolved in Arnhem Land and questioned the need for regulation beyond self-regulation. Despite this opinion, later reviews (e.g. Clough & Jones, 2004; Urquhart & Thomson, 2008) report that self-regulation was undermined by aggressive entrepreneurial activity in which kava was marketed and targeted at toward Aboriginal people in Arnhem Land. Some communities adopted self-regulatory approaches including restricting sales, banning children from using kava, and banning it entirely (Clough & Jones, 2004). Despite these attempts at self-regulation communities had difficulty in exercising control over kava sales, preventing the expansion of kava availability as they were not backed by sufficient powers to do so. Clough et al. (2004) describes the efforts of a particular community who requested that a kava wholesaler in Sydney sell only to a designated community organisation in an effort to prevent funds leaving the community but there was no compunction for the wholesaler to comply with the request (Clough & Jones, 2004); kava sales from non-community members continued to flourish. There is no evidence that support for communities who wished to ban kava was available at this time nor support by way of funding or resources to implement health promotion or treatment programs.

A second period of unregulated kava availability occurred between 1994 and 1998 when the NT laws fell outside of the new Commonwealth regulations (as described in Section 1.6, page 47) and the sale of licensed kava was stopped. At the time of license suspension there was a clear market for kava in Arnhem Land and it did not take long before entrepreneurs moved in to sell kava (d’Abbs & Burns, 1997). Despite the suspension of licenses there was little legal provision to act as a deterrent to black market kava sale, meaning that the police were largely powerless to prevent the black market. Hughes (2007) argues that at this was interpreted as a freeing up of imports and sales into the NT so that consumption increased. It was during this time that communities reported 24 hour, seven day per week selling of kava, and Clough, et al. (2006) estimated (see Figure 1.1, page 74) that use was at its highest. This period of kava use was arguably the period in which most concern around kava emerged and Hughes (2007) suggests an impact of this was kava was being sold in five communities who were not originally licensed. During this period, with unregulated kava freely available and not under community control a lot of money left communities. Clough (2003) demonstrated that this created significant economic burden on communities. The cost of kava during this period (see Table 1.5, page 79) was greater during this period than under other period of kava control.
This second period of unregulated kava availability was a particularly confusing period, licensed kava was prevented, yet the uncontrolled black market was allowed to flourish, not surprisingly the evidence suggests this had clear impact on the per capita consumption of kava and the finances of communities. There is also concern that there were impacts from the process of ending the licensing system and returning to unregulated kava supply. The suspension of licensing at this time occurred with little planning and consultation, and was followed up with no support for communities, or for kava users, to address the harms associated with kava use. Additionally a review into the licensing system was completed (d'Abbs, 1993), and communities had not had an opportunity to respond to the recommendations in the report, which concluded that despite the serious flaws in the licensing system this was preferable to a ban on kava.

Taken together the limited evidence suggests that the deregulation of kava has resulted in per capita increase in kava consumption in Arnhem Land and increases in personal and community wide economic burden. Furthermore there were no opportunities for funds spent on kava to be used for the benefit of communities. The lack of overarching regulation places responsibility solely on communities, with no resources and no legal power, to try and prevent the aggressive sale of kava and kava related harm. Not surprisingly attempts at self-regulation were undermined and left communities powerless. Both periods of un-regulated kava availability were also associated with a lack of community consultation and support. In the latter period laws changed rapidly meaning there was no opportunity for communities to put in place supports to help people adjust to the new system from one in which kava was licensed, not surprisingly this to many people who used kava legally to shift to engaging with black market kava.

**Kava ban**

Kava was first banned in the Northern Territory between 1998 and 2002. The ban occurred when the availability of kava was estimated as high and dominated by black market kava (see Figure 1.1, page 74). The ban was introduced whilst the NT and Federal Governments developed legislation to address kava nationally. There is very little information regarding the impact of this ban. In Figure 1.1 (page 74) Clough, et al. (2006) estimates the quantity of kava in the NT during this period based on police seizures. Between 1998 and 2002 NT Police seized 5 tonnes of kava in 100 operations. It is important to note that police priorities and resources are not consistent over time making it difficult to gauge from the seizure data what proportion of available kava was seized. Information describing particular policing efforts and whether these impacted the estimations of kava availability is not available. Clough, et al. (2006) suggests that seizures are likely to represent 5% of the kava reaching Arnhem Land, which suggests that there was less kava in Arnhem Land during the ban than during the unregulated availability of kava, although there is no further data to support this conclusion.
Prevalence data collected during this period (see Table 1.4, page 71) suggests that between 41% and 52% of males and between 11% and 33% of females consumed kava. Thus, it is possible that per capita consumption may have decreased during this period but that the number of people using kava remained high.

Thus there is mixed evidence as to whether the period of kava prohibition between 1998 and 2002 resulted in a reduction in kava use. Furthermore there is little detailed information regarding the financial effects on the black market during this period and if the ban had an impact on other kava related harms. As with periods in which kava is unregulated the prohibition of kava was not accompanied by funding or resources for health promotion and treatment for people who use kava. Although there is little discussion in the literature, an additional consequence of kava prohibition is the criminalisation of kava users. Considering the documented prevalence of kava use, the implication is that when the laws changed a significant proportion of the population are at risk of committing an illegal activity.

In contrast, in Western Australia (WA) kava was banned in 1988, whilst there is no data regarding per capita kava consumption in WA before or after the banning of kava, following the ban there have been no significant arrests or kava seizures or any evidence of emerging kava related harms. This suggests that banning of kava did not result in harms to the community or that an increase in kava availability via a black market occurred. The context and process of the ban in WA was considerably different to that in NT. The process of kava prohibition in WA was a collaborative and community lead policy, and it took place prior to kava demand being established. When kava was banned there was very little recorded use outside a very small Pacific Islander population in Perth.

The banning of kava in the NT may have led to reduced availability of kava; however it did little to prevent the demand for kava or black market activity. As explained by d’Abbs and Burns (1997) and Loughnan (1999) attempts to control kava consumption through banning kava are limited in that it becomes entirely a police responsibility. Policing in remote areas is particularly challenging (Delahunty & Putt, 2006) and it cannot be assumed that kava can be consistent priority for the Police. The penalties associated with kava possession in the NT were relatively weak, making it hard to convict and deter suspected traffickers and difficult for the police to justify pursuing kava at the expense of other policing priorities. There is no evidence regarding how the banning of kava impacted on other indicators of kava use or kava related harm in the NT. The difference in outcomes of banning kava in WA and NT are great, it is important to recognise that banning kava in WA occurred prior kava use becoming an established practise; this has not been case in the NT.
**Initial period of Kava Licensing in NT**

The initial period of licensing in the Northern Territory was in place from 1990 - 1993. The overall objective of the licensing system was to reduce per capita consumption of kava, reduce health, social and economic harms and to regulate sale and supply with a view to eliminating profiteering and ensure kava sales went to the benefit of the community (d’Abbs, 1993). The rationale for introducing licensing included evidence that moderate kava use has little demonstrated effect on health and evidence that the emergence of a black market was having a negative impact on community wellbeing (i.e. d’Abbs, 1993). Under this system, the sale of kava was prohibited except with the approval of NT Minister for Health. The Minister for Health would consider approval if the majority of residents wished to maintain access to kava. Of the eight communities known to use kava, five communities (Yirrkala, Ramingining, Gapuwiyak, Warruwi and Minjilang) and one outstation (Dhipirri – an outstation of Milingimbi) elected to retain kava and three communities (Milingimbi, Galiwinku and Maningrida) elected to not apply for a kava licence (d’Abbs, 1993). The licensing system incorporated the supply reduction strategies of specified trading hours, price controls, and limited number retail venues. Kava sold under license was to be sourced only from an approved kava wholesaler and there was to be a limit to 50g per day for individuals over 18 years (d’Abbs, 1993). The licensing system was subjected to review by d’Abbs then with the Menzies School of Public Health.

d’Abbs’s (1993) review considers the effects of the control measures on kava consumption, kava related harms and benefits, and the sale and distribution of kava. In examining kava consumption d’Abbs (1993) reviews trends in kava sales and demonstrates that there was a short-lived fall in kava sales at the time the controls were introduced followed by a steady increase in kava availability. d’Abbs, (1993) found that by 1992 the level of legal sales in Arnhem Land was equivalent to the levels prior to the measures being introduced (see also Figure 1.1, page 74). Thus, d’Abbs (1993) concludes that the licensing system had failed in its objective to decrease per capita consumption. d’Abbs also cautions that his estimates are likely to be conservative as they do not include information regarding the black market available kava that continued to be present across Arnhem Land during the period. It is possible that black market kava availability varied between kava licensed communities and communities who elected to ban kava however there is no data which describes differences in black market activity between communities presented.

Prevalence data and kava sales data in a single community were used to estimate average consumption of kava, and d’Abbs (1993) deduced that kava drinkers were consuming an average of 620gms per week. This amount is higher than that described earlier by (Alexander, et al., 1987) suggesting that consumption levels had increased during the licensed period. This is an important observation but d’Abbs does not explain if his estimation accounts for the kava sold in the community that was not consumed in the community.
and therefore may be an overestimation of use. Regardless of this caution the
evidence presented by d’Abbs demonstrates that the licensing system did not
reduce supply of kava or reduce heavy use of kava. Furthermore the data
suggests that over this period the percentage of women using kava increased,
the reasons for this have not been explored. The review by d’Abbs (1993) does
not assess the impact of control measures on the prevalence of health effects
associated with heavy kava use. However d’Abbs comments that health effects
are closely linked to availability of kava and therefore if kava availability was
as high during licensing it is likely that the level of kava related harm will also
be high.

The key advantages of the licensing system compared to kava being illegal or
unregulated are that licensing can be used to prevent money from leaving
communities and to provide controls over how kava is sold. d’Abbs reviews
how kava profits were retained by some communities and found the benefits
of retail trading were mixed. d’Abbs (1993) described licensing sales of one
retailer who proposed that from every $5.00 of kava sold $1.30 would be used
to cover costs, $1.70 would be used by the shop to subsidise groceries, $1.00
would go to the association of Traditional Owners to be used for funerals and
other costs and $1.00 would be used for community development projects.
While these breakdowns were credible there is little evidence as to whether
this was satisfactorily achieved. In examining the financial records of a
different community d’Abbs reports that there was evidence that kava profits
were used to provide loans to communities, of these loans 50% were
appropriated by just six individuals and overall only 6% of the outlay was
repaid. So while the goal of ensuring profits were retained for community
benefit were positive, the lack of appropriate controls over kava profits in all
likelihood prevented the whole of the community from benefiting from kava
income.

A proposed benefit of the licensing system was minimising the impact and
damage associated with black-market kava trading. Black-market kava during
the licensed period took two forms; the on-selling of licensed kava and the
importation of kava without a license. d’Abbs (1993) notes that communities
who had banned kava had difficulty in preventing kava bought from other
communities being consumed, which undermined the community decision to
ban kava. d’Abbs points out that under the kava management act there were
no laws related to possession, only to supply and sale, therefore there were no
penalties for individuals found with large quantities of kava on them, making
it very difficult for police to address on-selling. d’Abbs argues for the need of a
‘deeming provision’ under the kava management act in which those in
possession of a quantity of kava could be deemed in possession for the
purposes of sale or supply. Consequently the laws did not sufficiently support
communities who elected to ban kava. During this period the importation of
unlicensed kava continued and remained robust in some communities.
Whilst d’Abbs (1993) concludes that the licensing system had not met its objectives he identifies key problems with the structure of the regulatory systems that could be readily addressed. Firstly he argues that the system failed to develop an orderly regulated retail system under local control. He notes that bureaucratic demands on councils (the licensed retailers) were onerous and there was a failure of Government to assist local councils in fulfilling their obligations. The Government and local councils failed to deliver kava education and research, which were identified as priorities in the development of the control measures. A further concern was that there was little effort to prevent the black market from continuing, and given the lack of legal opportunity to pursue black marketers, they were able to maintain their position in the marketplace.

d’Abbs (1993) concludes that objectives of the control measures were appropriate; the goal of kava control measures should be to minimise excessive use. However he recommends changes to the licensing system that could entail more accurate retail systems, more responsible service and sale of kava, funds allocated to health promotion and research and for the overseeing of licence compliance to be adequately resourced (d’Abbs, 1993). d’Abbs (1993) also argues against the use of a daily consumption limit, citing concerns for the evidence base surrounding daily consumption limit measures. Changes in the national laws pertaining to kava prevented the recommendations detailed by d’Abbs (1993) from being actioned and disappointingly before adjustments could be made licensing ended and kava became unregulated. In summary, the initial licensing system had some promise but was poorly executed, it failed to reduce the per capita consumption of kava use, there was a lack of responsible sale of kava and there was a lack of resources and regulations to prevent black marketing of kava, which lead to the flourishing of the illegal trade. He cautioned that kava was being seen increasingly as an important source of revenue for communities at the cost of considering kava as a public health issue. The first period of kava licensing included some important positives for communities including acknowledging that different communities wanted different access to kava, unfortunately the laws did not include provisions and resources to assist communities who wanted to remain kava free do so.

National Code of Kava Management

National Licensing

The 2002 National Code of Kava Management (NCKM) allowed the importation of kava under license into Australia but restricted the sale and advertising of recreational kava use (Section 1.6, page 47). Travellers to Australia aged 18 years or over were permitted to bring in up to two kilograms of kava (for nontherapeutic purposes) without a license or permit, provided it was in their accompanying baggage. A person wishing to import kava was required to hold both a License to Import and a Permit to Import a Controlled Substance from the Office of Chemical Safety. A further license was required to sell kava. The
NCKM included standards on the sale of kava including not selling kava to people less than 18 years of age and recording all kava sales transactions (Urquhart & Thomson, 2008).

Data were provided by the Department of Customs and Border Protection (Customs) to the current study regarding the quantity of imported kava for the 2005/6 and the 2006/2007 financial year by country of origin. Unfortunately the data included both kava used for natural medicine and recreational kava (Australian Customs and Border Protection Service, 2012); therefore it is not possible to deduce how much kava was used recreationally in Australia during the period. In total in 2005/06 there were 49 kava imports into Australia totalling approximately 41,000 kg, in 2006/07 there were 75 imports into Australia totalling approximately 67,000 kg (Australian Customs and Border Protection Service, 2012). Kava arrived in Australia from predominantly from Tonga (47 importations) and Fiji (52 importations), with a small number of importations from other Pacific nations including Vanuatu, New Caledonia and Papua New Guinea. Kava was also listed as imported from the United States, China and Vietnam (Australian Customs and Border Protection Service, 2012), although it is likely that kava from China and Vietnam was natural medicine. Taken together the data suggest that there was an increase in kava imported from 2005/06 to 2006/07 of a magnitude that cannot be accounted for solely by the sale of licensed kava in Arnhem Land, but considering the lack of additional information from previous years and in relation to the use of the kava imported the data tell us little about whether this was part of a trend of increased kava use and whether kava imported is related to per capita consumption by Pacific Islanders in Australia.

To date it has not been possible to access data from the Office of Chemical Safety who administered the kava import licenses. Further there is no published public information regarding the administration of licenses, the process by which adherence to license conditions were monitored, and if there were resources allocated to monitoring adherence to the standards on the sale of kava. Thus there is very little evidence from which to evaluate the impact of kava licensing on the consumption patterns and harms experienced by Pacific Islander Australians.

**Kava Management Act – Second period of licensing in the Northern Territory**

Under the NCKM the Northern Territory developed the Kava Management Act (KMA). The long title of the KMA was ‘An act to prohibit the cultivation, manufacture, production, possession and supply of kava, to encourage responsible practises and procedures’ (Clough & Jones, 2004). This title set a harm minimisation agenda for kava management (Clough & Jones, 2004). The KMA was largely guided by d’Abbs’ (1993) review and a scoping paper by d’Abbs & Burns (1997) who advocate a system of controlled availability with local control over distribution of profits and provision for funding research,
evaluation and health promotion. The KMA was administered by the Liquor Commission and the aims of the Act include the promotion of responsible kava consumption and the responsible retailing of kava (Lye, 2003). As summarised in Section 1.6 (page 47) under the KMA kava was only legal if sold and consumed within kava licensed areas. Communities were able to apply for a kava retail licence if there was community agreement and a Kava Management Plan (KMP) was developed and accepted by the Licensing Commission. The KMA stipulated that retail licensees could only purchase kava from one designated wholesaler, further licence holders were required to ensure that funds were spent appropriately and that retailers adhere to their KMP. Important changes from the original licensing system included strengthening the provisions relating to the responsible supply of kava and formally involving local communities in the management of kava in their communities using kava management plans (Lye, 2005). Following from the lessons learnt under the previous licensing regime, possession and supply of more than two kg of kava without a license was made illegal as an attempt to curb illegal on selling of licensed kava (Lye, 2005). To purchase kava, individuals were required to be registered as kava drinkers. This registration of kava drinkers was aimed to reduce on-selling licensed kava and to facilitate weekly limits of kava sales. Weekly limits of kava sales were initially set at 800 g of kava per week per person (Lye, 2005).

To assist kava license holders in adhering to the Act, KMPs were required to be developed and accepted prior to the commencement of retailing kava. KMPs were required to contain information on: boundaries of licensed area, place and method of kava sales, where kava may be consumed, areas within the licensed area in which the possession and consumption of kava should be prohibited, times and place of purchase, purchase limits, community expectations or rules, and actions to monitor and modify negative impacts of kava use (Lye, 2003). In 2002 kava licenses were held and kava was being retailed at Yirrakla, Laynhapuy Homelands, and Warruwi. In 2003 Ramingining commenced retail sales of kava, and Minjalang (Croker Island) in 2006. Gapuwiyak was declared a kava licensed area but had not commenced kava sales prior to the ending of the licensing system (Northern Territory Licensing Commission, 2006) (Lye, 2003). There was no evaluation of the KMA commissioned; consequently there is no detailed examination of the impacts of these measures. Below is a summary of the available information relating to the impacts of the KMA.

Data from the kava wholesaler can be investigated to examine kava availability. From the data available it is not possible to compare the kava availability in communities who elected to ban kava and those who elected to retain kava. Data presented in Figure 2.1 and Figure 2.2 are the total amounts of kava sold by the kava wholesaler as reported to the Licensing Commission during the licensing period from 2002 to 2007 (Northern Territory Licensing Commission, 2006, 2007). Caution needs to be exercised in interpreting the sales data. In an opinion paper released by the Centre for
Independent Studies, Hughes (2007) scrutinised kava sales data and data related to the number of registered kava drinkers in several communities. She argues that the information provided by the wholesaler has been ‘periodic, sketchy and contradictory’ (Hughes, 2007).

Figure 2.1 Kava supplied to individual kava retailers by the kava wholesaler

Source: Northern Territory Licensing Commission, 2010

Figure 2.1 (page 95) presents the overall volume of kava imported as reported by the wholesaler to the Licensing Commission (Northern Territory Licensing Commission, 2010) and the amounts sold to individual retailers. The combined data (red line) suggest that total kava quantity of legal kava increased from 2002 to 2006. In considering the data it is important to note that fewer communities initially held kava licences, therefore it is of value to investigate the volume of kava retailed at each licensed area. The data in Figure 2.1 under kava licensing different communities had different experiences. In Community A kava sales remained relatively constant throughout the period, whereas in Communities B and D there were rapid increases in the amount of kava sold over the licensing period. Community C comprises a series of smaller communities and this data is examined in more detail in Figure 2.2 (page 96). There are approximately 19 homelands of varying size which make up Community C, they have a collective population of up to 1,000 residents during the dry season and about 700–800 during the wet (Laynhapuy Homelands Association, 2008a). Of the 19 homelands, six had kava licensed areas, four communities received kava from 2002 to 2007,
one from 2004 to 2007 and one from 2005 to 2007 (Northern Territory Licensing Commission, 2007). Figure 2.2 (page 96) demonstrates great variability across communities, but the increase in use in Community 5 is noteworthy. These intercommunity differences mean that although data can lead to broad generalisations about the greater Arnhem Land region these generalisations may not be meaningful at a community level.

Figure 2.2 Kava supplied to individual Homelands communities

Source: Northern Territory Licensing Commission, 2010

The explosion of kava retail sales in some communities may be accounted for by the on-selling of kava or population growth due to the availability of kava and not necessarily because individuals were consuming greater quantities of kava. There is evidence that the registration of kava users was being exploited to facilitate the on-selling of kava. Hughes (2007) reports that the number of registered kava users in one community was almost equivalent to the number of adults reported living in the community. Given that the prevalence data suggests that there were significant numbers of people who did not consume kava it is likely that those who did not drink were registered as users and kava was being acquired under their names (either with or without their knowledge). It is not possible from the data available to ascertain what proportion of kava was consumed legally and what proportion was on sold.

In addition to on-sold kava the black market of illegally imported kava was still present in Arnhem Land during the licensing period. This included both unlicensed kava entering Arnhem Land and the diversion of licensed kava. Police seizure data, as reported by the Licensing Commission (Northern Territory Licensing Commission, 2007) is presented alongside licensed kava.
imports in Figure 2.3 (page 97). The data shows a consistent amount of kava was seized during the licensing period. Whether black market kava was restricted to communities who elected to ban kava is unclear. Some licenced communities have argued that black market kava was eliminated in licensed communities (Laynhapuy Homelands Association, 2008b) but there is little objective evidence to support this assertion.

There is little detail as to whether the Police seizure data provides a reasonable indication of the amount of kava entering Arnhem Land illegally due to the variable nature of black market trade and of policing priorities. It is however clear that under the KMA black market kava was still present and at face value there was not a noticeable reduction in black market kava under the licensing regime. The Licensing Commission data presented below in Figure 2.3 (page 97) and the estimation of kava availability over time presented by Clough et al. (2006) in Figure 1.1 (page 74) suggests that during the licensed period kava availability increased to amounts consistent with the unregulated kava market between 1994 and 1997.

![Figure 2.3 Wholesale and illegal kava reported by Northern Territory Licensing Commission](source: Northern Territory Licensing Commission 2007)

In addition to kava availability, the KMA aimed to reduce some of the negative impacts of kava use on communities. There has been minimal evidence collected in relation to harms.

An oft cited consequence of heavy kava use is the prioritisation of funds in a family to kava over other items such as food and bills. One method of determining if licensed kava sales resulted in greater funds available to families is to examine grocery sales data. The Arnhem Land Progress
Association which runs stores in several remote communities across Arnhem Land provided some interesting sales data (King, 2011). They reported that a store in a community that had commenced kava sales produced 11.4% growth over budget. In context stores typically manage 4–5% increase over a year not 11% over budget. The Arnhem Land Progress Association argued that they could find no other contributing factors to account for gains in sales. They concluded that in this particular community licensed kava resulted in people having more money to spend in the store on food and other essential items (King, 2011).

The licensed retail of kava was also aimed at responsible distribution of kava funds. Financial records of one kava retailer documented that during 2007 (prior to the termination of licensing) they had sold $657,827 worth of kava (Yuyung Nannung Aboriginal Corporation, 2007) deducting cost of the kava ($318,347) and operating expenditure ($93,861) they reported that $220,500 was allocated to community expenditure. The greatest spending amount was for contributions to funerals and ceremonies ($60,000), other expenditure included contribution to the local art centre, night patrol, subsidising low wages and running a community bus. Of note health related items included top-up costs to drug and alcohol services ($3000) and funding for a cold water facility at the clinic ($3000) (Yuyung Nannung Aboriginal Corporation, 2007) all of which suggests that although the organisation was diligent in directing its funds towards community projects very little of the money was targeted towards health and health promotion around the harms attributed to kava.

A key focus of the KMA and the recommendations by d’Abbs (1993) and d’Abbs and Burns (1997) was an emphasis on harm reduction and health promotion. There is no indicator health and wellbeing indicator data available to examine the harm minimisation of the KMA agenda. Although there has been no formal evaluation of the KMA, commentators including Hughes (2007) and Clough et al. 2006 have been particularly critical of the implementation of this health promotion and harm minimisation component of the KMA. Health measures required under the act included signs, brochures, training, counselling and asset budgeting (Hughes, 2007). Whilst signs were put in place, the labelling of kava put in place and the development of a few harm minimisation pamphlets there is little evidence to suggest that training and counselling had been comprehensively attempted or disseminated. An important part of the KMA was the development of the Kava Education and Health Advisory Group (KEHAG) that was set up to fulfil the harm-minimisation objectives of the legislation and funded by a levy on kava sales. The KEHAG was to be organised and managed by the kava wholesaler. Despite early ambitions the levy on kava sales to support the aims of KEHAG initiatives were only planned to be implemented in 2006–07 (Northern Territory Licensing Commission, 2006).

In addition to the KEHAG, Annual Licensees Forums were to be held yearly to review the sales of kava and monitor the emergence of harms. In addition to
the license holders and licensing commission the licensee forums were attended by local organisations, health representatives, the NT police and others. Although there is little detail available regarding these meetings, Hughes (2007) is particularly critical of these licensee forums and the conduct of the meetings in English. She argues that some meetings were poorly attended and that most of the Indigenous retailers did not have enough English to be able to participate effectively in the discussions. Hughes (2007) concluded that the annual licensee conferences and the meetings of the KEHAG, both of which were organised by the wholesale licensee, evidently failed to halt increases in kava consumption in the Nhulunbuy hinterland. It is problematic that the kava wholesaler themselves were responsible for the organisation and management of the health promotion agenda. Hughes (2007) argues that the emphasis of harm minimisation was on the benefits that sales brought to the retailers and their communities. For the retail licensees it was evident that the more kava was sold, the better off their community would become and in addition kava was promoted as reducing the costs of alcohol. She concluded that: ‘The cash benefits were laid out in front; the costs were hidden’.

It was hoped that KMPs in addition to the licensee forums and KEHAG would ensure the effects of heavy kava use would be monitored and addressed. However, in reviewing correspondence surrounding the development of a KMP (Application for a kava retail licence pursuant to part V111 of the Kava Management Act, 2006), it is clear that while the Licensing Commission encouraged potential license holders to be proactive regarding potential harms and clear in their development of the plan, there was very little detail contained in plans as to what health promotion should look like and how it would be implemented. For example, harm minimisation strategies described were based largely on the meeting of subcommittees with little detail as to how these would operate and on what parameters decisions about suspending an individual’s access to kava would be achieved (Application for a kava retail licence pursuant to part V111 of the Kava Management Act, 2006). Harm minimisation strategies described aimed to identify signs of kava misuse and provide an intervention, however beyond identifying data sources, the interventions are not clearly identified, and whether the intervention options suggested (e.g. provision of drug and alcohol counselling to heavy users) were resourced or feasible. The Licensing Commission was to conduct ongoing inspections of kava licensees to ensure that they were maintaining their KMPs. They conducted an average of 19 inspections per year from 2003 till 2006 (Northern Territory Licensing Commission, 2006), which suggests that they had a reasonable level of contact with licensees. Despite this high level of contact there is little published detail examining the process and outcomes of inspections. Although there is very little evidence beyond Hughes’ opinion piece, from the limited evidence it is likely that there was insufficient planning and resourcing of the health promotion and harm minimisation aspects of the KMA.
Despite these criticisms the KMA had benefits; it allowed communities to devise regulations applicable to their circumstances that increased the likelihood of individuals to engage in safe kava practises. It stipulated selling prices and that the profits returned to the communities thus attempting to alleviate the financial burden of kava use on communities (Urquhart & Thomson, 2008). In terms of what went wrong with the KMA it seems that in addition to the high rates allowable for sale there were difficulties in establishing some of the health promotion sidelines to the KMA. This was not achieved satisfactorily and there were concerns that language difficulties prevented many experienced individuals from participating actively and exchanging ideas in annual kava licensee forums due to the lack of English (Hughes, 2007).

In consideration of the difficulties described, Clough et al. (2006) argue in a letter to the editor of the Medical Journal of Australia that the KMPs were not satisfactorily reducing harm related to kava consumption. In light of the data available, which pointed to a steady increase in kava availability and the lack of substance misuse services available, Clough, et al. (2006) recommended the Kava management act be reviewed to:

- prevent further retail licences being granted until overall supply is reduced;
- retail licensees supply no more than 440 g per week to individual consumers;
- kava selling be reviewed in the light of trade-offs between higher prices to reduce demand and minimising financial drains on communities; and,
- rigorous enforcement of illegal kava dealing.

In response to these concerns, the weekly limit of 800 g per person was halved by the Licensing Commission in 2006 (Hughes, 2007; Northern Territory Licensing Commission, 2006).

There are also examples that communities recognised that changes needed to be made to the way in which kava was retailed. One community commented that they were aware of community concerns that kava consumption had led to apathy in the community and reluctance to attend to employment and community affairs. Using their KMP they agreed to stronger trading limits, and prohibiting problematic drinkers from accessing kava (Namayiwa & Galaminda, 2007). Another community proposed reducing hours of availability, reduce weekly purchase limits, and connect buyers to a central record system to prevent shopping around (Burarrwanga, Marika, & Marika, 2006). These initiatives were not able to be introduced prior to the banning of kava in 2007.

Finally, in addition to looking at the impacts of the KMA it is important to note impacts of the process by which the licensing system was developed.
Clough and Jones (2004) describe the steps taken by the Minister’s office between passing the management act and the licences becoming operational. They describe how in 2001, 21 visits were made to six communities who were considering kava licensing. This meant that traditional owners who did not want kava consumed on their land were able to have areas excluded from licensing boundaries; it enabled working relationships to be established between the licensing commission and the communities. Clough and Jones (2004) surmise that this system provided a legal instrument with regulations and conditions created by local people to suit their particular needs and social circumstance. It offered the prospect of controlling kava availability under conditions specified by the local community. Clough and Jones (2004) explain the consultation around the act as open to incorporating Aboriginal views regarding kava and to have these supported in law. The KMA did not impose a set of foreign regulatory controls on an Indigenous social system and was developed with consultation. Of note, Clough and Jones (2004) caution that the KMA was fragile and vulnerable to collapse; they cautioned the following – the key threat to success is the resurgence of the kava trade – a strong policing effort is required. Objective monitoring of sales was required and that the commitment to harm minimisation must be underwritten by managerial capacity. The evidence presented suggests that these warnings from 2004 were not heeded and the resourcing of the police and of health promotion was severely lacking preventing the elimination of the black market and the successful undertaking of health promotion activities.

**Current legislation**

The tightening of import restrictions was implemented by the Australian Government in June, 2007, in response to the ‘...abuse of kava, which is contributing to negative health and social outcomes in Indigenous communities’ (Abbott, 2007; Hartley, 2007). Since this time there has been no examination of the impacts of the kava ban. Below is a summary of impacts that several community agencies have reported that have arisen as a consequence of the ban. Of note the majority of criticism and noted impacts occurred immediately following the ban, there is little recent commentary. Further examination of the impacts of the ban will be addressed in Part II.

It is difficult to separate within the documents available the purported impacts of the ban itself and the impacts related to the way in which the ban was enacted. A possible ban on kava was flagged in early 2006 (Abbott, 2006; Brough, 2006) although it is unclear how widespread awareness was that this was being considered. At the time rationale presented to community organisations that kava should be banned was that it creates lethargy and apathy in individuals. No formal review process or consultation was conducted. For some communities the first they knew of the ban was the day after it came into place. For example, a submission to the Senate standing committee on the Northern Territory Emergency Response (NTER) (Laynhapuy Homelands Association, 2008a) condemns the decision to ban kava with no
forewarning or consultation and reflect that they received advice a day after the ban came in place. The lack of consultation during this period undermined many of the efforts that were being undertaken as part of the KMA. While the ban was not formally part of the NTER it occurred while the NTER was being implemented and it was regarded by some as a component of the NTER that was being implemented without consultation.

Initial consequences of the importation ban on communities are largely related to the financial impacts of sudden end of the trade. It resulted in a significant loss of discretionary income used for community benefit (Norton, 2008). Namayiwa and Galaminda (2007) explain that kava profits were able to assist with the expense of managing a remote community in the absence of ongoing funding. Retail licensees and the wholesaler were angered that agencies received no compensation for loss of income (Laynhapuy Homelands Association, 2008b). This lack of compensation made it difficult for agencies to continue operations – kava income had become a crucial part of service delivery. The banning of kava with little forewarning placed agencies in a difficult position financially and they commenced legal action against the Federal Government for compensation due to loss of business.

Concerns that the end of kava would bring about a return to alcohol consumption were also expressed widely. Norton (2008) argued that unintended consequences of the enforcement of import restrictions were that previous kava drinkers have switched to alcohol which is more damaging physically and socially. Namayiwa and Galaminda (2007) reported great concern that the removal of legal kava would result in individuals accessing other substances instead, they expressed concern that young men will leave community to look for grog if kava is unavailable. Similarly the Laynhapuy Homelands Association (2008b) argued that the banning of kava was premature, particularly as it occurred prior to the implementation of effective alcohol management – consequently they argue that some homelands residents return to major town to drink when they could not get kava. Hughes (2007) too cautioned that the ending of kava in Arnhem Land must be accompanied by transformation of education, access to jobs good health and decent housing, if not the result may be greater consumption of alcohol cannabis and other drugs. In support of these arguments a newspaper article shortly following the ban (Ravens, 2007) reported that alcohol related crime had increased in areas which had previously had kava, however there is little evidence to support these concerns. In contrast, another article (Australian Broadcasting Corporation, 2007) argued that an increase in alcohol could be better accounted for by a local sports event and funeral than the kava ban.

It had been hoped that a ban on kava would also reduce diversion of family income away from food and other essentials. There is no evidence as to whether a ban in kava achieved this. In a review of remote policing Delahunty and Putt (2006) caution that success in reducing community spending on any particular substance or gambling may leave more cash for food and other
essentials but caution that the extra cash might also create new opportunities for illegal cannabis or alcohol trades. An unsubstantiated newspaper article claimed that gambling increased following the end of legal kava (Ravens, 2007). Indeed the Arnhem Land Progress Association reported that one shop reported a decrease in profits following the ending of the kava trade (King, 2011).

There are two additional major concerns associated with the rapid end to licensed kava that have not been addressed in the literature. Firstly the ban was not accompanied by additional or coordinated policing resources to prevent the resurgence of the black market. Secondly, there were no additional resources provided to health and drug and alcohol services to assist current users of kava. Urquhart and Thomson (2008) points out that considering the lack of knowledge we have about the presence of a kava withdrawal syndrome and if there are risks associated with rapid termination of kava use, a sudden ban with no resources and support provided to health practitioners was a risky, short sighted and irresponsible move. A complete ban requires the use of force to stop traders and kava users but if not adequately resourced Burke (1998) raised concerns that total ban would be likely to draw dealers and kava users more closely together and resist the change more vigorously. Without a concerted effort to end the black market it is unlikely that any ban will be successful.

As a stand-alone measure to increase the health and wellbeing of Arnhem Land communities the importation ban on kava was likely to have had little effect. Similarly as a stand-alone measure to reduce kava consumption it is unlikely to have had a lasting effect. Many commentators conquer that any efforts to decrease substance use must be accompanied by efforts to address the drivers to the misuse of kava. This includes the social determinants of health and addressing the broader disadvantage confronted by Aboriginal communities in Arnhem Land in the areas of education, health, employment, housing and self-determination (Gray & Wilkes, 2010; Hughes, 2007; Urquhart & Thomson, 2008), and of note There is little published evidence as to the impacts of the ban. It is clear that the way in which the ban was implemented had a negative impact on communities. Laynhapuy Homelands Association (2008b) argue that the decision to ban kava takes power away from the community. They point to the diversity of Arnhem Land communities and the fact that an overall ban does not recognise these differences. Mununggurr (2007) argues that the banning was out of context with the way other harmful substances and activities are responded to in policy and compares that the effects of kava to the known serious impacts of alcohol, tobacco, high fat and sugar content foods, and illicit substances. Mununggurr (2007) concluded that the response to ban legal importation of kava is in one which would not have occurred if kava sales were part of non-Indigenous businesses and communities. While it is not possible to confirm or deny Mununggur's comments and regardless of whether the tightening of the importation restrictions resulted in a reduction in kava availability the
process by which the ban was implemented had the potential for damaging consequences on health and undermined Arnhem Land communities.

**Summary**

Kava regulation in the NT has included unregulated, controlled availability (licensing) and prohibition frameworks. The preceding discussion and ongoing policy decision making is severely limited by the lack of good quality evaluation of these regulations. The fact that only one evaluation was commissioned from five changes in regulation is alarming. Only licensing periods had clear objectives, goals and mechanisms to monitor those objectives and goals, yet both periods of licensing were terminated prior to those objectives and goals being adjusted in light of data suggesting increased sales and harms. It is concerning that these objectives initially included limits on consumption that exceed the current best estimates on safe kava consumption. The licensing frameworks were positive yet require a great deal of adjustment to strategies to ensure safe consumption and safe retail practises. Overall, it is not possible to draw clear conclusions regarding the impacts of kava regulations applied to the NT to date. The data does however lead to three clear conclusions. Firstly, there is a persistent level of black market kava available in the NT regardless of the regulatory framework. Secondly, under licensing provisions legal kava is on-sold to members of communities who have elected to ban kava and kava sales tend to steadily increase under licensing. Thirdly, there are great intercommunity differences in Arnhem Land that mean different communities have had different experiences under the different regulatory frameworks. Taken together this indicates that the process by which regulations are developed and enacted has an impact on communities and needs to be carefully considered.

There is not sufficient data available in relation to the licensing and sale of legally imported kava elsewhere in Australia under the National Code of Kava Management to make any conclusions regarding the impact of the Code. This is concerning as there has been no monitoring of kava consumed in Australia and there appears to be little information regarding adherence to responsible sale of kava. Without this information we cannot make any conclusions about how kava has been sold legally in Australia, which makes it more complicated to develop appropriate policy.

Efforts directed at health promotion, prevention and treatment have been poorly attempted in the case of licensing or completely lacking in the case of kava being banned or unregulated. This limited scope in attempts to reduce harm associated with kava may be partly due to the lack of clear consensus of what harms kava actually causes. Without accurately being able to measure or identify kava related harms it is difficult to identify if kava control measures have had an impact. The kava related harm which has attracted the most attention has been the economic impact of heavy kava use at both the family and the community level. There is some evidence to suggest that in one
community licensed kava retail lead to increased food sales, suggesting licensing resulted in families having more money; however the generalizability of this finding is not clear. It is interesting to note that under the second licensing period there is evidence to suggest that in many licensed communities kava retail profits were used to the advantage of the community. Kava profits were unfenced funds that communities could use to address community identified priorities. While this is clearly a positive, given the amount of money thought to leave communities under unregulated and banned kava regulatory frameworks, it created a difficult situation because communities became increasingly dependent on kava sales to improve their communities.

Licensing regulations have had to walk a fine line between reducing the impact and attractiveness of the black market trade and ensuring the responsible sale of kava. In a parliamentary reading, the 1998 Minister for Health, Burke (1998), argued that regulation through the combined effort of police, traditional Aboriginal law and Aboriginal community members is likely to have a more long lasting effect. The termination of licensing regulations may have prevented this coming to fruition. The most recent change in regulation occurred with little planning and opportunities for a co-ordinated response between communities, police and health services. A detailed review and examination of the regulatory frameworks including process, outcomes and resourcing to date, and in particular the most recent licensing period, is clearly needed before the introduction of any new policy directions.

### 2.2 Health interventions

Despite criticism above that very few health promotions or interventions were conducted in the NT under the different regulatory frameworks it is important to recognise that internationally there is not an evidence base around kava interventions. There are no documented clinical interventions to address kava heavy use and no health promotion materials have been evaluated or widely disseminated. As a consequence it is not possible to review the impacts of health interventions used to date. Below is a description of the known health promotion and clinical interventions to date, of note these activities are limited to the NT.

**Health Promotion**

Reviews of the grey literature reveal that several community health agencies in Arnhem Land have developed health promotion resources that predominantly relate to harm minimisation and tend to be focussed on hygienic kava use practises. The Yuynany Nyannang Aboriginal Corporation developed a video portraying hygienic preparation of kava use (Constable & Burton), the video also portrayed the rules for purchasing kava and advice to not drink kava when pregnant, breast feeding, driving or operating machinery. The video was non-speaking and included only English headings and written advice. The
Miwatj Aboriginal Health Corporation produced a flip chart for health workers to use that covered a range of topics including guidelines for safe kava use (e.g. do not drink kava with alcohol, washing hands when drinking kava, drinking water, having regular health checks), information about the known consequences of kava use and the hypothesised consequences of kava use (Miwatj Health Aboriginal Corporation). They also produced an information document in both English and Yolgnu Matha detailing what kava is, how it was introduced into Arnhem Land and the known consequences of kava use (Miwatj Health Aboriginal Corporation). The harm minimisation messages were consistent with that of the NT Licensing commission who specified that kava should not be consumed by those who are breastfeeding, pregnant, driving, operating machinery, taking therapeutic medicines, using alcohol, have respiratory or cardiac problems or are under 18 years of age (Lye, 2005). There is no detail as to how these items were disseminated, the uptake of these items or if they were evaluated.

The Northern Territory ‘Bush Book’ which provides health promotion information to regional and remote practises provided an information chapter about kava covering the most recent information regarding the effects of acute and chronic kava consumption (Department of Health, ND). The Bush Book is no longer publicly available. In addition to these locally developed resources the Australian Drug Foundation’s Drug Info resource hub provides a fact sheet on kava (Drug Info, 2007). These information sheets are both written in English only and not tailored to either low literacy or people with English as a second language.

**Primary health interventions and clinical practice recommendations**

Most initiatives for improving assistance to people who use kava at harmful levels have been focussed around delivering training to health staff (d’Abbs & Burns, 1997; Northern Territory Licensing Commission, 2006). However as Chalmers (1995) notes this has been particularly difficult to achieve given the frequent changes in the Commonwealth legislation. Evidence suggests that dissemination of training was not adequately achieved during any regulatory period. In an evaluation of Aboriginal mental health programs from 2002 till 2004 (Robinson, Benson, & Williams, 2003; Robinson & Harris, 2005) health workers highlighted their need for improved education about kava and other substances (Robinson & Harris, 2005) suggesting that little education and support was reaching those who worked with people experiencing harms related to kava use.

There is some evidence that health services began routinely screening for kava use at various times (Chalmers, 1995; Miwatj Health Aboriginal Corporation), however how widespread this was and how long routine screening stayed in place is unknown. It is unlikely that training around the effects of kava has been available at all in other jurisdiction in Australia. Practise guidelines for kava in primary health in the NT have included references to kava. The NT
Government's Health Department provides a Remote Health Atlas that provides comprehensive health resources for Remote Health Workers across the NT. The Atlas provides governance and information for remote health staff and provides guidance and standards of clinical practise and has endorsed the protocols contained in the Central Australian Rural Practitioners Association (CARPA) Standard Treatment Manual as the protocols for the management of clinical conditions (Department of Health, 2011).

The CARPA reference manual has a section on kava written by Clough in 2004 that serves as the NT Department of Health’s recommendations for the management of kava use at a primary health care level. The CARPA manual provides advice to practitioners and advice to kava drinkers, these are summarised in Box 2.1 (page 107).

Box 2.1. CARPA clinical protocols for kava use

<table>
<thead>
<tr>
<th>Advice for practitioners:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Do a full examination, including skin. This will alert clinicians to low weight and skin conditions.</td>
</tr>
<tr>
<td>• Consider full blood examination and liver function tests. Abnormal liver function test results may be used to provide feedback to someone about their kava intake.</td>
</tr>
<tr>
<td>• Ask about the number of bags that is usually consumed and the numbers of people with whom it is shared. Advice clients that more than 400g per week is likely to lead to health problems.</td>
</tr>
<tr>
<td>Advice for kava drinkers</td>
</tr>
<tr>
<td>• Annual health check-ups.</td>
</tr>
<tr>
<td>• Think about the amount of money leaving the community</td>
</tr>
<tr>
<td>• People with heart disease or who are pregnant should reduce or stop drinking kava</td>
</tr>
<tr>
<td>• Kava users may have extra chances of serious infections</td>
</tr>
<tr>
<td>• Kava drinkers should avoid drinking in 24-hour sessions</td>
</tr>
<tr>
<td>• Using kava with alcohol or benzodiazepines should be avoided</td>
</tr>
<tr>
<td>• Skin and liver problems usually return to normal about a month after stopping drinking kava.</td>
</tr>
</tbody>
</table>

(Source: Clough, 2004)

The recommendations made by Clough (2004) are described as ‘... a common sense interpretation of the available information’. There has not been the opportunity to update these protocols and they remain the protocols endorsed by the NT Department of Health and CARPA. There has not been a rigorous examination of these protocols. There are not more detailed clinical practise guidelines available to practitioners in primary health care or in alcohol and drug services for the management of kava use and for assisting people who wish to cut down or quit kava use.
Summary

To date, the development, evaluation and dissemination of interventions to support people who use kava is severely lacking. Health promotion materials that have been developed appear to have been part of short term projects without evaluation or dissemination components. Similarly there have not been attempts to update clinical protocols for kava use in primary health care and no effort to develop assistance for alcohol and drug service provision around kava use. Future work is clearly needed to develop an evidence base around kava interventions, including prevention, harm minimisation and treatment strategies.
PART II RAPID ASSESSMENT OF KAVA USE IN AUSTRALIA

3 Rapid Assessment Methodology

In following on from the literature review, and to address the terms of reference, a methodology was required that could quickly examine the patterns, prevalence and context of kava use in Australia as a whole and in particular two diverse population groups, Aboriginal people in Arnhem Land and Pacific Islander Australians known to use kava. Rapid Assessment Methodology (RAM) was identified as a suitable methodological framework to address the terms of reference for the current study not addressed in the literature review (Chapter 1, page 3) and review of interventions (Chapter 2, page 86). RAM is a multi-method approach that provides the means for rapidly assessing and responding to health problems in the context of diverse social economic and political situations (Rhodes, Stimson, Fitch, Ball, & Renton, 1999; Stimson, Fitch, Rhodes, & Ball, 1999). RAM combines various methods of investigation, using a wide range of sources (Stimson, et al., 1999) including sources that may be overlooked in more methodologically constrained studies.

In RAM data is collected and analysed using both qualitative and quantitative methods, it is an eclectic approach to research combining a variety of methods or tools for collecting and analysing qualitative and quantitative data (Vincent, Allsop, & Shoobridge, 2000; World Health Organisation - Substance Abuse Department, 1998). Qualitative ethnographic methods including key informant interviews, focus groups, and observations are used to gain information from both insider and outsider perspectives; this information is supported by the analysis of any existing quantitative data (Rhodes, et al., 1999; Vincent, et al., 2000; World Health Organisation - Substance Abuse Department, 1998). In this way RAM encourages the constant cross checking of information sources. RAM focuses on public health contexts in addition to individual health behaviours and encourages assessment and intervention compatible with local practises in different cultural settings (Rhodes, et al., 1999); this means that RAM considers multiple levels of investigation (Stimson, et al., 1999) including the individual, the community and the society. Thus RAM is highly relevant to examinations of substance use in minority populations.

RAM was initially applied in developing countries with great success (Trotter, Needle, Goosby, Bates, & Singer, 2001) and has been used in culturally and linguistically diverse populations across the globe (Grigoryan, Busel, & Papoyan, 2002). RAM has been employed to investigate diverse and sensitive topics including malaria, HIV, sexually transmitted infections and injecting
drug use (Trotter, et al., 2001). In developed nations Trotter, et al. (2001) notes that RAM is used as a complimentary process, in this role it is valuable in targeting conditions and contexts that are more concentrated than those observed in normal surveillance data, and is therefore useful at identifying emerging conditions and also conditions in which a local cultural condition is different to the dominant cultural system. In Australia RAM has been used to investigate injecting drug use among Aboriginal people in South Australia (Shoobridge, Vincent, Allsop, & Biven, 2000). Shoobridge et al. (2000) note that RAM is particularly appropriate for investigating the dynamic nature of substance use because it is flexible to geographic and cultural differences that occur within and between drug using cultures. Considering the diversity in kava using populations, the limited available data, and the lack of standardised tools to investigate kava RAM provides a useful framework from which to investigate kava use in Australia.

RAM has emerged from diverse methodological perspectives, consequently there have been attempts to standardise RAM practises (Rhodes, et al., 1999; Trotter, et al., 2001; World Health Organisation - Substance Abuse Department, 1998). In unifying RAM approaches key principles have been identified: the use of multiple methods and multiple data sources, exploitation of existing data, continuing triangulation of data, inductive hypothesis formulation, investigative orientation, pragmatic orientation, non-duplicative and consultative (e.g. Rhodes, et al., 1999; Trotter, et al., 2001). These principles have been used to guide the present study.

### 3.1 Methods used in the current study

This study utilised the main principles of RAM as described above to examine kava use in Australia. The key methods employed to collect data included: the examination of existing data, key informant interviews among both insider and outsider participants, focus groups, questionnaires. The research was conducted in three phases, firstly existing data sources were identified and analysed, in the second phase qualitative research methods were applied to assessing kava use in Pacific Islander communities and in Arnhem Land. While the existing data sources cover the broader Australian context, as well as Aboriginal and Pacific Islander groups, different methods were employed to examine kava use in Aboriginal and Pacific Islander groups; this was primarily due to the different cultural, social and geographical issues the both groups presented. The different phases of the research build on, and are informed by, the reviews of literature to date. A summary of the methods used in each phase are summarised below.

### Existing data sources

Presented in Chapter 4 (page 113) is the examination of existing current data related to kava use and availability in Australia. This includes data from national survey that have included questions on kava and data collected as
part of the enforcement of laws pertaining to kava. The aim of examining existing data was to provide an overall snapshot of kava use nationally, to identify any emerging trends in kava availability. The data examined includes data from the National Drug Strategy Household Survey, the National Aboriginal and Torres Strait Islander Social Survey, Customs and Border Protection seizure data, and state police data from NSW, Qld and the NT. The data examined will also be used to confirm and validate information obtained in later phases of the research. The triangulation of data is particularly important because large data bases are rarely unproblematic. They are not necessarily collected with the present research in mind and can be limited in their capacity to sample minority groups (World Health Organisation - Substance Abuse Department, 1998). In addition two novel sources of data are investigated to examine if kava use is emerging in populations outside of Aboriginal groups in Arnhem Land and Pacific Islander Australians. These data sources include the monitoring of drug user internet forums and the number of calls made to alcohol and other drug information services across Australia.

**Kava use among Pacific Islander Australians**

Presented in Chapter 5 (page 131) is the analysis of kava use among Pacific Islander Australians. Four data collection methods were used. These include key informant interviews, focus groups, kava use questionnaires and abstracts and participant notes from attendance at an Australian kava conference. The vast majority of data collected was key informant interview data.

Key informants identified and interviewed included both insiders from kava using Pacific Islander groups and outsiders who work with Pacific Islander peoples using semi-structured interviews. Detail regarding sampling, sample size and interview questions is presented in Chapter 4 (page 113) however sampling methods were used that enabled a broad cross section of the Pacific Islander community in Australia to participate, this included Tongan, Fijian and Samoan participants. The aims of the key informant interviews were to obtain information about pattern, prevalence and social context of use, as well as understand the diversity of opinions and values about kava that occur among Pacific Islander Australians. Focus groups were conducted with kava using participants which was recommended and supported by Pacific Islander participants in the key informant interview stage. In reviewing information collected using the key informant interviews and focus groups it was identified that more specific data regarding pattern of kava use was required, to achieve this a small number of questionnaires were completed. A final source of data came from attending a conference organised by a group promoting more liberal kava laws in Australia – the Australian Kava Movement (Australian Kava Movement, 2011). Although participant notes and abstracts from non-peer reviewed conferences are rarely considered as ‘data’ the RAM approach
encourages the use of innovative data sources (e.g. Stimson, 1995; Trotter, et al., 2001).

Qualitative data from the key informant interviews, focus groups and kava conference were analysed and reported together. Data were transcribed and then manually coded and categorised. Recurrent patterns in the data were noted and clustered to form categories of data in order to generalise meaning. Questionnaire data and basic descriptive analyses were conducted and presented in Chapter 4 (page 113). Analysis of the data collected and interpretation of results was informed by the literature review and analysis of existing data.

Kava use among Aboriginal communities in Arnhem Land

Presented in Chapter 6 (page 184) is the analysis of kava use among Aboriginal communities in Arnhem Land. The primary qualitative data collection method used was group and individual key informant interviews. Whilst other methods were considered and proposed (in-depth interviews, questionnaire completion, health worker consensus data collection models) key informant interviews were identified as the most appropriate method following extensive consultation in Arnhem Land and consistent with findings from the literature review. Factors promoting the use of key informant interviews include geographical and climactic limitations of conducting research across remote communities in Arnhem Land, intercommunity differences that mean that a concentrated study in one community would make results difficult to generalise, the current socio-political climate due to the Northern Territory Emergency Response (‘The Intervention’) which has led to rapid changing policies applied without consultation, the political climate resulting from the banning of kava and the previous volume of kava research that has been conducted.

Key informants participating in the research represented six main groups: Aboriginal community members, community controlled organisations, government and non-government health and welfare agencies, law enforcement, representatives from other government agencies, and non-Aboriginal residents of Arnhem communities. Method sampling and research methods are described in more detail in Chapter 5 (page 131). To support this data and to review more detailed information regarding the availability of kava and the operations of the black market a textual review of Police media releases relating to kava was also conducted. Data analysis was conducted using the same methods as those described for the Pacific Islander qualitative data above.
4 Examination of existing data sources

The analysis of existing quantitative information is an important component of Rapid Assessment Methodology (RAM). Existing data pertaining to kava in Australia falls into two main categories; data collected about individual’s kava use and access to kava in national surveys and data collected in the course of enforcing laws related to kava. Only data related to recreational kava is discussed below, data related to the use and importation of medicinal kava has not been examined. All data described in the current section were used to triangulate and corroborate findings from qualitative research conducted and presented in Chapter 4 (page 113) and Chapter 5 (page 131).

Access to data was sought from agencies known to hold data about kava, or it was anticipated might hold data about kava. The following data sources were made available to the research and are described in detail in the sections below.

- Permission was granted to examine data collected about kava in the National Drug Strategy Household Survey (NDSHS) from the Australian Institute of Health and Welfare.
- Permission to examine data collected about kava use in the National Aboriginal and Torres Strait Islander Social Survey (NATSISS) from the Australian Bureau of Statistics.
- Permission was granted to examine data collected on the seizure of illegally imported kava into Australia from the Australian Customs and Border Protection Service
- Permission to examine data related to illegal possession and supply of kava was granted by Queensland Police Service, New South Wales Police, Northern Territory Police and the Northern Territory Department of Justice.
- Data were sought from the Australian Crime Commission, Australian Quarantine and Inspection Service and the Australian Federal Police; however these agencies did not collect information about kava.

In addition to the above, to investigate if kava use is prevalent outside of Aboriginal groups in Arnhem Land and Pacific Islander groups around Australia, two additional data sources were investigated: calls about kava to alcohol and drug information services and examination of online drug forums for topics and discussions about kava.
4.1 National survey data

**National Drug Strategy Household Survey (NDSHS)**

The National Drug Strategy Household Survey (NDSHS) is a national survey conducted every three years in Australia by the Australian Institute of Health and Welfare (AIHW) (Australian Institute of Health and Welfare, 2011). The NDSHS is closely aligned to the goals of the National Drug Strategy and is recognised as the leading national survey on alcohol and other drug use. The NDSHS is conducted every three years, the most recent being 2010, and collects data relating to individual alcohol, tobacco and other drug use, attitudes to drug use, perceived harm caused by drugs and access to drugs. Until the most recent survey (2010) the NDSHS has collected data from individuals aged 14 years and over, the most recent survey included participants 12 years and over (Australian Institute of Health and Welfare, 2011).

The NDSHS has collected data on kava since the 1998 survey (Australian Institute of Health and Welfare, 2005, 2008, 2011), however the current review is only considering results since 2001. Participants who complete the NDSHS are not asked if they use kava, however they are asked about access to kava, harms caused by kava, and the acceptability of regular kava use. Before examining the results of the NDSHS it is important to recognise the limitations of the data. Firstly it is a household survey and therefore excludes individuals in institutional settings, hotels, motels, hostels and people who are homeless (Australian Institute of Health and Welfare, 2011). In addition foreign language interviews are not conducted; consequently it is possible that Pacific Islander Australians who do not have English proficiency were not included in the survey. In addition given the size and breadth of the Australian population it is unlikely that significant numbers of Pacific Islanders and Aboriginal people from Arnhem Land participated in the survey, consequently the data is not likely to provide detailed information about these groups. There have been methodological differences between years that should be taken into consideration when comparing across years of the survey. Importantly the most recent survey was conducted entirely by returned mail whereas previous years a computerised assisted telephone interview had been used to collect some data (Australian Institute of Health and Welfare, 2011). Between 2001 and 2010 respondents ranged between 23,356 participants to 29,445 participants across Australia (Australian Institute of Health and Welfare, 2005, 2008, 2011). Whilst there are clear limitations of the survey in reaching remote Aboriginal communities in Arnhem Land and little detail as to whether it includes a reasonable sample size of Pacific Islander peoples the NDSHS does represent the best indicator of substance use across the broader Australian community and examination of the data is warranted.
Permission was granted for the current study to examine the raw data related to the kava use questions from the 2004 and 2008 surveys. Responses to questions which included kava as a response option were examined by frequency of response. The data were examined in detail, including comparisons across age group, state, Indigenous status and gender, however the endorsement of kava items on the NDSHS was so low that meaningful comparisons could not be drawn and reliable estimates of prevalence could not be calculated. Consequently only summary data published by the AIHW is presented below. The data is discussed in relation to perception of drug use, perceptions of drug use and opportunity to use drugs.

**Opportunity to use kava**

In the NDSHS participants over the age of 14 years were asked if they had had been offered or had the opportunity to use a list of drugs, including kava. Over the past 12 months, response options were ‘yes’ and ‘no’. This question was asked in 2001, 2004, 2007 and 2010. Percentages of participants responding ‘yes’ to kava is presented in Table 4.1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Percentage responding ‘yes’</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>1.7%</td>
</tr>
<tr>
<td>2004</td>
<td>2.0%</td>
</tr>
<tr>
<td>2007</td>
<td>1.8%</td>
</tr>
<tr>
<td>2010</td>
<td>1.9%</td>
</tr>
</tbody>
</table>


These results suggest that at a population level opportunities to use kava are low and have not changed over time. Although this tells us little about minority groups who are known to use kava it does suggest that kava is not widely available and availability has not changed under the various regulation frameworks that have been in place.

**Perceptions of harm and attitudes to kava use**

The NDSHS survey asks participants a range of questions about their perceptions of drugs which cause problems to society and their attitudes to people who use certain drugs. Since 2004, participants have been asked which drug they think of first when they hear of a ‘drug problem’, estimates of the percentage of respondents endorsing kava on this item either carry a standard error rate of greater than 50%, or there have not been sufficient responses to calculate a percentage (Australian Institute of Health and Welfare, 2008, 2011). Consequently it is clear that kava is not regarded as
‘drug problem’ to the Australian population as a whole. Similarly participants were asked which drugs caused the most concern for the general community and which drugs were perceived to be associated with mortality. From 2001 onwards that amount of people responding was less than 1% of the population and reliable estimates are not possible (Australian Institute of Health and Welfare, 2005, 2008, 2011). These findings suggest that nationally kava is not seen to cause great concern or harm.

In 2010 participants were asked if they approve of the regular use of a range of drugs by adults. Kava was endorsed by 4.2% of respondents. To put this figure in context with other illicit drugs, approval of ecstasy was 2.4%, hallucinogens was 2.4% and cannabis was 8.3%. Interestingly when broken down by gender men were more accepting of kava than women (5.9% compared to 2.6%). Taken together the findings indicate that across Australia kava is regarded as causing little harm, yet approval of regular kava use is not high. A factor that may affect these findings may be that a significant proportion of the Australian population do not know what kava is. Without knowing if respondents were aware of what kava is when answering the findings can be regarded as tentative at best.

**Summary**

As kava is not widely consumed outside Aboriginal groups and Pacific Islander groups, with the possible exception of those who have tried kava whilst travelling in pacific nations, it is not surprising that little data regarding kava exists in the NDSHS. In interpreting the data it is also likely that many people may not know what kava is, which may affect how they respond to questions about acceptability of kava. However the data reported are interesting as they place kava use in a national context as a substance that is perceived to cause little harm to the broader Australian community and a substance that few respondents have had the opportunity to test.

**National Aboriginal and Torres Strait Islander Social Survey (NATSIISS)**

The National Aboriginal and Torres Strait Islander Social Survey (NATSIISS) has been conducted in 2002 and 2008, it aims to collect data on a range of demographic, social, environmental and economic indicators, including: personal and household characteristics; geography; language and cultural activities; social networks and support; health and disability; education; employment; financial stress; income; transport; personal safety; and housing (Australian Bureau of Statistics, 2010). The 2008 NATSIISS conducted interviews with 13,300 Indigenous Australians living in private dwellings in remote and non-remote areas, including discrete communities (Australian Bureau of Statistics, 2010). The 2002 NATSIISS was completed by 9,359 respondents (Australian Bureau of Statistics, 2004). It is important to recognise that although providing valuable data the NATSIISS has a significant degree of under-coverage of the population (Australian Bureau of Statistics, 2004, 2010; Chikritzhs & Brady, 2006), which affects the generalizability of
the results. The NATSISS collects data from both remote and non-remote communities; however it is not clear whether there is a representative sample from Arnhem Land communities contained in remote communities.

The NATSISS includes questions on substance use; these questions were voluntary and differed between remote and non-remote areas. In non-remote areas participants had the option of self-completing the substance use questions, as opposed to completing via interview, in remote areas participants were only asked by interview. Participants in the NATSISS were asked if they had ever consumed a range of drugs, including kava, and if they had consumed those drugs in the previous 12 months. As noted by Chikritzhs and Brady (2006) the asking of substance use questions via interview may result in poor data being collected if participants are not comfortable answering substance use questions then the data collected may explain little about the actual consumption of substances. Despite these concerns the data collected in the NATSISS was examined for the present study. The present study received permission to investigate the data in more detail (e.g. comparisons between age and gender classifications); however given the low number of respondents endorsing kava items more detailed examination of the data was not possible. A summary of the overall prevalence data is considered below.

In 2002 the data from the substance use questions for participants in remote areas were not released by the ABS due to data quality issues (Australian Bureau of Statistics, 2004; Chikritzhs & Brady, 2006), data from the 2008 NATSISS includes both remote and non-remote respondents. In non-remote areas in 2002 3.4% of respondents reported having ever used kava, less than 1% reported using kava in the previous 12 months. In the 2008 NATSISS 5.7% of respondents reported ever using kava and 1.2% reported using in the previous 12 months. Table 4.2 summarises the prevalence estimates between non-remote and remote data and between male and female respondents in the 2008 NATSISS.

<table>
<thead>
<tr>
<th>Kava use</th>
<th>Remote status</th>
<th></th>
<th>Gender</th>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Remote</td>
<td>Non-Remote</td>
<td>Male</td>
<td>Female</td>
<td></td>
</tr>
<tr>
<td>Ever used kava</td>
<td>3.0</td>
<td>6.6</td>
<td>8.2</td>
<td>3.5</td>
<td>5.7</td>
</tr>
<tr>
<td>Used in past 12 months</td>
<td>1.2</td>
<td>1.2</td>
<td>1.7</td>
<td>0.7</td>
<td>1.2</td>
</tr>
</tbody>
</table>

Source: (Australian Bureau of Statistics, 2010)
Overall the prevalence of kava use is low, however it is higher than expected considering that kava use is rarely described among Aboriginal people outside of Arnhem Land. Interestingly the data show that participants in non-remote areas show a greater prevalence of kava use than in remote areas, this is a surprising finding, and inconsistent with expectation, the finding requires further investigation through the qualitative data collection in Chapter 6 (page 184). The difference in prevalence between male and female participants is consistent with previous research demonstrating that kava use is more common among males (Clough, Burns, & Mununggurr, 2000; Clough, Guyula, Yunupingu, & Burns, 2002). Consistent with comments regarding kava questions in the NDSHS participant’s knowledge and understanding of what kava is unclear, it is possible that many respondents do not know what kava is and have not answered the question reliably. Indeed Chikritzhs and Brady (2006) question the inclusion of kava in the 2002 NATSISS due to kava use among Aboriginal people being limited to only a small geographic region. While detailed discussion of the limitations of NATSISS survey is reported elsewhere (e.g. Chikritzhs & Brady, 2006) it is important to recognise that there are clear data quality issues. Despite this the findings to date are consistent with the findings from the NDSHS which suggest that across the broader Aboriginal and Torres Strait Islander population in Australia kava use is not common. This data is not representative of Arnhem Land populations so tells us little about the prevalence of kava use in that region.

4.2 Illegal importation, possession and supply

Customs and Border Protection Service kava seizure data

There have been import restrictions on kava since the implementation of the National Code of Kava Management in 2002. Kava was allowed to be imported only under license to Australia between 2002 and June 2007, in July 2007 the importation of kava into Australia was banned (see Section 1.6, page 47, for detail). From 2002 air passengers over the age of 18 years have been allowed to bring 2 kg of kava into Australia in their accompanied baggage. Therefore data related to the illegal importation of kava into Australia can give some indication of the availability of kava and the activity of black markets. Access was granted to data relating to kava seizures from 2004 till mid 2010 by the Customs and Border Protection Service (Customs). Total number of kava seizures and total amount of kava seized by Customs was provided for the current study, the data is separated into seizures of kava made from air passengers and crew, and kava seized in mail and cargo. The data provided by Customs are estimates only and not official data, the data were sourced from a variety of discrete systems and weights of kava provided included both confirmed weights and estimated weights (Australian Customs and Border Protection Service, 2010). Thus the data provides an indication of kava seizure quantities.
The number of kava seizures made and the total estimated amount of kava seized is presented in Figure 4.1 and Figure 4.2 (page 120). Figure 4.1 (page 119) shows the total amount of kava seized since July 1, 2004; the data suggest that other than a large seizure amount in 2008 following the ban on kava less than 500 kg of kava has been seized per year. The majority of kava seized has been through cargo and mail. Figure 4.2 shows the number of seizures made per year; the data suggest that despite lower quantities being seized in 2009 and 2010 compared to earlier years the number of seizures being made has increased. The data shows that the majority of seizures made have been from cargo and mail as opposed to air passengers and crew. In saying this there appears to be a steady increase in the number of air passengers and crew who are caught bringing greater than 2 kg of kava into Australia since the tightening of import restrictions in 2007.

In examining the high amount of kava seized in 2008, a review of the Customs media releases was conducted to examine if a significant seizure was made. In December of 2008 Customs reported a 4 tonne seizure of kava from a shipping container originating in Tonga and also containing yams and taro (Australian Customs and Border Protection Service, 2008). The inflated seizure quantity amount in 2008 is accounted for by this single large seizure of kava. Examination of all media releases by customs shows that there are no other seizures that have warranted publicity. Despite the best efforts of Customs it is likely that kava in these quantities continues to arrive in Australia via shipping cargo.

![Figure 4.1 Total quantity of kava seized per year from cargo and mail, and air passengers and crew](image_url)

Source: Australian Customs and Border Protection Service, 2010
It was possible to also examine kava seizures by state from the data provided by Customs (Figure 4.3, page 121). The data is separated between pre 2007 and 2007 onwards to enable a distinction between the tightening of import restrictions. The results in Figure 4.2 indicate that the majority of kava illegally imported is through New South Wales, Victoria and Queensland, which is consistent with the major air and sea ports of entry from the Pacific Islands. The data also indicate a clear increase in illegal kava seizures since the tightening of import restrictions which suggest that the amount of kava entering Australia illegally has also increased. The number of seizures made on entry to Western Australia is interesting in light of its distance from the Pacific and because kava has been banned in WA since the 1980s. Further investigation of kava availability in Western Australia is warranted and will be investigated in Chapter 5 (page 131). It is important to note that there have been no kava seizures entering Australian through the NT, suggesting that kava used in the NT is brought in from elsewhere in Australia and not directly from the Pacific. The number of air passenger and crew detections are low, however examination of the available data (Australian Customs and Border Protection Service, 2010) demonstrate that the vast majority of seizures are in NSW with 70 seizures reported since 2007, only three have been made in Queensland and no other state has recorded customs seizures from air passengers and crew (Australian Customs and Border Protection Service, 2010).
The data provided by Customs provides interesting information. It confirms that the majority of illegal kava enters Australia through NSW, Vic and Qld which is consistent with the population of Pacific Islanders live in Australia and the ports of entry from the Pacific. Further the data demonstrate that there is a steady increase in air passengers and crew bringing greater than 2 kg of kava into Australia, this said there appear to be surprisingly few seizures made from air passengers and crew outside of New South Wales. Important to note that there is no data collected by Customs or the Australian Quarantine Inspection Service which indicates how much legal kava is bought into Australia under the 2 kg per adult traveller allowance, it is not known how much kava enters Australia legally. The data suggest that kava is more likely to be seized when entering Australia by cargo or mail; it is unclear whether this reflects more kava entering Australia via this method or that this is more closely checked. The findings raise the question of the manner in which kava is getting to Western Australia despite WA’s distance from the Pacific, it is possible that it may arrive in WA via New Zealand as WA is a port of entry for aircraft from New Zealand. This hypothesis requires further examination in Chapter 5 (page 131). Finally the Customs data demonstrate that there has been an overall increase in the number of seizures made since the tightening of import restrictions and suggests that kava remains available in Australia despite these import restrictions.
Police seizures, arrests and convictions

Data relating to the seizure of kava and arrests and convictions related to the supply and possession of kava were sought from the New South Wales (NSW), Queensland (QLD) and Northern Territory (NT) and Victorian Police. These jurisdictions were contacted as they were the main regions where kava seizures have been noted and where it is known that kava is consumed. Information from the Victorian Police was not available; data from the other jurisdictions is presented below. In the NT additional data related to convictions for kava offences was sought from the NT Department of Justice.

Queensland

A request was made to the Queensland Police Service (QPS) regarding kava seizures, arrests and convictions in Queensland, correspondence from the QPS (Stewart, 2010) reported that no seizures arrests or convictions related to kava have been recorded. The QPS noted that recording of intelligence related to kava was not easy to identify as kava is included under the broad classification of ‘other drugs’ across their data bases. In light of this QPS conducted a free text search on the word ‘kava’ across their data bases which yielded a single reference to a ‘kava bowl’ (Stewart, 2010). Thus it is clear that kava has not emerged as a priority for the QPS and the police have very little cause to respond to issues relating to kava and have recorded no arrests or significant operations in relation to kava.

New South Wales

A request was made to the New South Wales Police regarding data related to kava seizures, arrests and convictions. Correspondence from the NSW police advised that NSW police do not have any data related to arrests for possession, supply and trafficking of kava or quantities seized. Similar to the QPS the NSWP do not have a field in their data base to record kava if it is detected by police. A free text search across the police data base was conducted by the NSW Police to determine if kava was mentioned in any context (kava being consumed, kava being present, someone referring to kava in a conversation) from January 2005 till August 2010. This search revealed approximately 13 police reports per year. This figure is a considered rough estimate only as the free text search does not identify reports if kava is spelled incorrectly, further the contexts in which kava were described were variable, they included a small number of intelligence reports but were mostly related to incidents where kava was in some way involved (i.e. people drinking kava, not the offences of possession or supply of kava). The NSW police concluded that there is some indication, based on a very small number of police reports, that NSW may be an entry point for kava which is then transported to other states, particularly the NT (Hall, 2010). The analysis conducted by the NSW police is consistent with the finding of the QPS that kava has very little impact on policing resources and has not emerged as a substance which is implicated in everyday policing. This is not to say that kava is not being consumed but rather that it is not being consumed in such a way that brings kava drinkers
to the attention of Police. Further it suggests that despite the proposal that NSW is the origin for a proportion of the kava trafficked to the NT, investigations into the supply and possession of kava is not a current priority for police resources and has not yielded any significant arrests.

**Northern Territory**

In the Northern Territory kava is governed by the Kava Management Act (Northern Territory Government, 2011), this includes the offence provisions. Kava is illegal to possess outside of a licensed area in amounts less than 2 kg. These are disposed of by police and not always recorded. Amounts greater than 2 kg are illegal across the NT (Northern Territory Government, 2011). Under the Act, kava in amounts between 2 kg and 25 kg are trafficable quantities of kava, and amounts greater than 25 kg per person are classed as commercial quantities (Northern Territory Government, 2011). Data relating to kava seizures by NT police have been provided to the current study and are described below. The kava related offences of supply and possession carry different sentences depending on quantities involved; data relating to the convictions for these offences have been provided by NT Ministry of Justice and are described below.

NT police have provided data relating to the seizure of commercial and trafficable quantities of kava from January 2009 till October 2011 (Northern Territory Police, 2011). Examination of the location of kava seizures reported by the NT police demonstrate that the majority of kava seizures have taken place en route from Darwin to Arnhem Land, within Arnhem Land, at Post Offices and in airports (Darwin and regional airports). Presented in Figure 4.4 (page 124) are total amounts of kava seized by the NT Police in this timeframe. The data show the variability in seizures made over time, and importantly show that the majority of kava seized comes from larger commercial quantity seizures. An exception to this are several months in 2011 in which a greater quantity of kava seized came from more trafficable quantity seizures. The variability of the data may be accounted for by the variability in the activities of the black marketeers or variability in police resourcing and activities, and both of which are effected by seasonal variation, the fluctuations in the data are likely to be a result of both.

To examine changes over time the data provided by the NT police was compared with the seizures reported by the NT Licensing Commission during the second period of kava licensing in the NT (Northern Territory Licensing Commission, 2006, 2007). These data are presented in Figure 4.5 (page 125) and Figure 4.6 (page 125) for the total number of seizures made and the total amounts of kava seized. Unfortunately data for 2006–2007 through to 2008–2009 financial years is not available. Figure 4.5 (page 125) demonstrates that the amounts of kava seized during the licensing period, with the exception of 2003–2004, was less than 1,200 kg per year, in contrast quantities in excess of 1,700 kg of kava have been seized from July 2009. Although it is difficult to draw conclusions from the data given the large gap in available information,
Figure 4.5 (page 125) demonstrates that the amount of kava seized in the NT is greater than that seized during the period of licensed kava. This suggests but is not firm evidence of an increase in the black market. Figure 4.6 (page 125) presents the number of seizures made, interestingly the data show that the number of seizures in 2010–2011 was far greater than that made previously. Importantly the data show that the number of seizures made in 2003–2004 was consistent with other licensing years suggesting that the large amount of kava seized in this year was the result of a single large quantity of kava being apprehended. The is consistent with the finding in Figure 4.4 (page 124) which shows an increase in the number of trafficable quantity seizures made, suggesting more frequent smaller amounts of kava are being seized by police.

![Figure 4.4 Commercial Quantity, Trafficable Quantity and Total Quantity of kava seized by the NT police each month from January, 2009 – August, 2011](image)

*Source: Northern Territory Police, 2011*

While it is difficult to draw firm conclusions from the data, the data do suggest several possible trends. Together data suggests a slight change in types seizures made with more frequent smaller seizures beginning to emerge in the data. Even though 2010 amounts were equivalent to that of 2003–2004 the number of seizures made in 2009–2010 and 2010–2011 are far greater than at previous years. The data suggest that kava remains available in Arnhem Land, and have increased since the banning of kava in 2007, with the exception of a large kava seizure made in 2003–2004. Finally it is interesting to contrast the amounts of kava seized in NT with the amounts of kava seized by Customs and Border Protection Service. With the exception of the large
haul of kava reported by customs in 2008 the amount of kava seized in the NT far exceeds the amount being seized at port of entry into Australia.

Figure 4.5 Total amounts of kava seized by NT Police from July 2001

Sources: Northern Territory Licensing Commission, 2007; Northern Territory Police, 2011

Figure 4.6 Number of kava seizures made by NT Police from July 2001

Sources: Northern Territory Licensing Commission, 2007; Northern Territory Police, 2011
Data regarding convictions for kava offences was provided by the NT Ministry of Justice from the financial year 2005–2006 to 2009–2010 (Northern Territory Ministry of Justice, 2010). Kava related offences include the both possession and supply offences (Northern Territory Government, 2011). Conviction for the possession of kava relates is for either trafficable or commercial quantities of kava, for a possession offence it must be demonstrated that the kava was in a person’s custody or control and that person knew they had custody or control of the kava. Supply offences under the Kava Management Act specifies that kava must not be supplied to another person unless doing so in accordance with a license (even though all licensing is suspended), supply offences include supply without a licence for quantities under 2 kg, supply of trafficable quantities of kava and supply of commercial quantities of kava (Northern Territory Government, 2011). Supply offences are defined broadly and include not only selling or giving away kava but also agreeing to sell or give away kava.

Figure 4.7 Number of possession convictions in the NT from July 2005

Source: Northern Territory Ministry of Justice, 2010

The conviction data provided by Northern Territory Ministry of Justice (2010) are presented in Figure 4.7 (page 126) for possession offences and Figure 4.8 (page 127) for supply offences. In interpreting this data it is important to note that convictions are not necessarily recorded in the same year as an offence is committed so the data provide an indication of general trend. The data in Figure 4.7 demonstrate an interesting drop in convictions at the time the laws pertaining kava changed, since that time there has been a steady increase in
the number of possession convictions recorded. Similarly in Figure 4.8 the data show a drop in convictions in 2006–2007 followed by an increase in total convictions. Of note in Figure 4.8 the vast majority of recorded offences are for the relatively minor offence of supply without a licence. The number of supply convictions for trafficable and commercial quantities of kava is strikingly low. This suggests that despite seizures made by police there is difficulty in convicting the major suppliers of black market kava in the NT.

Conviction data provided by Northern Territory Ministry of Justice (2010) were used to compare number of convictions recorded by Aboriginal people and non-Aboriginal people, this analysis is in light of comments made in the grey literature that kava supply into the NT includes both Aboriginal and non-Aboriginal people (e.g. Hughes, 2007; Rota, 2011). The data are presented in Table 4.3, and demonstrate that the vast majority of convictions recorded are for Aboriginal people. This data may not suggest that Aboriginal people are more involved in the trade, but rather that they are more likely to be convicted. Minor supply offenses are leading to convictions but very few instances of the supply of trafficable or commercial quantities of kava. These findings require further investigation in the qualitative data collection presented in Chapter 5 (page 131).
**Table 4.3 Number of convictions for kava offences recorded in the NT by Aboriginal status**

<table>
<thead>
<tr>
<th>Year</th>
<th>Aboriginal</th>
<th>Non-Aboriginal</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005–2006</td>
<td>17</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>2006–2007</td>
<td>6</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>2007–2008</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>2008–2009</td>
<td>13</td>
<td>9</td>
<td>22</td>
</tr>
<tr>
<td>2009–2010</td>
<td>26</td>
<td>9</td>
<td>35</td>
</tr>
</tbody>
</table>

Source: (Northern Territory Ministry of Justice, 2010)

**Summary**

Taken together the seizure and conviction data from the NT demonstrate that illegal kava has an ongoing presence in Arnhem Land and is being increasingly detected in the NT, it appears that more kava is entering the NT illegally under the current regulations than under the licensing system. The data indicate the kava seized in the NT is either already in, or en route to, Arnhem Land communities. Further, the data suggest that there is some difficulty in capturing kava seizures resulting in significant convictions for the more serious supply offences.

**4.3 Use in non-traditional groups**

Considering the NDSHS did not provide adequate detail as to whether people outside Pacific Islander groups and Aboriginal groups in Arnhem Land use kava, two potential data sources were examined: the prevalence of discourse related to kava on internet forums in which people discuss drug use in an anonymous yet public online environment, and enquiries made to drug information telephone services about kava.

**Internet forums**

Recent research has shown that an expanding number of individuals are accessing the internet for information about drugs and their effects and this applies to both licit and illicit substances (Hillebrand, Olszewski, & Sedefov, 2010). In Australia, the rates of internet use are high with approximately 75% of people aged 15–34 years indicating online activity with Internet usage remaining over 50% in people up to 65 years of age (Miller, 2010). Increasing evidence indicates that individuals are using the internet to access information about drug use in Australia with 24% of post-secondary students utilizing online sources to inform them about illicit substances (Boyer, 2001). Thus, it has become important for research to assess online information available to users when evaluating the prevalence of specific substance use, corresponding effects, and potential harm in order to identify emerging trends and accurately predict the potential impact in the community. Additionally, it has been hypothesized that online forum research represents an effective...
avenue to gain access to hidden recreational drug user populations that typical methodologies do not obtain Miller (2010).

The extent that online information and communication pertaining to the use of kava is present in Australian online communities was assessed through the analysis of several sites identified in key word searches conducted by the online search engine ‘Google’. Through this process six potential website forums were identified that contained Australian threads on both illicit and licit substances:

- www.bluelight.ru
- http://www.drugs-forum.com
- http://www.shaman-australis.com
- http://www.ravelinks.com/
- http://forum.ah.fm/australia/

These sites were then searched for the key word ‘kava’ and the resulting forum threads were then restricted to those occurring after January 1, 2009. The further search parameters yielded four sites that had current kava related threads:

- www.bluelight.ru
- www.drugs-forum.com
- http://www.shaman-australis.com

and two websites with recent kava related discussions

- http://www.ravelinks.com/
- http://forum.ah.fm/australia/

Three out of the four sites had multiple kava-specific forum threads posted subsequent to January 1, 2009. The maximum replies within any Kava thread was 28 although most threads were more brief with the average of 9 replies per thread. The kava-related threads were analysed to identify key themes. Key themes which emerged included: information about kava prior to visiting the pacific, summary of user effects, information on sourcing both recreational and medicinal kava, mode of administration, active chemical compounds, potency, importation, legality within Australia and abroad, use to medicinal kava minimize withdrawal symptoms of other substances, distribution, South Pacific Islander culture, and cultivation. There were very few negative effects or harms discussed, many forum posts commented on the bad taste of kava, and difficulties in drinking sufficient kava to get an effect.

From this online assessment, it is clear that while kava use is discussed in Australian online forums the total amount of activity on the forums related to kava is very low in comparison to other substances. The findings from the search on online forum activity suggests that kava is not commonly discussed among users of online drug forums and suggests that there are few harms associated with kava use experienced in the broader Australian community.

**Calls to drug information services**

Number of enquiries made to anonymous telephone drug and alcohol information services can provide an early indicator of drugs or drug related
harm emerging in the broader Australian community. Data were sought from
telephone information services in two different states for the present research.
Neither service collected data on the frequencies of calls pertaining to kava.
One information service reported anecdotally that they hearing about one
kava related phone call in the previous decade.

4.4 Summary

Taken together the data from existing data sources provides valuable
information and raises important questions to be considered in the qualitative
components of the following sections in the report. Data from the national
surveys tell us little about kava use in Arnhem Land or among Pacific Islander
groups however they indicate that across the broader Australian population
few people report the opportunity to use kava and people do not regard kava
as a substance causing harm or mortality in Australia. Data from the
Australian Customs and Border Protection Service demonstrate that kava
seizures, among air passengers and crew, and in cargo and mail have been
increasing over recent years and in particular since the tightening of import
restrictions in 2007. This said, the amount being seized is relatively low,
particularly in comparison with the quantities of kava seized within the NT.

It is clear that only a proportion of illegal kava entering Australia is being
detected. Data provided by the NSW police and QPS demonstrate that there is
very little police activity around kava. This is important for two reasons, firstly
it demonstrates that people using kava are unlikely to come into contact with
law enforcement whilst consuming kava and secondly that very few, if any,
police resources are directed at investigating the importation, possession and
supply of illegal kava. In contrast in the NT frequent kava seizures are made
in or en route to Arnhem Land, with over 60 seizures made in 2010–2011
financial year. This suggests that kava has an ongoing presence in Arnhem
Land. Further the data indicate that more illegal kava is being seized now
than under the licensing system. Reviews of novel sources, including internet
forums and call made to drug information services indicate that there are very
few people who appear to drink kava outside of the known populations of
Pacific Islander people and Aboriginal people in Arnhem Land.
5 Use among Pacific Islander peoples in Australia

To examine kava use among Pacific Islander people in Australia, and in
keeping with Rapid Assessment Methodology (RAM) principles, four data
collection methods were collected. These were key informant interviews, focus
groups, conference attendance and questionnaires. The aim of the data
collection was to examine the prevalence and pattern of kava use among
Pacific Islanders in Australia, the contexts of kava use, consequences of kava
use, impacts of kava regulations and identify awareness of kava related
negative consequences. In total 138 people participated in 33 key informant
interviews and 10 focus groups, researcher's notes and abstracts from 13
presentations at a conference discussing kava and pacific culture organised
by a group supporting more liberal kava laws in Australia were also used as
data. In addition, 34 questionnaires about kava use were also completed by
Pacific Islander participants. Data collection occurred in New South Wales,
Queensland, Western Australia, the Australian Capital Territory and the
Northern Territory, participants included Tongan, Fijian, Samoan and non-
Pacific Islander outsider participants. In the data and analysis presented
below the term Fijian is used to describe both Indo-Fijians and Melanesian
Fijians unless otherwise specified. Analysis of the key informant interviews,
focus groups and conference papers are presented together below and the
questionnaire findings are presented separately.

5.1 Methods

Key informant interviews
Key informant interviews were conducted using semi-structured interviews
with either individuals or in groups of two or three participants. In total 33
key informants (KI) interviews were conducted with a total of 38 participants.
The aims of the KI interviews were to gain an understanding of people’s
perceptions about kava use, patterns and prevalence of kava use and the
impacts of kava use on individuals and families. This information was used to
explore the nature and extent of kava use among Pacific Islander Australians.
Considering the diversity between Pacific countries sampling aimed to ensure
that three major Pacific Islander population groups in Australia, Tongan,
Fijian and Samoan, were represented.

Sampling and recruitment
Consistent with RAM the sampling was required to be representative of
cultural variability within the population (Trotter, Needle, Goosby, Bates, &
Singer, 2001). Individuals were sought who could discuss different elements
of the kava use and the role of kava in different Pacific Islander cultures.
Targeted frameworks were used in the present study whereby individuals who
are most likely to have knowledge of the area and experience of the cultural domain were targeted (Trotter, et al., 2001). From the targeted sampling snowball sampling methods were then used to further expand the number of key informants interviewed. A down side of this method of sampling is that representativeness is not known (World Health Organisation - Substance Abuse Department, 1998).

Initially identification of potential KIs came from community groups representing Pacific Islander interests, agencies and individuals who had previously published information related to kava. Key informants included health and drug and alcohol service providers, representatives from community organisations, church organisations, and people with expertise in Pacific Islander drug and alcohol issues. Personal networks were also used to identify potential participants. Snowball sampling was then used to further expand the network of participants. The KI sample size was determined by saturation and pragmatic redundancy (Trotter, et al., 2001); whereby participants were no longer sought for the study once saturation of themes had been achieved.

Community groups and individuals identified as potential KIs through literature and internet searches were invited to participate in the research. KI's were initially contacted via email or telephone and provided with an information sheet and invitation to participate. The information sheets explained the purpose of the study confidentiality, voluntary participation and data security. Face-to-face interviews were conducted where possible, but given the range of locations covered in the research over 50% of the KI interviews were conducted by telephone. At the conclusion of the interview participants were asked if they knew anyone who may be interested in participating to assist with snowball sampling.

All participants interviewed were informed about the role of the researcher and how the information was to be used. Participants gave verbal consent for the researcher to take notes and it was explained that they may be quoted, without being identified, should their story assist in explaining findings.

**Semi-structured interview**

A semi-structured interview methodology was used which included both standardised questions with response formats and open ended questions. The overall interview template asked questions related to basic demographics, observations of current prevalence, pattern and contexts of kava use, descriptions of kava use, polysubstance use, impacts of kava use on health and wellbeing, reasons for using and not using kava, community opinions about kava, impacts of the current regulation and previous regulations. Questions asked to participants depended on their experience and knowledge of kava. The questions did not ask participants about their own kava use, however many participants did refer to their own personal experience.
Profile of key informants

During the KI interviews basic demographic information was collected and is described below. All KI participants were over 18 years of age. Participant’s gender and ethnicity were recorded and are presented in Table 5.1. Of note 25% of the Fijian participants identified as Indo-Fijian. To preserve confidentiality of participants specific details regarding profession and organisation are not provided, however the sample is comprised of 7 academics, 5 church organisations, 3 from health and welfare organisations, 15 through community organisations, 9 participants were not aligned with a particular community organisation but participated via snowball sampling. Participants resided in West Australian (WA) (n=4), Northern Territory (NT) (n=3), the Australian Capital Territory (ACT) (n=2), New South Wales (NSW) (n=15), Queensland (QLD) (n=13), and Victoria (VIC) (n=1).

Table 5.1 Ethnicity and gender of KI participants

<table>
<thead>
<tr>
<th>Ethnic group</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Tongan</td>
<td>11</td>
<td>65%</td>
<td>6</td>
</tr>
<tr>
<td>Fijian</td>
<td>86</td>
<td>66%</td>
<td>4</td>
</tr>
<tr>
<td>Samoan</td>
<td>2</td>
<td>50%</td>
<td>2</td>
</tr>
<tr>
<td>Non-Pacific Islander</td>
<td>2</td>
<td>40%</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>58%</td>
<td>16</td>
</tr>
</tbody>
</table>

The majority of Pacific Islander participants (88%) were not born in Australia, and had been in Australia ranging from 6 months to 32 years; the majority having been in Australia for over 10 years. Participants who migrated to Australia reported arriving directly in Australia, with the exception of several participants who had migrated from New Zealand. The majority of participants reported attending church, including Free Wesleyan, Uniting Church, Roman Catholic and Hindu. Those attending the Uniting Church included those attending culture specific churches or congregations (e.g. Tongan congregation) and those attending mixed congregations. Of note both Seventh Day Adventist and the Church of Jesus Christ of Latter Day Saints are popular religions in the Pacific; a weakness of the current study is that there are no participants who reported these faiths. This said it is worthy to note that both prohibit the use of kava. In terms of representativeness of the sample it is important to acknowledge that although there are more Fijian and Samoan people in Australia the majority of study participants were from Tonga. Consequently, the sample is biased toward Tongan viewpoints. Of note this is also related to the fact that kava is more openly debated by Tongan groups and the pro-kava lobby is predominantly Tongan. Samoan participants explained that in Australia kava use is not common practise outside of
ceremonial use; consequently there was less effort was directed to recruiting Samoan participants. Finally there are fewer female than male participants which is largely related to kava being a male dominated activity.

In addition to the 38 KI’s who participated in the study, participants were also sought from four community agencies that were identified but could not be reliably contacted, or the agency was no longer active. A further six individuals identified in snowball sampling were invited to participate however non-response to telephone and email messages were taken as a reluctance to participate. The following details represent responses from the 38 participants who completed the study.

**Focus group**

*Participants and procedure*

The use of focus groups to discuss kava use among kava users was recommended by two key informants, 10 focus groups were subsequently conducted; two with Fijian participants and 8 with Tongan participants. All focus groups were conducted in person. Focus groups were conducted at kava drinking venues. The interviewer was invited by a community member to attend the kava drinking venues and participants were informed of the researcher’s attendance prior to arrival. On arrival at the kava club, the researcher was welcomed and introduced in Tongan and in English by a community member who had arranged the focus group. The research background, methodology and implications were explained to participants who gave verbal consent to participate. Information sheets were available for interested participants and people who did not wish to participate either left the room where the discussion was taking place or did not speak to the researcher during the discussion. Prior to the commencement of the focus groups it was clarified to participants that the aim of the research was not to support kava but to learn about kava use and all the positives and negatives. While this may have prevented some open discussion it was important to clarify with participants that the aim of the research was not to change the current laws. In Tongan focus groups several discussions were conducted in Tongan and then translated by participants for the researcher. The researcher was available after the interview for discussion with participants if they so wished. At Fijian focus groups no translations were required and the same overall procedure was applied.

All focus group participants were male, in some Tongan groups a female was present serving the kava however they did not participate in discussion. Focus groups were conducted in WA, NSW and QLD. In Table 5.2 a summary of the focus groups is recorded.
Table 5.2 Summary of focus groups conducted

<table>
<thead>
<tr>
<th>Focus Group</th>
<th>Participants (n)</th>
<th>Ethnicity</th>
<th>State</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6</td>
<td>Tongan</td>
<td>QLD</td>
<td>Private residence</td>
</tr>
<tr>
<td>2</td>
<td>11</td>
<td>Tongan</td>
<td>QLD</td>
<td>Hired multipurpose hall</td>
</tr>
<tr>
<td>3</td>
<td>28</td>
<td>Tongan</td>
<td>QLD</td>
<td>Hired multipurpose hall</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>Tongan</td>
<td>QLD</td>
<td>Private residence</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
<td>Tongan</td>
<td>NSW</td>
<td>Rented venue</td>
</tr>
<tr>
<td>6</td>
<td>18</td>
<td>Tongan</td>
<td>NSW</td>
<td>Rented venue</td>
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<tr>
<td>7</td>
<td>16</td>
<td>Tongan</td>
<td>NSW</td>
<td>Private residence</td>
</tr>
<tr>
<td>8</td>
<td>6</td>
<td>Tongan</td>
<td>NSW</td>
<td>Private residence</td>
</tr>
<tr>
<td>9</td>
<td>7</td>
<td>Indo-Fijian/Fijian</td>
<td>WA</td>
<td>Private residence</td>
</tr>
<tr>
<td>10</td>
<td>5</td>
<td>Fijian</td>
<td>NSW</td>
<td>Private residence</td>
</tr>
</tbody>
</table>

**Focus group agenda**

The focus groups were conducted with a short agenda to maximise participation in the study and minimise demands on participants’ time. Agenda for focus groups included describing the current kava drinking session, describing contexts of kava use, how often people come to kava clubs and how much they drink, what is important about kava drinking, what do people like about kava, are there any not so good things about kava use and participants opinions about the impacts of the import restriction on kava.

**Conference attendance**

The author attended the Australian Kava Movement’s first conference held in Canberra on the 6th and 7th August, 2011 (Australian Kava Movement, 2011). Ten presentations in all were attended by the researcher; presentations attended are listed in Table 5.3. The conference was not peer reviewed; presenters were all invited by the organisers. Eight of the presenters were Tongan, one presenter was Samoan and one was non-Pacific Islander. There were no Fijian presenters at the conference. All presenters, except two from New Zealand, were Australia residents. Nine of the presenters were male. It is important to note that all conference speakers were supportive of lifting the import restriction in Australia for both cultural and economic reasons. The conference did not include a diverse range of viewpoints; however it did openly discuss kava use and the role of kava in maintaining pacific island culture.

Conference abstracts (available online (Australian Kava Movement, 2011) and the researcher’s conference notes were included with the transcripts from the focus groups and the KI interviews, with the exception of the abstract and notes by Dr Sarris (see note, Table 5.3), and was used as part of the broader qualitative analysis of data.
Table 5.3 Details of Australian Kava Movement conference presentations attended

<table>
<thead>
<tr>
<th>Presentation Title</th>
<th>Author</th>
<th>Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>The next magic bullet from Oceania</td>
<td>Prof Sitaleki Finau</td>
<td>Tongan</td>
</tr>
<tr>
<td>Kava, the ‘partial’ versus the ‘total’: a way out of the impasse</td>
<td>Dr Okusitino Mahina</td>
<td>Tongan</td>
</tr>
<tr>
<td>‘Kava’ a Christian symbol</td>
<td>Rev Simote Vea</td>
<td>Tongan</td>
</tr>
<tr>
<td>Perspectives of the importance of kava: from a medicinal and scientific perspective</td>
<td>Dr Jerome Sarris</td>
<td>Non-Pacific Islander *</td>
</tr>
<tr>
<td>Kava – a mitre touch of a master political architecture</td>
<td>Inoke Fotu Huakau</td>
<td>Tongan</td>
</tr>
<tr>
<td>The Australian Kava Movement for a Fair Go</td>
<td>Siosiu To'fa'ipangai</td>
<td>Tongan</td>
</tr>
<tr>
<td>Kava as telos: the Fofo'anga experience</td>
<td>Dr Malakai Koloamatatangi</td>
<td>Tongan</td>
</tr>
<tr>
<td>Kava importation, management and control of distribution, ongoing evaluation and assessment.</td>
<td>Polikalepo Tualeva</td>
<td>Tongan</td>
</tr>
<tr>
<td>‘Blood in the kava bowl’ by the late Professor ‘Epeli Hau’ofa of the University of the South Pacific, Fiji</td>
<td>Ioane Lafoai</td>
<td>Samoan</td>
</tr>
<tr>
<td>A kava-bowl in my sitting room</td>
<td>Luesane Nakao-Tuita</td>
<td>Tongan</td>
</tr>
</tbody>
</table>

* Notes and abstract of Dr Sarris’s presentation were not included in the qualitative analysis as it did not discuss kava use by Pacific Islander peoples.

5.2 Key informant interview, focus group and conference results

The data from all three qualitative sources was compiled in a single data base and categorised, dominant themes for each category were identified and are presented below. Distinctions are made between the different ethnic and cultural groups where appropriate because of differences in their use and descriptions of kava use.

The broad context of use

In the focus groups, interviews and conference presentations discussions about kava were frequently linked to discussions of the broader issues facing Pacific Islanders in Australia. In order to understand kava use and the participants experience a brief summary of the key broader themes are discussed below. The key themes that emerged across qualitative data collected include migration stress, changing gender dynamics and issues facing youth.

Migration stress

Migration stress and the complexities of maintaining cultural identity in a new country are a key issue facing Pacific Islander Australians. The different way of life on the Islands and in villages compared to Australia was discussed by
all participants. Adjusting to living in Australia is different experience for different people. For some participants this has meant making adjustments to traditions to find a balance between Australian life and Island, for example several participants reported shortening the length of funeral obligations in order to maintain attendance at work and family responsibilities. Other participants explained their need to keep up Island traditions as they were, and talked of the stress involved in maintaining traditional practises such as funeral obligations. For others still, migration is not about balance or maintaining tradition but a complete change in lifestyle. One participant commented:

Island life and Australian life do not fit together, yes that is difficult for some people, but you can't live an island lifestyle here in Australia, people need to make some difficult decisions, they need to adjust and change.

This discrepancy of experiences was described by one participant

Some people who come to Australia want to fiercely hold on to culture and maintain it, they don’t want to lose identity, and they also don’t want things in the village at home to change! but for others they see Australia as being something different new employment opportunities, lifestyle and education.

Regardless of the approach taken, many participants reported difficulties in adjusting. The struggle to maintain cultural obligations was described in most detail by Tongan participants. For Tongan participants there was much discussion of the stress families are under living in Australia in relation to obligations to send money back to family in Tonga. Several participants explained that Tongans in Australia tended to work in low paying labouring jobs and shift work, with their income they send a proportion of income back to Tonga, a proportion to their Church and then may struggle to maintain a mortgage or rent. A similar issue of obligation emerged when discussing the time people had available; one participant explained it by stating:

Parents work hard all week, go to church on the weekend and maybe they miss out on their own kids.

While this was topic discussed by Samoan and Fijian participants, it was discussed in more detail among Tongan participants. In addition to themes of managing cultural obligations regular themes emerged about feeling lost in European culture and struggling with language which lead some participants to feel alienated in Australia. Participants described the importance of strong cultural networks within Australia to minimise the effects alienation and also to support new migrants.
**Gender politics**

Many respondents commented on changing gender roles in Pacific Island society. In discussing kava, a predominantly male activity, an understanding of these issues is necessary. In the Pacific as a whole, but more pronounced in Australia respondents talked of broad shifts occurring in the roles and rights of women. In Australia much of this shift is related to women becoming financial contributors to the family. As summarised by one participant

In Tonga the women work only in the home, men work outside the home, but in Australia women work outside the home so they need help inside the home. Men do not understand that, they like women earning the money but expect them to still do everything else inside the home and with the children.

Several women also reported feeling more empowered in Australia stating that in Tonga they are unable to own property and were unable to speak out against their husband or things they don’t like, but in Australia they can speak freely because they have more rights. Several men also explained that these changes were difficult for them to adjust to and resulted in added pressures in the home.

Of note while these topics were discussed by Tongan, Samoan and Fijian participants, they were not mentioned by Indo-Fijian participants, which may represent a sample bias or that these issues are not as acutely felt or not openly discussed. The changing roles and the challenge of balancing household chores is by no means particular to Pacific Islander peoples, but it has a particular salience among KIs and was a recurring theme amongst both male and female participants when discussing kava.

**Youth issues**

Many people in the Pacific Islander community are worried about the levels of crime and offending among young Pacific Islander males, as described in Chapter 1 (page 3), Tongan and Samoan males have the highest incarceration rates of any cultural group in Australia. As explained by a participant

Pacific kids get in trouble. While they get in trouble later than non-Pacific kids, their first offences are more violent. The strength is that they have a longer retention in schools and use less alcohol and drugs, but many of our youth are finding themselves in trouble.

This is causing great concern to adults and community leaders who feel the responsibility to help young people keenly and are struggling to identify strategies to address crime. There was great diversity among participants regarding their understanding of what was causing difficulties and how to help youth. Whilst a minority of older male Tongan participants argued that the solution was to teach young men culture through listening to older men – as phrased by one conference presenter ‘older people – we know best, the youth need to listen to us, to respect what we know, this will work’. Other
participants understood the difficulties faced by youth differently. Many participants discussed the differences between adult migrant parents and their children born in Australia or children who arrived in Australia very young, proposing that this has resulted in a cultural distance between the two generations. There is recognition that young people want to live differently from their parents which leads to a separation between children and parents:

Children do not always show an interest in what their families do, they can show challenging behaviour, young people value being Islander but struggle under some of the obligations to Church and Island – do they want to lead the life their parents lead – they are lost.

The time and money involved in cultural obligations of parents emerged as a theme which contribute to cultural distance. Many participants wondered if youth felt that these were important and thought that many youth did not want to live their lives under these obligations. Several participants also felt that obligations left youth feeling alienated from their parents both in terms of money and time spent on obligations.

... they can be very separate from their families. Pacific families spend a lot of time at work, send money back to the Islands and also they spend a lot of down time at the church. This can leave kids alienated.

Finally several participants felt that older people in the community needed to accept these changes and support young people.

... we need to recognise they won’t all go out and marry someone else from the islands. Many Islander kids are interested in their culture but also other things. They may chose not to participate in all the old things. That needs to be ok.

Despite these concerns it is important to note that several participants both Tongan and Fijian, regarded youth as the most important and exciting part of the community proposing that the next generation will get the mix of cultures right.

**Prevalence of kava use**

All participants in interviews and focus groups were asked about the prevalence of kava use among their cultural group. Discussions of prevalence were complex difficult, however the majority of participants suggested that most men and women would have tried kava once or twice in their life, except those whose religion prevent it (Church of Jesus Christ of Latter Day Saints, Seventh Day Adventist). In discussing regular use all participants reported that the prevalence of kava use by women was low. Many participants explained that women from Fiji, Tonga and Samoa did drink kava occasionally for ceremonies; however more frequent and social kava use was considered to
occur occasionally among Fijian women, but very rarely for Tongan and Samoan women. In contrast descriptions of prevalence among males were highly variable.

Participants’ descriptions of prevalence among Tongan males varied largely based on participants age and religion. For participants who attended Churches which have incorporated kava into worship and who support kava clubs prevalence estimates were between 80–90%, with the suggestion that approximately 60% of men would drink regularly. In contrast other participants suggested that it was only a vocal minority of Tongan males who drink kava. These participants tended to be younger, born in Australia or New Zealand and be Catholic or members of a non-culture specific Churches. On participant suggested that less than 10% of males would drink kava regularly. Older participants also tended to suggest higher prevalence rates than younger participants.

Fijian participants reported that while kava is present at many cultural events and ceremonies only about 10–15% men would use it regularly. Estimates of kava use prevalence by Samoan men were consistent across participants. Use was described use as sporadic and only ceremonial. Participants reported that it was rarely consumed regularly in Australia.

The above summary is very broad, and does not provide a clear indication of prevalence, the responses by participants were limited by the different contexts of kava use, and many suggest that prevalence is dependent on context of use; a summary of the contexts of kava use is described below. Despite this it is clear that lifetime prevalence of kava use is very high, however estimates of regular kava, particularly for Tongan males is highly variable.

**Cultural contexts of use**

Across participants there were consistent responses when explaining the different contexts of kava use; however the contexts differed between cultural groups and are described below.

**Tongan contexts of kava use**

*Ceremonial and formal kava:* Consistent with the historical distinctions of kava use contexts (see Section 1.7, page 67) of *Ilo kava* and *Taumafia kava* participants described ceremonies in which kava has been used throughout Tongan history, including for welcoming special visitors, intention to date or court a woman, coronation of the King, funerals, and weddings as being an important contexts of kava use. Many participants felt these occasions were not finalised or formal and less kava has been used. In more recent history drinking kava has become an important part of formalising events such as graduation ceremonies. Formal kava ceremonies are highly ritualised and beautiful ceremonies that hold great importance. During these ceremonies women of rank participate in kava drinking.
Social and recreational kava use - kava clubs: Participants explained social kava drinking was an important context of kava use. Social kava use occurs as part of a ‘kava club’ or organised kava circle. Kava clubs are organised groups that drink kava regularly on a set day, or days, a week. Kava clubs vary in their structure and are typically arranged as part of Church group, location in Australia, representing a location in Tonga or as a large social group. Drinking in kava clubs was described as *Fai Okava* by several participants (see Section 1.7, page 67) and is consistent with the understanding of kava use by commoners. A more detailed description of kava clubs is presented below in Section 5.2, page 146.

Church kava: Kava use as part of church service was described by some participants as a context of kava use. Kava drinking has been incorporated into church service by a number of Free Wesleyan churches. In this context kava is used prior to a sermon, or by a group of men after church service. Kava is not used equally across religions. As described by one participant

- Catholics drink kava, but never in church Methodists drink all the time and Seventh Day Adventists do not drink at all.

Fundraising kava: Several participants identified kava drinking as part of fundraising as a context. Kava drinking for fundraising typically occurs in either a specially organised kava club or a regular club in which participants raise money for personal and community causes such as raising money for medical treatment. In addition kava circles are used by Churches to raise funds for the church.

Fijian contexts of kava use

Ceremonial and formal kava: Ceremonial kava use was described as very important to Fijian and Indo-Fijians alike. Kava ceremonies, in which kava is presented and consumed, are used to welcome visitors, settle disputes and celebrating days of importance and occasions of cultural significance.

Social kava use: Participants described social kava use, however unlike Tongan participants kava circles were not described as organised clubs or regular events, but rather as groups of friends or family drinking together.

Family kava use: Fijian participants explained that kava drinking can be an important part of family life. In addition to being used in a social context at family gatherings as described above, kava is used in formal family discussions and family meetings. As explained by one participant:

- Kava is very important, it is the centre of a discussion, it makes a meeting formal, sitting down with kava can indicate that this is an important discussion and there are protocols which must be followed. It is a sacred space. You might be sitting down talking casually but once the hands are clapped and the ceremony starts the dynamic changes. Behaviour follows certain rules.
Community events: Participants explained that at Fijian community functions kava is often present; however it is only consumed by a small proportion of people.

Spiritual kava use: Fijians participants explained that kava use was also used to enable spiritual connection to ancestral spirits and for stopping curses.

Samoan contexts of kava use

Ceremonial kava use: Samoan participants explained that, in Australia, Samoan people rarely used kava outside of ceremonial use and celebrations of national significance (Independence Day). Ceremonial kava use for Samoan participants was explained as being important to mark attaining of rank for men.

In Samoa we drink kava ceremonially, other cultures drink it socially but for us, especially in Australia, we just like it for ceremony. Some cultures use it as a drug, for us it is ceremony and for welcoming visitors.

In addition to the above all groups described medicinal use of kava as an historically important context of use. Several participants described that kava can be used as a medicine for treating various ailments such as an upset stomach; however it was described as an uncommon use of kava in Australia.

With the exception of medicinal use, all these contexts described above denote the use of kava in groups; consequently participants in both KI interviews and focus groups were asked if people drank alone. Many participants reacted to the question with surprise, and it was considered highly unlikely that people would use kava alone. As explained by one participant:

I've only ever heard of one person who drinks alone. It would be rare to drink alone. You drink at a gathering. So if you're busy, don't go to a gathering. Then you don't have any kava. It's simple.

The following sections describe in detail the most common contexts of kava use and characteristic of use within these contexts.

Kava clubs

Participants explained that Tongan kava clubs are organised in relation to a specific Church, Tongan village, or location in Australia, these clubs vary greatly in size and cost to participants. Recently a number of clubs have opened in Australia that are part of the Fofo'anga network of kava clubs which also exist in Tonga, New Zealand and the United States. Participants suggested that overall there are between 50 and 70 kava clubs which currently run in Sydney, with around 100 in total across New South Wales. In Brisbane estimates of the number of kava clubs were difficult to obtain with some participants suggesting that there were at least 20 clubs. The size of
clubs varies greatly, with one of the larger clubs in Sydney saying they would have at least 50 people on a Friday or Saturday night and 20 during the week. Similarly, participants in Brisbane explained that around 10–12 people attended most clubs, but larger clubs could be as great as 30 people. Participants explained that it is acceptable to visit a number of kava clubs in an evening and be a member of a number of kava clubs.

Participants explained that the environment can differ between kava clubs; typically participants will gather on the floor around a kava bowl and be seated in a circle if size permits. Some clubs which are Church organised will run bible study or preach during kava drinking, however in most kava clubs people sing, tell poems, share stories about the islands, recite and explain genealogy whilst drinking kava and talking informally. A minority of clubs are less formal and have pool tables and televisions to watch while kava is being consumed. In one group several participants explained that they would occasionally run facilitated discussions about certain topics of importance that may have emerged in the community.

When asked about the composition of a kava club circle a common theme which emerged was the diversity of people who attend a club together. Many men discussed the intergenerational composition of kava club attendees. One focus group respondent of a small club in Brisbane described:

Our group is very mixed, we have elders, we have people who do not speak English, we have professional people. Leaders guide discussion and encourage values. We can learn from elders and also from professional people.

When asked if non-Tongan men came to kava club participants, reported either that they never did or that it was very rare. When asked about women attending kava clubs participants explained that the preference was to have a woman serve kava although this was not always possible. Beyond a server, clubs reported that women did not come to kava clubs. The one exception to this was one kava club which allowed women to attend one evening a week, but the women tended to not sit in the circle with the men. Several participants also mentioned that they had heard there was an all-women kava club somewhere in Sydney, however no participants were sure of its existence or location.

The Fofō'anga kava clubs are worthy of further description as they are a rapidly growing organisation. A member of the Fofō'anga club in Sydney suggested that there were about four to 500 members of Fofō'anga in Sydney alone, however it has been not possible to corroborate this number. There are approximately nine Fofō'anga clubs in Australia and upwards of 200 clubs internationally. The objective of Fofō'anga is described as a broad social group for men to drink kava in a socialized and non-traditional manner, with little emphasis on traditional taboos of kava Royal/chiefly ceremonies. The Fofō'anga kava movement is in part a democratization of kava use which
breaks down the rigid social structure of Tongan society. A conference presenter described that in Fofo’anga kava is the binding agent of the clubs, it enhances social interaction and allows music and storytelling.

**Club locations**

Participants explained that Tongan kava clubs in Australia are typically run in community multipurpose halls which are hired (e.g. scout halls, tennis clubs etc.), private homes or at premises rented specifically for the kava club. Kava clubs in Brisbane and Cairns tend to be run private homes or multipurpose halls only. In Sydney, several of the larger clubs have been able to rent out premises specifically for a kava club. Rented premises have enabled some clubs to provide more amenities to members. One kava club reported that they were hopeful of purchasing a property at some point in the future in which they could hold kava clubs.

At this kava club we are making a profit and we are hoping to buy our own commercial premises so individual houses are not used, this will also help hold kava clubs every night of the week.

Kava clubs run from homes are typically held in a garage or in purpose built shelter outside a home. Kava clubs in private homes are likely to run one only one or two nights per week. Men explained that it was important that kava clubs were outside as women could stay inside and be separate from the kava club. Kava clubs run in multipurpose tend to be run on weekend nights and are required to leave them at a set time (usually midnight). Several participants expressed frustration at drinking in multipurpose halls due to the early finishing time; conversely a small number of participants saw this as an advantage. Finally some kava clubs are run on Church premises, who run their own kava clubs for the purposes of fundraising, bible discussions and socialising.

**Frequency and opening times of kava clubs**

Participants in focus groups were asked how often clubs were held. The majority of kava clubs open between two and three days per week, typically Friday, Saturday, and Sunday. This said, in Sydney, there are kava clubs held every night of the week. In Brisbane, clubs were occasionally clubs which opened every night of the week, but participants explained that kava was usually on available four to five nights per week. In Canberra participants explained that kava clubs were open only three nights per week. Several participants reported that Tuesdays and Thursdays are the quietest kava nights for Tongan kava clubs.

No kava clubs reported opening during the day. Typically the kava clubs open after 7pm, although some larger clubs reported opening earlier to accommodate shift workers. The clubs tend to be open until midnight at
multipurpose halls, 2am in private houses and later in rented premises. Many not in hired halls do not have closing times:

At a kava club we don’t finish until it’s all gone. Then we say a prayer and go home. Some people might leave earlier though.

In reviewing the focus group data it was clear that the larger kava clubs stayed open for longer and met more frequently than the smaller groups.

Participants were asked how often people attended kava clubs, although there was variability it was commonly thought that most men would attend kava clubs two times per week. It was explained that younger men may move from club to club during a night. In contrast in one of the smaller kava club focus groups a participant explained that:

We run this club weekly. Most attend only this circle. Half attend less than every week.

**Quantity consumed at kava clubs**

Key Informants and focus group participants were asked about how much kava people consumed. To understand quantity themes around duration of drinking, tempo of drinking and quantity of drinking emerged. In terms of how long most people at kava clubs consumed kava for the majority of participants reported it would be common to drink for between 3 and 6 hours, although many people would drink for up to 8 hours. As explained by one focus group participant

We would start at about five or six in the evening after work, then go home at midnight during the week but on the weekends maybe to three or four am. Usually only the organisers will stay the whole night. Everyone else will come and go.

The tempo of drinking was described as slow, participants report that it was typical to have a cup of kava approximately every five to ten minutes. Participants explained that during an evening if there was a particular discussion occurring or song being sung more than ten minutes between drinks would occur; participants reported that drinking was never faster than every five minutes.

In terms of usual quantity of kava consumed participants described how much was consumed in ‘shells’ or coconut shells. Shells are not a consistent size, participants in most clubs will also drink from a different shell each time they drink kava, so it is difficult to identify with any clarity how much kava is typically consumed. It was common for respondents to report drinking around 25 shells (cups) of kava in five hour period. This is consistent with reports
about tempo of kava consumption described above. That said there was variability in the amount of kava consumed. One participant commented:

I have one or three shells as I am old and just come for company. Some would have nine or twelve shells in about four or five hours, but many would have more than 25 shells.

Considering that kava is drunk in rounds in a group environment, participants were asked if there was peer pressure to drink or keep drinking. Whilst most respondent reported that there was little pressure to drink, and that many people would skip a round from time to time or chose a small shell to drink from, there was acknowledgment that younger people when they first start attending a club may experience some pressure. It was acceptable to pass in a kava circle. Several participants suggested that there was little status to be achieved by being a big drinker so there was less likely to be pressure to drink more. However other participants reported that there was pressure to attend a club sometimes or to stay for a long time.

**Finishing a kava session**

Participants were asked to discuss how kava club sessions ended. A typical response was:

You leave when you have had enough or because the club shuts or runs out of kava for the night.

Other themes which emerged included having to attend work the following day or having an agreement with family. Several participants explained that they always left kava at a set time to keep their families happy.

**Kava Clubs and harm minimisation**

Participants in focus groups were asked if the kava clubs did anything to ensure that kava drinkers and kava drinking was safe. There was considerable variation between the different groups. With the exception of one kava club held in a back garden all clubs reported that members were required to smoke outside the kava drinking circle. The majority of respondents also reported that they not allow alcohol at the kava club, although some clubs accepted people who wished to drink alcohol at the same time as others were drinking kava. Individual harm minimisation strategies are discussed in more detail in Section 5.2, page 136.

With regard to hygiene, several focus group participants reported that in some clubs people kept their own shell (cup) for a whole night; however this was only a in minority of the clubs. Of note one club had gone to great lengths to provide a clean environment, they had available fresh water, washed out all utensils between preparations and also encouraged participants to eat fruit and drink water while consuming kava. The also provided a bathroom and hand washing facilities which were in close proximity to where kava was
consumed. Several clubs did not have toilet or hand washing facilities for participants and did not have drinking water easily available.

Finally one respondent explained that he attended a kava club in which people sat on chairs as opposed on the floor which he argued was better for health, particularly in winter and for older members. While it is strength that the majority of clubs prevent smoking, there are concerns that many clubs have inadequate hygiene facilities. In general, with the exception of one club, there was little evidence of thought around harm minimisation.

**Summary**

The majority of kava use by Tongan men in Australia appears to occur in the context of kava clubs. Kava clubs are peaceful social environments in which men talk, sing tell stories and pray. Kava clubs vary greatly in their composition, location and service of kava. Attendees to the larger kava clubs tended to report drinking kava for longer and more times during the week.

**Social kava use among Fijians**

While the evidence from focus groups and key informants was mixed, it appears that the majority of Fijians in Australia do not drink kava regularly but, for those who do, regular kava consumption occurs in social settings or family settings. Social kava drinking is described by participants as less structured than that for Tongans. It was a common theme amongst Fijian respondents to emphasise the difference between Tongan and Fijian recreational kava use. Social settings were generally described as relaxed social environments where people may be playing cards, watching sports or playing pool while drinking kava. As explained by one participant:

> Usually we have it at someone’s house, we don’t have a set circle, set pattern or set days, sometimes women will there too and some of them will have a few bowls too.

Participants emphasised that kava would be part of a gathering but not the only reason for a gathering.

The frequency of social kava drinking was described as variable with participants explaining that they would have kava when someone has kava they would like to share or they are planning a casual gathering, these events would occur around once a month. In contrast, one participant explained that they had a regular Fijian social group who drank kava every week when they met for around three-and-a-half hours.

When asked about quantity, many participants reported that they had small amounts of strong kava.

> In groups of four or five drinking we would have about ten to fifteen cups each. Afterwards there would be a wash-down of a couple beers.
Participants in focus groups were also asked if there was peer pressure to drink kava. Consistent with Tongan respondents, participants commented that they did not see kava as a status drink like alcohol. Some participants commented that some people will stay in a kava drinking circle talking and watching sports but do not drink much at all, whereas another participant commented that in Fiji because it is served in a circle, it can be hard to say no. Social kava use by Fijians is described as less formal and structured than Tongan kava clubs, participants report drinking in both male and mixed groups, and drinking less frequently than kava clubs participants.

**Familial kava use among Fijians**

Fijian participants explained that much kava use takes place in the family context. Use in family contexts was described as welcoming a visiting or returning family member, to formalise family discussions and events and for social gatherings. The use of kava in family social gatherings is consistent with the description above.

Welcoming family members was described as an important occasion for kava drinking or for presenting kava to the family member. This distinction is important, as several participants explained that they would present kava to a family member but this did not necessarily mean that the kava would get drunk. Quantities of kava consumed to welcome family members was variably described by participants, most participants reported that in Australia it would be less than what is consumed at social gatherings.

Kava drinking described as being used to initiate and formalise family discussions. As expressed by one participant:

> In my family if I get a call to say come and drink some kava I know there is an important discussion to be had. I pass on the kava but I’ll be present and stay in the circle for the announcement and to participate. It’s a beautiful event, and an important part of culture.

Kava drinking in this context is typically infrequent and does not involve high levels of consumption.

**Kava use in Church service**

The relationship between kava consumption and religion emerged as a theme among Tongan participants and participants describing kava use by Tongans. A general theme which emerged among participants was the relationship between kava and the main religious denominations in Tonga. The relationship is complex considering the historical role that religion has played in banning kava at various points in history across the Pacific. It was explained by participants that the Catholic Church in Tonga accepted kava in the 1960s, although not actively encouraged by the Church in Australia it is not prohibited. In contrast the Free Wesleyan Church leadership endorses kava and recognises kava as a Christian symbol. Kava consumption is integrated into religious service in some congregations of Free Wesleyan
Church; however other Christian denominations such as the Uniting Church who have culture specific congregations also run kava clubs. Kava consumption at kava clubs is described in more detail in Section 5.2 (page 136).

Kava was related to church service at two time points, firstly to be consumed prior to service – for example offering kava to a preacher before gives a sermon, drinking kava prior to worship. The second context described was drinking for a few hours following a church service for fellowship. One participant explained:

Start the day with a small kava and then drink afterwards. To combine custom and religion.

Kava consumption as part of church service is, as expected, weekly on a Sunday and smaller amounts of kava are consumed (less than 9 shells) than in a kava club context.

Kava has been linked to churches both as a component of worship and as a Christian symbol, but also financially and as a way to encourage attendance and participation of men. Several participants suggested that many Tongan Churches run one or two kava clubs to meet these ends. The adoption of kava into regular church life is not without debate, concerns about the use of kava in the Church setting include:

- I went to church one day and they were finishing kava from the night before. How can this possibly be good for the church let alone women and families?
- Some people drink for congregational things and go to the church kava club. People feel they have to go. Some churches cause problems. It puts more demands on people’s time and finances.

It is important to also acknowledge that for many churches, including culture-specific churches that kava is not used in the congregation. One participant explained:

At my church, we don’t use kava. I think if you are using kava in the church then you have disengaged with God.

In contrast, in Fiji and Samoa kava is not as strongly linked to religion and Church service and was rarely discussed by participants.

Whilst the role of kava in the church is not the concern of the current report it is important to recognise that many churches play a role in facilitating kava use, this also means that they can play an important role in any harm minimisation or health education efforts.

**Ceremonial and formal kava use**

Ceremonial kava use was acknowledged by all participants, both male and female, as an important part of the different cultures. In terms of how much
kava is drank during ceremony the majority of participants explained that it is consumed weaker and for a shorter period of time than social kava use. For Tongan participants the exception to this is kava consumption which occurs during funerals. At this time kava is consumed nightly for a period of up to a week, however participants reported that kava is mixed weakly during this time. Several Fijian participants suggested that after a ceremony there will be a few people who stay and drink for a while but on the whole most people will get up and leave.

**Frequency and quantity of use across contexts**

Participants were asked to describe what they thought the typical patterns of kava use were across contexts. In examining the responses it was apparent that among Tongan males drinking patterns differed between those who drink at kava clubs and those who do not. Those who attend kava clubs are more likely to be regular kava drinkers and attend a kava club between one and three times per week and stay for approximately 5 hours, many of these will also drink kava once a week at Church, and occasionally for ceremonial or formal events. There is diversity within this pattern with some men drinking every night and others who only drink occasionally to maintain relationships with those at kava clubs:

I drink two cups when I go to a circle and I only go once in a while to keep ties with some people.

Another pattern of kava use was described by Tongan participants, was that among men who drink only at ceremonial occasions and do not drink to socialise at kava clubs. These different patterns of consumption were summarised by one participant:

It depends on many factors. For women they may have one or two bowls occasionally as a sign of respect at ceremony, but rarely any more. Men will have it after church, a small amount, or maybe for ceremony only. For those who do drink, once or twice a week is the norm.

When Tongan focus group participants were asked what factors affected patterns of consumption, the key themes which emerged were drinking less in cold weather, being unwell, and because it had been requested by their wives.

Among Fijian participants it was reported that there were some people who would drink every week as part of social gatherings or regular family kava drinking, however it was commonly reported that those who drink regularly would be most likely to do it every month. Several participants explained that this pattern would change when they visited Fiji where they would drink as frequently as every couple of days. As with Tongan kava drinkers there was
also a significant proportion of people who drink only rarely for ceremonial or family occasions and drink small amounts when they do drink.

Responses from Samoan participants suggested that kava drinking in Australia was limited to ceremonial kava drinking and would occur between 1 and 6 times per year. The results indicate that for Tongan males in particular there are different patterns of kava use which are largely dependent on whether kava is consumed at only ceremonies or at ceremony and at kava clubs, and if their Church includes kava drinking as part of regular service or social functions. Among Fijians patterns differ between those who drink for ceremonial, formal and family occasions and those who drink socially in addition to formally.

**Kava strength and preparation**

An alternative means for examining consumption is to examine the amount of kava used by a group of people drinking kava to estimate individual consumption. Focus group participants were asked how much kava powder they used. In these discussions a common theme which emerged from both Fijian and Tongan participants was the belief that Fijians drink their kava strongly and quickly whereas Tongans drink weaker kava over longer periods.

Fijian participants suggested that 200g of kava in a single domestic bucket (approx. 4–6L) would make a medium to strong mix. Two buckets of a mix of this strength would suit around 6 people, which equates to approximately 67g per person. Another Fijian participant suggested that if they had limited supply of kava then they would stretch a 250g bag over two buckets which they would share between three people which is approximately 83g per person. If that mix tasted too strong then it would be watered down. Participants explained that kava mixing was a skill and that experienced kava mixers would add water to the kava depending on the colour of the drink.

In one large Tongan club it was suggested that a 2 kg of kava would last two hours for 25 people, this amounts to 80gms of kava per each two hour period. Considering that people often stay at a kava club for six hours this could be as much as 240g per person during a night. Similarly one of the smaller clubs commented that they would use around 2–3kg per night for eight people which equates to between 250g and 375g per person. Considering many men attend kava clubs twice or more per week it is safe to assume that drinking more than 400gms per week is relatively common. As described in Chapter 1 (page 3), 400g per week is considered ‘heavy use’ across the literature. In contrast a smaller club suggested that it would use 1.5kg per night for between 10–12 people, suggesting less than 150gms per person.

In considering how much kava is consumed in social situations (social gatherings among Fijians and at kava clubs for Tongans) the limited evidence from the current research suggests that more kava is consumed per occasion by Tongans compared to Fijians.
**Heavy kava use and intoxication**

Participants were asked what they understood kava intoxication and heavy use to be, and how common it was. In discussing intoxication participants explained that intoxication is characterised by people blinking a lot and slurring their words. Excessive use on an occasion was considered to be when someone had drank so much that they were unable to stand, participants suggested that this would take 9 to 12 hours of drinking. Responses varied as to how common and how accepted intoxication is. Comments ranged from:

Kava is about respect. Intoxication is not respectful.

to

I use it to get a buzz, have to get enough to get the right feeling.

However in general participants regarded severe intoxication as a rare, but not frowned upon or seen as a problem:

Goal is not intoxication, but that might happen as a by-product. On the whole people do not use it for the buzz. People drink for relaxation of the body and the mind. If they have too much in one sitting they will fall asleep, no harm done, there is no risk we will make sure that they are in a safe place.

When participants were asked what heavy use was the responses varied, some participants regarded using more than twice per week heavy use, others characterised heavy use as people who attend many kava clubs in one evening. The term ‘kavaholics’ was used by a number of participants to describe people who drink kava every day, it was reported that there were only a few of them in Sydney. Indeed, when asked if there were many people who used too much the majority of participants thought it was rare in Australia, but relatively common in Tonga and Fiji. One participant suggested that 90% of people in Australia use it in the correct way. As described by one female participant

There are people with a reputation, we call them grog swipers in Fijian community, they will drink most days till the early hours of the morning. We all know a few of these in the community. They are not held in high regard at all. They have yellow eyes, bad skin, red lips and look ugly! Good looking men don’t drink kava.

Finally several participants explained heavy use in terms of negative consequences of use, these were considered rare:

People in Perth work hard, hold jobs, for them they will do it socially, occasionally, while it has implications at higher doses, I don’t think you would see that in Perth.

Taken together these findings suggested that what is perceived as excessive use among Tongan and Fijian participants was considered as rare. These
findings are in contrast to the amounts of kava which are consumed which are consistent with definitions of heavy use in the literature. This discrepancy is important to acknowledge.

**Characteristics of people who use kava**

When asked about who uses kava four consistent themes emerged for Tongan participants, gender, religion, age and years in Australia. As previously described men are more likely to drink kava than women. As previously described different faiths in Tonga have different approaches to kava which has an impact on whether or not men use kava regularly. With age, regular kava use was regarded as more common among older people:

Kava is more important to older people. Younger people drink kava at important events where as older people drink socially as well.

It was also common to suggest that men born in Tonga would drink kava regularly, but second and third generation Australians would probably not.

I wouldn’t think that they (Australian born) do. People born in Australia don’t use as much. They prefer other things.

Adherence to culture was also mentioned as a factor which predicts kava use:

Some people spend their time the same as on the Islands, they spend all their time either with family or with the church, for those people there will be more instances where kava is present.

Finally, one participant also wondered whether kava was linked to socio-economic status and suggested that those in higher income brackets may be less likely to use kava.

Among Fijian participants, male gender and age over 25 years were common characteristics of people who use kava. Participants also emphasised personal taste, social group and family of origin as predictors of kava use.

**People who do not use kava**

Participants were also asked about men who do not drink kava. The key themes raised by Tongan participants were religious prohibition, having bad general health, having other things to do, not liking the taste of kava and wives preventing kava use. Many Fijian respondents explained that many men do not like to use kava at all because it is not part of their social circle or because they do not like the taste. Similarly one Tongan participant explained:
I don’t use kava, none of my family or social circle drink kava either.

Other participants did raise issues that men born in Australia may not use kava and men in professional positions would not have time to drink kava. These findings suggest that despite varying estimates of prevalence there is awareness among both the Fijian and Tongan population that many men do not use kava, and choose not to for a variety of reasons.

**Course of kava use**

The lifetime course of kava use was discussed with both focus group and KI participants. Among Tongan respondents the responses were consistent. Participants explained that both males and females may have sips as a child for medicinal use or for toasting at ceremonies. It was common to explain that male children would drink occasionally at ceremonies from the age of 16 years. For men who drink kava regularly the typical course of kava use reported was attending kava clubs occasionally during the 20s, then more regularly in the mid to late 30s. Others explained that regular kava use would only occur after marriage.

I remember toasting as a child, from 16 drank at ceremony and then came to kava circle after I was married.

At 16 to 25, young men are learning and starting to work, starting a family. It’s after that that most people start kava. At this time their roles in the family and the church have changed.

Several other participants suggested that course of kava use in Australia was also linked to a reduction in alcohol use as they grew older:

First came to Australia when I was a young man, drank lots of alcohol and only sometimes kava – in my 20s and 30s, now I drink only kava it is better for myself and my family. It keeps me away from alcohol

A similar pattern was used to describe the course of kava use among Fijians, who explained that regular kava use tended to emerge in the late 20s to 30s, and drinking at family events and ceremonies commenced at about 16 -18 years.

**Kava consumption and youth**

Kava consumption among young people is considered rare, as described by one participant:

Young people do not drink kava for fun. It is slow acting, bad tasting and takes time to prepare, there are no girls to look at. They may come to keep an uncle happy but most will not want to stay.

However, many participants reported that encouraging kava use was an important component of youth crime prevention and intervention, for example:

Kava can bring young people in; we can use kava to stop young people having troubles with alcohol.
We need to encourage youth to drink kava; this would be good for them. It would keep them out of bars.

When there are youth gangs, there is church and there is kava, this is how we help.

Police put pressure on the community and church to do something about youth crime so we run youth groups and we have kava. Lots of men think kava might be the answer to help. If we can bury kids in activities then they won't be on the streets.

One focus group described actively seeking out young people and bringing them in to kava clubs in an effort to keep them from being on the streets at night. Despite these widespread views other participants view the situation differently:

Kids need more than church to stop them going bad. Kava is not the answer either.

If you are 17 and finished school then ok, come to kava but not before.

Several participants also felt uncomfortable at the use of kava and kava clubs as a diversion technique. One participant explained:

We were aware that there was a youth group which was using kava to divert young boys on a night patrol, they argued that it was tradition – but I cannot see how it was tradition. Young boys don’t drink kava. It is not a good excuse to keep drinking kava and it is not an excuse to give it to kids under 18 without parental consent and when they have been drinking (alcohol).

The examples above demonstrate the desire and also pressure to help young people felt by many in the Pacific Islander community, but also demonstrates the limited options that many community members feel they have in tackling youth issues. Clearly more support is needed to assist youth groups and Church groups in providing harm minimisation and diversion strategies. At the current time kava use is consumed predominantly by men over the age of 18 years, however the use of kava as a diversion strategy for those under 18 years is concerning and warrants ongoing attention.

**Changes in consumption over time**

Participants were asked if kava consumption had changed over time. Consistent with the literature all participants reported that there had been increases in non-ceremonial use across the Pacific, in New Zealand and in Australia. These increases were described as both increases in frequency of kava use and increases in quantity of kava used per session. One Tongan participant explained:

When I was young Fai kava was only ever once a week and now it is every day.
Among Tongan participants these increases were accounted for by increases in kava use at Church and at kava clubs:

Clubs are better organised now leading to an increase in use and opportunities to use. The growth of organisations like Fofo'anga and the ease of using kava to raise funds in the community have meant that it is now normal to drink more.

Several participants, both Tongan and Non-Pacific Islander commented that kava use may be increasing because people are told that it is ‘better than alcohol’ and will prevent alcohol related harm.

Similarly Fijian participants commented that increases in kava use in Fiji was related to a rise in social kava drinking and the emergence of kava bars, whereas in Australia it was thought that little to no increase in use was occurring.

When asked if there were any changes in relation to the import restriction, it consistently emerged that the restriction occurred whilst kava consumption was growing and has little impact on how popularity is increasing.

**Kava and alcohol use**

When asked about the use of alcohol alongside kava use, all participants reported that in ceremonial kava use it would be disrespectful to kava and to culture to have alcohol at a kava circle. Further no participants reported the mixing of alcohol and kava within the same drink. It was suggested that most men who drink kava regularly would also drink alcohol on occasion, but they would be unlikely to use them together.

Several key themes emerged when discussing the use of alcohol and kava during kava clubs for Tongan participants. It was common among older participants and those drinking in religious kava clubs to explain that a key component of kava drinking is respect for the kava. They argued that to drink alcohol would be disrespectful to kava. Several focus groups reported that people would be turned away if they came to a kava club with alcohol; however a minority of clubs reported that it was accepted for people who don’t like kava to bring alcohol to drink at a kava club. In these situations it was considered unlikely to consume both kava and alcohol.

I would say more than 95% of people (Tongan) would not drink alcohol and kava together.

Interestingly the use of kava to manage alcohol intoxicated people also emerged. In two focus groups, participants commented that if young people arrived intoxicated from alcohol that they would encourage them to have some kava to help settle them down. One participant suggested:

Kava can counteract alcohol, it nullifies it, so we can give kava to people who drink too much.
Considering the literature, there is evidence that kava can potentiate the effects of alcohol. Consequently, this is a somewhat concerning finding, and suggests that there are opportunities for harm minimisation efforts within kava clubs.

In Fijian social settings it was more commonly reported that alcohol would be present at events where kava is consumed:

Some wives drink wine whilst husbands drink kava at a social function. People would also use both alcohol and kava on the same occasion:

Wash down is common, between one and three drinks but never before kava hand and not much more.

Having an alcohol ‘wash down’ was reported as a common practise by Fijian respondents, with most emphasising that people would be unlikely to have more than three drinks because kava and alcohol are both filling. Participants reported the use of wine and beer for wash down but not spirits.

Both Fijian and Tongan KI interview participants were asked if people ever went out to events serving alcohol after drinking kava, such as bars or nightclubs, all participants suggested that it was highly unlikely. They pointed out that kava is a different ‘vibe’ to alcohol and people would be unlikely to be in the mood to go out after kava.

Several focus group and interview discussions also discussed the value of kava as a measure to reduce alcohol related harm. Several participants suggested that Pacific Island people were violent when they drink alcohol and should be encouraged to drink kava instead. These responses were consistent with attitudes in the Pacific described in the literature which emphasise the importance of kava use to reduce alcohol consumption. Interestingly though some participants reported a downside of kava being used as an alternative to alcohol. One reasons given for why kava was not appropriate to address alcohol was that it does not address the underlying causes of alcohol use:

Swapping alcohol for kava, out of the frying pan and into the fire. It should be about moderation. Kava is not an appropriate or valid response to alcohol harm. Others argued that using alcohol to treat alcohol ultimately changes the meaning of kava, emphasising that kava has been part of Pacific cultures for longer than alcohol and should maintain a separate meaning.

**Poly-substance use**

Participants were also asked about poly-substance use. The majority of participants reported they had never heard of people using kava with other drugs. A minority of participants thought that cannabis may be used with kava although no participants reported firsthand knowledge of people using both substances.
**Access to kava**

KI interview participants were asked about access to kava under the import restrictions. KIs suggested that kava came either from the two kilo passenger limit or from accessing black-market kava. The emergence of black-market kava was also mentioned in focus groups and was a source of concern for many participants. Several KIs also commented that there are people at the airport who wait for planes arriving from the Pacific and New Zealand who try to buy kava from arriving passengers.

The majority of participants did suggest that it was still always possible to find kava, but that sometimes it would take time to do so and was now more expensive. Access to kava was thought to be easiest in New South Wales compared to other states. Further, it was thought that for people who use ceremonially or only occasionally it could be difficult to source kava when needed:

> We have to hunt for it sometimes in WA. If there is a funeral, important people in the community will need to find kava to present. We often have to borrow kava and then pay people back.

Participants reported that for people who need to source kava regularly, such as Church people, kava club organisers or family heads, that it would be quite difficult to achieve relying only on the two kilo passenger limit. The results suggest that most people have continued access to kava although it was sometimes difficult to source by legal means, and that it was likely that many people bought black-market kava.

**Cost of kava**

When asked about the cost of kava from the black-market in Australia reports from participants were largely consistent with costs ranging from $60 to $100 per kilo, with one participant suggesting that at one stage the cost had been as high as $60 for 500gms. In contrast under the previous licensing system kava cost approximately $30 per kilo.

**Kava quality**

Considering that a proportion of kava now comes from the black-market participants were asked if they had heard of any adulterated kava or problems with kava quality. Only two participants reported that they had had kava which had been cut by flour, but both described these instances as occurring prior to 2007. The majority of participants reported that they knew kava well and would be able to easily identify kava which had been adulterated.

Kava quality was an important topic for many respondents, the themes which emerged from these discussions was due to changes in production and cultivation practices in the Pacific and having limited choices in Australia. Concerns included that use of kava roots harvested too young, using inappropriate cultivars of kava plant, variability in methods used to dry kava
and a lack of standardisation in production. Taken together these findings suggest that Pacific Islanders in Australia have not had problems with poor quality kava as a result of black-market sales but rather there are overall concerns about the quality of kava which is being produced in the Pacific.

**Reasons for using kava**

In interviews and focus groups participants were asked what people liked about kava. Among Tongan participants the predominant theme which emerged was fellowship. Kava was seen as bringing men together socially to have conversation, tell stories, play music, and to pray. Fellowship was also seen as important to organise and facilitate community support for those in need or who have recently migrated. This theme of fellowship was particularly important in the context of migration stress and alienation which was discussed by many participants. Fijian participants commented kava was good for spending time with family.

The physiological effects of kava, particularly feelings of relaxation and calmness, were key reasons identified to drink kava by both Fijian and Tongan participants. These physiological effects combined, with fellowship was discussed by many:

> Kava is calmness, peacefulness and togetherness. It is a retreat no stress, and no burn out. Good company. This is why I have kava.

Another reason identified by a minority of participants was that belief that kava prevents harm caused by alcohol:

> Kava is cheaper than alcohol and not violent, so it brings families together.

Of note, very few participants reported that maintaining culture and cultural heritage as important individual reasons to use to kava. This is consistent with the reported increases in non-ceremonial kava use, and one participant suggested:

> Kava has a distinct ceremonial value, however much use is now linked to individual and group anomy, serves as a function to bring people together and reaffirm identity.

**Cultural value of kava use**

The cultural importance of kava has been considered in policy decision making and is worthy of further exploration. Across all three groups the importance of ceremonial kava use and formal kava use to maintain culture and heritage was emphasised. For example, many Tongan participants recited the Tongan myth around the origin of kava and described the use of kava at the coronation of the King to emphasis kava’s importance to culture. Similarly, Fijian participants described the presentation of kava during ceremony and important events as defining characteristic of Fijian life. In
discussing the cultural importance and value of more social forms of kava use important differences emerged between regular kava drinkers and non-kava drinkers. This difference was most pronounced for Tongan participants.

The central themes presented by regular Tongan kava drinkers were that kava is a central institution to keeping society strong and maintaining values, many participants referred to kava as their ‘heritage’. Participants made such comments as kava being ‘training in culture’ and kava clubs being a place to learn tradition from older men. Participants described singing songs and stories as important parts of kava clubs which served to maintain and support culture. This was seen as particularly important in maintaining male aspects of culture and values. For example:

We talk about the past. There are people in Australia who don’t know about their island, where they come from. You can learn this at kava. These things are not written, they are not at school, they are not at Sunday school, we get a bit lost in European culture, at kava we learn.

In contrast male and female Tongan participants, who did not drink kava regularly, described the relationship between regular kava consumption and culture differently. Many comments emerged around the theme that ‘culture’ was not easy to define and not a good enough reason for regular consumption; participants reported frustration that regular kava drinkers used culture to justify regular use.

People can get away with doing whatever they want by calling culture. I have culture, but I don’t have kava!

I believe I can teach my kids myths legends stories without kava.

Women are left with the young children because of kava; it is difficult to say that kava upholds culture when all young children learn is that dad isn’t home because of kava. It is the responsibility of the women in that case to teach culture.

It quite simply is not the only part of our culture, yes it has value in passing on stories and conduct and status and to formalise events, but you don’t need it every night of the week to do that.

Another theme which differed between participants was how regular kava consumption was aligned with ceremonial and cultural kava use. Whilst some participants felt that regular kava consumption upheld traditions others felt that it undermined ceremonial kava use and the importance of kava:

Kava is no longer special. That should bother people. They argue it is for culture but want to have it every night. That is not culture.

For Fofo’anga kava clubs this debate is felt differently, some participants explained that the Fofo’anga movement was part of the democratization of kava use and of status, and seen as a place where Tongan men could come and be equal without the pressures of status and rank. Despite this other participants explained that now prayer is integrated into some Fofo’anga, and with that there are changes in nature of Fofo’anga. One participant explained:
Fofa’anga is popular to escape the strict structure and order in Tongan society – but it is now a mechanism for that.

These discourses within the Tongan community are not all central to the present research and terms of reference, however it is important to recognise the complexity of the issue and the diversity of opinion. From the data collected though it appears that although there is debate as to the role of kava clubs in maintaining culture. For many people kava clubs provide a means for cultural transmission whereas others feel the regular use of kava undermines its significance. Regardless of this debate ceremonial kava use is regarded by most Tongans as an important and sacred part of culture.

Opinions among Fijian participants were less diverse. While most participants felt that kava was important for some people, all emphasised that you can be Fijian without drinking kava regularly. People who drink kava socially commented that they saw their recreational kava use as something that they enjoy and value, but that ceremonial and family kava use was important for culture. In addition several participants emphasised the distinction between the use kava as symbol in Fijian life and kava consumption. As described by one participant:

Presenting kava is important in Fijian culture. You may not drink it yourself but you will present it for welcoming visitors or for funerals or making peace with someone.

Similarly, for Samoan participants kava was regarded as an important part of cultural, particularly for men and in acknowledge when men achieve higher rank. In this way kava was regarded by participants as integral to reinforcing and remembering traditional practices.

Kava clearly has important cultural value across the Pacific communities in Australia. While there is active debate within the Tongan community as to whether that cultural value extends to kava clubs, it is clear that for the vast majority of people that kava is a component of maintaining cultural identity in Australia.

Consequences of use

Participants were asked about the consequences of kava use, both positive and negative, these are summarised below in terms of consequences for health and consequences for family and social wellbeing.

Health

Overall the general consensus among participants was that kava causes little serious harm to health, with many participants reporting that kava had no negative effects on health. The most commonly discussed negative effects on health were the effects of kava on skin, bad breath and sleepiness following kava. Participants reported that these would only occur among people who use kava frequently.
Several participants commented that prolonged use was unhealthy, and that heavy kava users were unhealthy people.

My husband drank way too much for a while, he had bad skin and he felt terrible. He needed a break.

Kava drinking practices were also thought to contribute to poor health among kava users:

There are some general health problems. If you sit in one place all the time and do not eat well, and do that a lot then yes you will be unhealthy.

Other kava drinking practices which were thought to impact on health included concerns about the amount of sugary foodstuffs that were consumed with kava. This was a concern for several participants who highlighted the high rates of diabetes which exist among Pacific Islander peoples. The use of lollies and soft drinks, in particular the use of energy drinks is a wide spread practise. This is partly due to the taste of kava and numbing sensation of the mouth which are both offset by sucking on lollies. The Tongan myth about the origin of the kava plant, which was widely discussed among Tongan participants, links the sugar cane and kava plant and it is regarded as customary practise to eat or drink sweet things whilst consuming kava. A number of men also reported drinking energy drinks to try to hold off the drowsy effects of kava and also for sweetness. The effects of the consumption of energy drinks and kava are not understood however it is an area of potential harm which requires further investigation.

A further problem identified was the effects of poor hygiene practises at some kava clubs and social gatherings. One participant reported experiencing a serious kidney infection that was thought to have been caused by unclean kava drinking vessel.

The positive consequences of kava on health described by participants were the effect of kava on sore muscles following labouring work and playing sport.

While it is important to recognise the limitations in the current data, such as the possibility that focus group participants were prone to not report negative kava consequences, it is important to acknowledge the more serious negative consequences described in the literature including seizures, and liver problems were not discussed by any participants.

**Social and family wellbeing**

When discussing if kava has social effects three key themes emerged: the effect of kava on employment, finances, and family time and relationships.

With regard to employment, participants consistently reported that they were not aware of people in Australia drinking so much kava that they had lost employment. As expressed by one participant:
Kava does not cause people to lose their jobs, but people who drink too much kava usually don’t have work.

Despite this several participants did express concern that lethargy after drinking kava may cause people to have limited job prospects or opportunities for advancement.

Overall financial impact of kava were considered minimal, several participants reported that kava could be expensive and ‘hurt the wallet’ however the majority of discussion around cost of kava centred on the observation that drinking kava was cheaper than alcohol.

The effects on family and relationships of spending time at kava and time the following day recovering from kava was the most discussed negative effect of kava use. For example:

- Health not a problem, not affected, but if you have too much then family will be frustrated with you.
- Families are neglected because of Church and kava; they take up too much time’
- Time and money are precious resources to be wasting on kava.

For many Tongan women the impact of kava on family life and role obligations was linked to clashes between the changing roles of women and regular attendance at kava clubs:

- Women used to be at home, they would get all the chores done during the day, now if they work, they need help at home and they don’t get it because men are at kava. In Tonga, women are not allowed to complain about the men if they drink all night and day, but in Australia we have rights and we can complain.

Women also reported frustration at men using culture and kava as an excuse for escapism:

- Is investing your time not with your family, but spending it with the woman who serves kava culture? No.
- Women say there are problems with kava, men say would you rather I was at a pub drinking? Women say no! We would rather you were at home.

Arguments about time spent drinking kava was discussed by many participants but was not a concern for all. One Samoan participant commented:

- I have never heard of a Samoan woman complaining that her husband drank too much kava.

In addition, there were men and women talked of negotiating with their spouses how many nights a week it was suitable to attend kava clubs. Despite this it is important to recognise that several participants in focus groups were frustrated by questions related to social harm arguing that kava does not cause social harm:

- Problems people think are about kava are really human frailties, human arguments and discussions which can occur in many contexts. Women should
be asking why does my husband prefer to spend time at kava than with the family? not blaming the kava.

The effect of kava on domestic violence was also discussed by several participants; participants working in health and wellbeing sectors pointed out that families rarely if ever come to the attention of services or ask for help because of kava drinking. Several participants argued that kava use was a measure to prevent domestic violence because it meant that men were not drinking alcohol, however this was a contentious issue and comments ranged from:

Kava is good for families because men don’t drink alcohol so there is less violence

Some people say kava prevents DV (domestic violence), if kava prevents it then it is because people are sedated. Is that really a cure for violence in the home?

In summary, from the interview and focus group data it was clear that many people saw kava drinking as a causal factor in family disruption and men not spending much time at home with family. The effects of kava on employment and finances were considered rare or minimal.

**Driving after kava use**

Considering that previous research in Australia has indicated that many men who drink at kava clubs drive home (Maneze, Speizer, Dalton, & Dennis, 2008) participants in KI interviews and focus groups were asked if they thought kava affected driving and if it was common to drive after recreational kava use (social gathering or kava club).

It was commonly reported that the majority of men would drive after drinking kava, further the majority of respondents reported that driving after kava drinking was safe and they did not think that kava would impair driving ability. However, several men conceded that there may be effects but they are aware they would not get in trouble so they always drive; and one participant reported that if you are too tired and too relaxed that driving would not be very good.

Driving after consuming kava is a common practise and very few respondents felt that it was an unsafe practise. More research is clearly needed to identify what potential risks exist if driving under the influence of kava.

**Knowledge and attitudes to kava related harms**

Participants in the KI interviews were asked if they thought the effects of kava were well understood in the community. The most common response was that
people felt they were poorly understood. Many participants reported that they had heard certain rumours about kava but were not sure what it really did for example:

When someone dies, you know sometimes that we say that one drank too much kava all his life, we know that, but we don’t know exactly what has happened.

I have heard it is bad for the appetite, but I don’t see many skinny Tongans so I don’t know what to think about that.

I have heard that it isn’t good for the kidney or liver but I don’t know for sure.

I don’t think people know what harms it causes they just know that it is better than alcohol.

Many participants also reported that they were aware that kava had caused problems in the Northern Territory for Aboriginal people, however very few people were aware of what those problems might be, and there was much scepticism about media reports and research which described harms. Many respondents suggested any problems in the Northern Territory could be alleviated if people were taught how to use kava properly by Pacific Islanders, with the suggestion that proper kava use does not cause harm.

In addition many participants acknowledged that kava use was causing some harm in the Pacific, and that heavy kava use was emerging as a health concern. One participant explained:

In my village in Fiji, there was too much kava, now the chief has put a stop to kava going beyond 10.30pm to stop people having too much, if people drink too much then whole family have to go to a meeting.

Whilst participants felt that overall people did not understand have a good understanding of kava related harms, the results are not surprising considering the complexity of the literature and the lack of health promotion regarding kava.

Attitudes to kava related harms were mixed. Respondents explained that many people in the community were very defensive about kava, partially as a consequence of the ban; therefore they were not interested in harms or denied that there could be harms. Indeed one presenter at the conference commented that ‘Kava causes no harm’.

Effects of kava use are also not considered to be indicative of harm; it was proposed by some that the potential for harm was often dismissed by kava drinkers. One female respondent commented:

Many men think dry skin means borrow the wife’s moisturiser not that I am drinking too much kava’.
Attitudes to potential kava related harms are also likely to be influenced by the attitude to kava from people’s country of origin. Across the Pacific kava use is often encouraged and there is rarely public discussion about kava and health. It is not surprising then that attitudes to kava related harm are largely dismissive. As explained by one respondent:

The challenge is how harm is framed; people are very alarmed at alcohol. They have learnt that illicit drugs make you crazy and alcohol makes you violent, harms associated with kava are not regarded in the same light.

**Individual harm minimisation practises**

Although many participants described that kava use did not cause harm, a common theme which emerged in KI interviews was adherence to the ‘proper ways’ of using kava. Participants in focus groups were asked if they did anything to stay healthy when drinking kava. The majority of participants explained that kava should only be drunk after the end of the working day; a meal should be eaten before and after kava to prevent nausea and help with sleep, and to always sleep after drinking kava. Other responses emphasised that it was important the day after kava to drink a lot of water and to work hard or exercise because sweating helped clear the kava from the body and help the skin. As summarised by one participant:

Traditional knowledge prevents harm, drink after work, your body needs to rest after drinking kava, you need to drink water, you need to work and sweat the next day.

Responses to this question emphasised that although many participants did not regard kava as causing harm the majority of people who drink kava do tend to drink kava in ways that are traditionally thought to minimise harm.

**Treatment and intervention**

There was awareness among the majority of participants that there were, although rare, people in the community who are use too much kava – described as ‘kavaholics’ or ‘grog swipers’. Considering this participants were asked if they thought there were treatment and intervention options for people who may need help with kava.

The majority of respondents reported that if someone was using too much kava they would be helped by family, the Church, or for Tongans – by a kava club:

There is no treatment for kava use that I know of. If someone was having too much, being trouble, you would send them away to other family members for a while.

If there was someone at the circle who was having too much we would tell them to have a break from it.
Churches were described as the most probable place for people to get help. One respondent explained:

Church is the best place for treatment, and people who are worried will go to the church.

In Catholic Church, there is a pioneer, a minister, they will give a person a badge and they would have to stop drinking kava for a period of time set by the minister. In Methodist church a minister could announce that a person has a restriction against drinking kava, a tambu, people respect this and will not serve that person kava.

No participants suggested that a drug and alcohol, health or welfare service, either mainstream or culturally specific, would be a place for someone to go if they were worried about kava use. These findings demonstrate that any individuals who may want or need assistance for kava use are likely to seek that assistance from family or the Church, or be recommended by a kava club to not attend for a period of time. It is not clear from the interviews or focus groups how often these mechanisms are used and how often people request help for using kava.

**Knowledge and impact of the import restrictions**

**Knowledge of current laws**

Participants were asked about what the current laws in Australia were, the majority of participants reported that they were aware of the ‘2 kg limit’ however the laws were often referred to as ‘the kava ban’.

**Introduction of the import restriction**

Participants were asked how they learnt of the import restriction and their understanding of what the law was for and the meaning of the laws for the community. In discussing how the change in laws were communicated participants reported that license holders were notified by mail of the import restriction in 2007, however most participants reported that the community learnt of the changed laws when they tried to buy kava or when they arrived at the airport with quantities of kava greater than 2 kg and had it confiscated. Many participants reported that the broad sentiment in the kava using community was one of frustration and confusion as they had not been aware that the import restriction was even being considered. This lack of communication was also a persistent theme in discussing the content and meaning of import restriction for Pacific Islanders.

Participants reported that many in the community were angry that the laws had been changed with no consultation or discussion with Pacific Island groups. An important comment made by several participants was that they were unsure of what the goal or the purpose of the import restrictions was. Not surprisingly this lack of information provided to Pacific Island groups has resulted in speculation among the community as to the motivation for the change in laws.
In discussing the import restriction in focus groups there were mixed responses and active debate. Several respondents argued that the law was racist and aimed at marginalising Pacific Island peoples whereas other participants felt that the law was a consequence of Pacific Island people being overlooked and ignored by politicians. Regardless of the viewpoint the implication was the same for many participants:

Australia doesn’t respect us.
Are they questioning the value of our culture?

Other participants were aware that kava had been linked to health problems among Aboriginal people in the Northern Territory and felt that Pacific culture as well as kava was being blamed for broader social issues facing Aboriginal people:

They are blaming what happened to Aboriginal people on us, it was political. There is more than kava that causes problems for Aboriginal people.

In focus groups discussions about the import restriction and the lack of a rationale presented to the community for the laws typically lead to participants comparing alcohol and kava, and arguing that kava does less damage than alcohol but alcohol is allowed:

Kava is nicer than alcohol, it is cheaper, people are less violent and they can drive better but they ban kava?

For some participants there was also suspicion that the import restriction had been instigated by the alcohol industry. Clearly the lack of communication and consultation about the laws has had a range of negative effects on the Pacific Islander community. The lack of justification or explanation left people feeling alienated, for some it lead to feeling persecuted and for others it was an example of being undervalued and ignored in Australian society. It is important to recognise that in no interviews or focus groups did participants consider that concern for kava related harm in Pacific Islander communities was a consideration in import restriction.

**Impact of import restrictions**

The impact of the import restrictions was discussed with all participants, common impacts discussed were the emergence of the black-market, the impact on community events and the impacts on consumption.

The emergence of the black-market and the impact of engaging in the black-market was a key theme for Tongan participants. Participants expressed concern that the black-market was not good for kava. One participant explained:
Kava used to be imported but not for money – now the only people who bring in kava do it for money, this is not a good thing, this is not respect for kava.

Other participants expressed concern that the emergence of black-markets meant that ‘good people’ and ‘church people’ had to engage with irresponsible people at times to ensure access to kava.

When asked about impacts on consumption, the consensus was that the restrictions had not impacted on overall social and church consumption, but rather impacted access to kava. As previously discussed it was generally argued that kava consumption is increasing and some suggested that the kava import restrictions had possibly served to slow the increase. Several smaller kava clubs reported that they would prefer to be open more nights per week, but that it was not possible considering difficulties in sourcing enough kava. Similarly, several Fijian participants explained that for occasional social drinkers they may drink less or drink kava more weakly. In contrast the larger kava clubs reported increases in participation despite the import restriction.

The impacts on ceremonial kava use were variably described with some participants saying that they continue to occur regardless of the laws and others suggesting that some more conservative people are not using kava ceremonially because they are unwilling to access black-market kava. A common theme that emerged when discussing impacts of the import restrictions has been the disruption to public ceremonial kava use. Participants described events in both Cairns and Canberra in which Pacific Island groups were invited to participate in community cultural events or multi-cultural festivals to then be asked at the events to not drink or share kava and, in the case of one festival, have police arrive to enforce the disposal of kava. This has been described as humiliating and disrespectful by a number of community members:

They invite us to show our culture but then tell us which bits to show. Do we have to hide our culture? Why should they get to choose?

In addition to the above examples a Samoan participant expressed great embarrassment when kava was confiscated from a group of volunteers invited to present a cultural day at a juvenile prison. The import restriction may have affected some ceremonial use yet has had little demonstrable impact on the recreational use of kava. There is some possibility that the restrictions may have slowed increases in recreational kava use by making kava more difficult to access, however this did not appear to be the case for larger clubs. It appears that the greatest impact of the import restrictions has been the emergence of the black-market and the impact on Pacific Islanders’ experiences of their culture being accepted and respected in Australia.
**Alternative frameworks for the regulation of kava in Australia**

Participants in the Ki interviews, the focus groups and many of the conference presentations discussed opinions of the current regulations and alternatives to the current regulations. The majority of participants reported that they were not happy with the 2 kg import restriction. As explained by one participant:

> Two kilograms is not enough. It means that only people who are rich enough to travel can get kava regularly and legally.

When asked about community opinion towards kava regulation, Samoan and Fijian participants reported that there was little debate in the community. Several Fijian respondents commented that Fijian people are flexible people and relaxed and that the kava laws were not a major issue in the community:

> We adapt, we are OK with the laws. I guess some people get frustrated that it can be hard to find, but there isn’t much of a debate.

In contrast among Tongan participants the issue of kava regulation was important to a significant proportion of respondents, although a several participants were frustrated at the time and effort put in to the kava debate when there are a range of issues facing Tongans in Australia. Whilst the majority of respondents in the current study did not support the import restriction it is important to acknowledge the comments of several participants who emphasised the diversity of opinion in the Tongan community and the possibility that some people may not feel comfortable to speak openly about kava:

> There is great diversity of opinion, you will hear many people say they oppose it but privately many women want it upheld and enforced.

Others explained:

> People are scared to speak against kava because it is important to the culture and church. They feel they can’t complain.

When alternative regulations were discussed the majority of participants suggested that a total ban would not be good for the community, because it would prevent ceremonial kava use and result in a further expansion of the black market. A consistent theme when discussing laws was participants arguing that they would prefer to buy kava than to ‘source’ it, and that if the laws were more reasonable that more people would follow the laws. A respondent commented:

> People want to buy kava from a shop, they do not want to break the law, they want to do the right thing.
While several participants argued that kava should be freely available as it is in New Zealand, many participants reported that the previous kava import licensing system or a larger import restriction would be better for the community.

Several participants suggested that a larger allowable amount under import restriction would satisfy peoples need for kava. One Fijian respondent commented:

An increase to five kilos allowed would be a good thing, because then we could choose which kava we want to buy and bring back a decent amount. There are not good standards for kava; commercial kava is often not good. When we buy it ourselves we can be safe. I don't think freely available is a good thing. You would not want it to be freely available or get into the wrong hands. But at two kilos the balance is not right.

Other participants suggested that relying on passenger imports would not prevent the black-market and suggested that a properly designed import system would be able to provide a balance enabling kava but preventing black-market kava and over use. One conference presenter suggested that a regulation should consider all steps of kava import and sales including the quality issues at point of kava origin, importation regulations, distribution procedures by licensed providers, control measures (trading hours, quantities consumed etc.) and monitoring and evaluation. The presenter argued that proper importation and control measures would enable ongoing and safe use of kava.

The lack of vigilance around the current, previous and future laws was also a common theme, with several participants describing that the lack of monitoring of the laws meant there was little effect on people. For example several participants reported that under the previous licensing system licence holders were never checked for compliance. With respect to the current import restrictions several participants commented that they appeared to unmonitored. For example:

There is supposed to be a restriction right? Then why do I have cousins that drink every night and cause trouble for their wives?

I am not sure what changing the ban will do, people get kava all the time now when there is a ban. I do not see that it has affected supply that much.

In considering participants opinions on the current and alternative regulation frameworks it is important to acknowledge that the current system is not regarded positively by the majority of participants, further those who are in support of the restriction do not regard it as successful at reducing kava use. Whilst not in favour of the current restrictions many participants acknowledged the need for some rules and monitoring of kava to be important.
5.3 Questionnaire results

Questionnaire methodology was employed to assess frequency and quantity of kava use and perceptions of kava related harm in more detail and to triangulate the data obtained from the qualitative component of the research. Two kava questionnaires were developed for the current study adapted from the measures used in Vanuatu by McDonald & Jowitt, 2000, one questionnaire was for kava users and the other for non-kava users. The questionnaire for kava users was a 33 item questionnaire, whereas the questionnaire for non-users was a 23 items. All participants were asked demographic questions, questions about ceremonial kava use, consequences of kava use, changes in kava use over time and alcohol use. Drinkers were asked about frequency, quantity of kava use, context of kava use and reasons for drinking kava. Non-drinkers were asked about their reasons for not drinking kava.

Thirty four participants were recruited from interviews, focus groups and snowball sampling at the latter stages of the key informant research, 50% of the participants had also participated in the qualitative research. The sample is thus a convenience sample and is not considered representative of Pacific Islanders in Australia.

Demographics

Participants were 86% male, aged between 26 and 55 years, the average age bracket endorsed by participants was 36–45 years. Participants were Fijian (23%) and Tongan (77%) with 94% of participants not born in Australia. Participants were recruited from New South Wales (32%), Victoria (7%), ACT (18%), Queensland (27%) and Western Australia (16%). The sample included 9 non-drinkers and 25 drinkers. There were no female respondents who reported drinking kava regularly. Among kava drinkers, 92% were married and 70% reported having children at home under the age 18 years. Non kava drinkers were asked if they had ever drunk kava regularly in the past, no participant reported that they were ex drinkers.

Kava use

The following findings are from the participants who completed the kava users’ questionnaire. Participants were asked the first age they tried kava and when they first started drinking regularly. First age of kava use ranged between 7 and 16 years and the mean response was 13 years. Age of regular use ranged from 19 years to 40 years with an average age of 31 years. These findings are consistent with the qualitative reports.

Usual frequency of kava use is presented in Figure 5.1 and demonstrates the majority of that reporting regular kava use, use at least weekly, which is consistent with the qualitative findings. Usual quantity of kava consumed is presented in Figure 5.2 where a ‘shell’ is half a coconut shell of approximately
150–300 ml. The results show that a majority of participants who drink regularly drink more than 12 shells per night. A weakness of the current questionnaire was the lack of response options at higher levels of use.

![Figure 5.1 Usual frequency of kava use](image1)

![Figure 5.2 Usual quantity of kava used.](image2)

Participants were asked how often they drank at a range of contexts on a five point scale ranging from ‘most of the time’ to ‘never’. The results are presented in Figure 5.3 and demonstrate the variability of kava use contexts. On closer
examination of the data, and consistent with the qualitative analysis, Tongan participants endorsed drinking at kava clubs and Fijian participants reported drinking more frequently at social gatherings and family events. The results suggest that those who drink kava are likely to do so more often in modern environments such as social gatherings, church functions and kava clubs compared to ceremonial events.

Figure 5.3 Usual contexts of kava use

Participants were asked how many people were usually present when they consumed kava; the most commonly endorsed item was between 5–10 people (54.5% of respondents). No participants reported drinking by themselves. When asked about the composition of kava drinking groups Tongan and Indo-Fijian participants reported drinking only with men, however and one Fijian participant reported drinking in a mixed group, which is consistent with the qualitative data. Participants were also asked how long they spent drinking kava per occasion; the results are presented in Figure 5.4, and demonstrate that most participants drank for between four and eight hours per occasion.
Eating drinking and driving after kava use

Participants were asked about eating, drinking and driving in the context of alcohol use as these were identified as potential harms associated with kava use. Eighty-two per cent of kava drinkers reported driving after using kava.

No participants reported not eating or drinking before or after kava, 90% reported eating before kava and 80% reported eating when they arrived home. These results are not consistent with harms reported in the literature from Arnhem Land that kava use is related to appetite loss and low consumption of food. However, 80% reported eating lollies and sweets and 64% reported drinking caffeinated soft drinks and energy drinks while consuming kava. These findings are consistent with concerns from the qualitative data that high levels of sugar are consumed with kava.

Reasons for using kava

Participants who completed the kava drinker’s questionnaire were asked to rank how important a list of reasons was for them personally as reasons to drink kava. Participants were asked to rank their top four reasons. The most commonly endorsed primary reason for drinking kava was ‘to meet up with family and friends’ and the second most popular response was ‘I like the effects to feel more relaxed’. Other reasons endorsed included to meet new friends, to keep away from alcohol, with only one participant endorsing to keep culture strong as a primary reason. To keep culture strong was endorsed by only 30% of participants as one of the top four reasons and tended to be listed as the fourth most important reason. In all, the most commonly endorsed reasons across the top four were ‘I like the effects to feel more...
relaxed’, ‘to meet family and friends’, ‘to find out news’, and ‘to get out of the house’. Only three participants endorsed religious service as an important reason for using kava, despite occasional use at church reported by many participants. Taken together these findings demonstrate that at an individual level the social situation and physical effects of kava were the primary reasons for kava use.

**Reasons for not using kava**

Participants who did not drink kava were asked how important a list of reasons for not drinking kava were to them personally on a five point scale from ‘very important’ to ‘not at all important’. The items most commonly endorsed as ‘very important’ were items denoting a lack of interest in kava related activities ‘I am not interested in drinking kava’ (70%) and ‘I do not have time to drink kava’ (55%). Other reasons listed as important were ‘Religious reasons’, ‘I do not like the effects of kava’ and ‘I do not like the taste of kava’. ‘Kava is too hard to get’ was endorsed as ‘not at all important’ for all participants.

**Ceremonial kava use**

Participants who did not drink kava were asked if they drank kava occasionally for ceremonial reasons, all participants stated that they did. Thirty three per cent reported that they drank kava once a year or less and sixty six percent reported that they drank kava between 1 and 4 times per year.

**Consequences of kava use for health and social and family wellbeing**

All participants were asked if kava can affect health and social and family wellbeing. Participants were provided with a list of possible consequences of kava use and asked to endorse as many as they thought applied. Responses for health consequences are presented in Table 5.4 (page 177) and responses for social and family wellbeing are presented in Table 5.5 (page 177).
Table 5.4 Participants’ beliefs about the effects of kava on health

<table>
<thead>
<tr>
<th>Belief</th>
<th>Per cent of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>It can make you lazy the next day</td>
<td>87%</td>
</tr>
<tr>
<td>It makes people eat less</td>
<td>0%</td>
</tr>
<tr>
<td>It makes people nauseous</td>
<td>14%</td>
</tr>
<tr>
<td>It is bad for the liver</td>
<td>21%</td>
</tr>
<tr>
<td>It gives people bad skin</td>
<td>43%</td>
</tr>
<tr>
<td>It gives people watery eyes</td>
<td>43%</td>
</tr>
<tr>
<td>It can cause people to get sick more often</td>
<td>21%</td>
</tr>
<tr>
<td>It is good for the stomach</td>
<td>14%</td>
</tr>
<tr>
<td>It is good for pain and sore muscles</td>
<td>36%</td>
</tr>
<tr>
<td>No kava does not affect health</td>
<td>21%</td>
</tr>
</tbody>
</table>

Table 5.5 Participants’ beliefs about the effects of kava on social and family wellbeing

<table>
<thead>
<tr>
<th>Belief</th>
<th>Per cent of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>No it does not affect family life</td>
<td>31%</td>
</tr>
<tr>
<td>Yes it takes money away from the family</td>
<td>31%</td>
</tr>
<tr>
<td>Yes families spend less time together</td>
<td>46%</td>
</tr>
<tr>
<td>Yes it causes conflict in the home (because of time/money spent at kava)</td>
<td>46%</td>
</tr>
<tr>
<td>Yes it prevents violence in the home</td>
<td>23%</td>
</tr>
<tr>
<td>Yes it gives husbands and wives something to drink together</td>
<td>0%</td>
</tr>
<tr>
<td>Yes it gives husbands and wives time apart – which they need</td>
<td>23%</td>
</tr>
</tbody>
</table>

As described in Table 5.4 the effects of kava on skin, eyes and feeling lazy were recognized as consequences of kava use, a significant proportion of participants also recognized that kava had a positive effect on muscles and pain. Important to also acknowledge that almost a fifth of respondents felt that kava had no effect on health.

As described in Table 5.5 almost half participants identified that kava impacted on time spent with families and contributed to family arguments. The findings presented above are consistent with the qualitative data and demonstrate that although participants identify that kava can affect health and family wellbeing, with the exception of feeling lazy after kava, these effects are reported by less than half the participants.
When asked ‘do you think if people who drink kava have a good understanding of the effects of kava on health and family life?’ 57% of respondents said ‘no’.

**Alcohol use**

Both kava drinking and non-kava drinking participants were asked if they drank alcohol; 61% of kava drinking and 55% of non-kava drinking participants reported drinking alcohol. Participants were also asked how often they drank alcohol and how often they drank more than five standard drinks in a sitting. The results are presented in Figure 5.5 and Figure 5.6 (page 179). Whilst the sample sizes are very small in the present study the results suggest that there is very little difference in patterns of alcohol use between kava drinkers and non-kava drinkers.

![Figure 5.5 Frequency of alcohol use by kava drinkers and non-drinkers](image-url)
Kava drinking participants were also asked how often that drank alcohol and kava on the same occasion on a five point scale (‘most of the time’ ‘often’ ‘sometimes’ ‘rarely’ ‘never’). A small minority reported drinking alcohol before kava rarely (12%) and 20% reported drinking either sometimes or rarely after kava. On inspection of the data these participants were Fijian, which is consistent with the qualitative data describing the practise of drinking a small amount of alcohol at the end of a kava drinking session. When asked how often kava and alcohol were consumed at the same time or mixed in the same drink all participants reported ‘never’.

**Changes in use over time**

All participants were also asked three questions assessing their opinion of changes in kava consumption in their community. The results, presented in Table 5.6 (page 180), are consistent with the qualitative findings and suggest that most participants regard kava consumption as having increased, being used in a different way than traditionally. Further the results demonstrate that the majority of participants regard the import restriction as having little effect on consumption.
Table 5.6 Changes in kava use over time

<table>
<thead>
<tr>
<th>Change</th>
<th>No</th>
<th>Yes, increase</th>
<th>Yes, decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>In your community, has how much kava people drink changed in the last 10 years</td>
<td>16%</td>
<td>82%</td>
<td></td>
</tr>
<tr>
<td>Do you think kava is used the same way now as it was traditionally</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do you think the import restriction has changed the amount people drink</td>
<td>93%</td>
<td>7%</td>
<td></td>
</tr>
</tbody>
</table>

5.4 Summary

Taken together the results of the qualitative and questionnaire data provide a description of kava use among Pacific Islanders in Australia. Whilst it is important to acknowledge that Tongan males who drink kava regularly were over-represented in the sample, the findings do allow for some overall conclusions to be drawn. In considering the findings it was important to recognise that kava use occurs within a broader experience of being a Pacific Islander in Australia. Specific issues such as migration stress and adjustment to life in Australia, changing gender roles, and challenges of youth crime and incarceration were key themes that emerged in discussions about kava use.

Prevalence of kava use was difficult to estimate from the data however, both the qualitative and questionnaire data suggests that the majority of Pacific Islanders in Australia use kava ceremonially, this may involve drinking kava, presenting kava or being present during a kava ceremony. Ceremonial kava use may occur on several occasions throughout a year and prevalence appears higher among newer arrivals to Australia. In understanding patterns of kava use, three patterns tended to emerge: those who use only ceremonially, those who use ceremonially and socially, and those who use ceremonially, socially and/or for church. The use of kava in a church context is limited to Tongan men. Whilst women may participate in ceremonial kava use, the use of kava by women in the Church and social settings is regarded as rare.

From the data collected, the prevalence of social and church use among Samoans in Australia is very low. Patterns of social kava use differ greatly among individuals, the findings suggest that although there are a small proportion of Fijians who use several times a week or more, the majority of Fijian kava drinkers consume kava occasionally, with many suggesting that a common pattern of use is once a month. In contrast, social kava use among Tongan males is higher. Many respondents suggested that for those who use kava socially a common pattern would be between one and three nights per week at a kava club. However this figure was variable with many users attending clubs only periodically and others attending a club most nights per week.
Kava use by Pacific Islanders in Australia takes place in a range of contexts; the most common of these contexts can be summarised as:

**Ceremonial and Formal:** Important to Tongan, Fijian and Samoan participants ceremonial and formal kava use was described as a ritualised practise to formalise events (e.g. weddings, funerals, family discussions) and as part of celebration (e.g. welcoming visitors, celebrating National days).

**Social:** Described as important to many Tongan and Fijian males. The social context of kava use for Tongan males tends to occur in organised kava clubs which may secular or Church organised. There are at least 80 kava clubs operating in Sydney. Fijian social kava use tends to be in less formal social gatherings among friends or family. The vast majority of social use occurs in the evening and at night and not during the day.

**Church:** For some members of the Christian denomination Churches, particularly Free Wesleyan and in culture specific (Tongan) congregations of the Uniting Church kava is used within Church service.

In examining quantities of kava used per occasion the findings suggest that in ceremonial and church contexts kava only small amounts of often weak kava is used. In social settings the data from the current study suggests that most people consume more than 12 shells (cups) of kava per occasion, and a sizeable proportion consume greater than 25 shells per occasion; where the average kava drinking occasion will last from 6–8 hours at Tongan kava clubs and less for Fijian social gatherings. In examining quantities of kava powder consumed during kava clubs and social gatherings the findings suggest that it is common for participants to consume upwards of 200 g of kava per occasion. This finding requires further research and clarification, however it does suggest that use at the levels identified in the literature as ‘heavy’ and ‘very heavy’ (e.g. Mathews et al., 1988) would be common among regular social kava drinkers in Australia.

The findings suggest that commonly experienced health related harms caused by kava use were dry skin, irritated eyes and tiredness the day following kava use. Many participants reported that heavy kava users were ‘unhealthy’, although this was difficult to define. Importantly more serious health consequences such as seizures and liver problems were not mentioned by participants. Heavy use and the potential for addiction were recognised among participants however the prevalence of people using at high levels was considered very low. Potential harms related to the way in which kava is consumed were also noted and include: sitting for long periods of time, consequences of poor hygiene in preparing and serving kava, eating and drinking items containing high levels of sugar whilst drinking kava, and driving after kava use. Importantly harm minimisation practises were also common and include drinking a lot of water after using kava, eating meals prior to kava use and sleeping after kava use. Many kava clubs also reported banning smoking in the kava circle.
Social and family harms were also addressed in the current study; the most commonly reported concern was the time which men spent drinking kava and the impact of this on families. Many women explained that time spent at kava had a negative impact on themselves, raising children and managing chores in the family home, and some men acknowledged that kava was a source of conflict in the home. This concern is particularly salient in the context of changing gender roles and the many demands experienced by Pacific Islander families including financial obligations in country of origin, and financial and time obligations to their church. It was regarded unlikely that kava impacted on people’s capacity to maintain work, particularly as most kava is consumed on the weekend; however it is possible that kava may affect work performance and therefore opportunities for advancement.

It was generally considered that people did not have a good knowledge about the health effects of kava; further attitudes toward harms were generally dismissive. This is not surprising given how little clear information is known about the effects kava, that there is no easily accessible health information about kava and that kava is generally encouraged and considered safe across the Pacific. Similarly, participants reported that they were not aware of any service or agency that could help someone if they were struggling with kava use. Treatment for excessive kava use was described as coming from within the family, by a kava club or through support from their church.

Why people use kava was addressed in the current research. Both questionnaire and qualitative findings demonstrated that the most common individual reasons for drinking kava were social reasons and to experience the relaxing effects of kava itself.

The importance of kava to culture and cultural identity is a complex topic. Ceremonial kava use is regarded by most Pacific Islanders in Australia to be an integral part of maintaining and teaching traditions, as well as important to formalising functions such as funerals and welcoming important visitors. Social kava use and indeed church kava use are more controversial. Although individual reasons for drinking kava were rarely related to maintaining culture, many Tongan social kava drinkers explained that kava clubs maintain culture by facilitating cultural identity and fellowship and by teaching culture through the telling of stories, reciting poems and prayers, and singing songs. Importantly for many others Tongan kava clubs do not represent culture; some feel that they undermine the cultural significance of kava, whereas others argue that culture cannot be reduced to kava use, particularly considering the impact that regular kava use can have on families. For Fijian and Samoan groups this debate does not appear as heated.

Regular social kava use is relatively rare among young people, with the average age of commencing regular consumption occurring between 25 and 30 years of age. However, the high rates of youth incarceration among Pacific
Islander males are of concern community wide; in response to these concerns a proportion of Tongan men now encourage young people to engage in kava clubs. This is worthy of attention and consideration as it can involve the use of kava by young people under the age of 18, without parental consent. In addition the use of kava to manage alcohol intoxication reported by several individuals is a concern and worthy of ongoing attention. Clearly the issues facing Pacific Islander youth in Australia are complex and worthy of a great deal of support, currently the practice of relying on church and community groups to provide, often unfunded, diversion and intervention requires revision.

In terms of the import restriction which has been in place since June 2007, participants largely felt that the law was developed without consultation and consideration of Pacific Islanders in Australia. Further, communication that the law had changed and explanation of the intent and goal of the import restrictions were poor. Whilst some have interpreted this as a racist and persecutory act against Pacific cultures, others felt that it was an example of Pacific Islanders being overlooked and ignored by the Australian government. The impact of this on Pacific Islanders in Australia should not be overlooked.

The primary impact of the import restriction itself on Pacific Islanders has been the emergence of the black-market and increases in the cost of kava. Whilst many people feel uncomfortable engaging with the black-market, access to kava was not considered difficult. Impacts on consumption were variably described, and need to be understood in the context that social kava use is increasing across Pacific. Indeed it was regarded that kava use has increased in Australia over the previous ten years, particularly through organised kava clubs frequented by Tongan males. The import restriction has not appeared to alter this growth although it is possible that some kava clubs do not open for as many nights a week as they would prefer as a consequence of the restriction. In contrast some Fijian social kava users, who use kava in a less structured way, reported using less kava frequently as they preferred not to engage in the black market.

The findings demonstrate that kava use is widespread in Australia among Tongan and Fijian males, further the findings suggest that import restriction has done little except drive the supply of kava to the black-market. Access to kava is largely unaffected. Kava does hold the potential for harms yet can also provide and avenue for fellowship, community support and cultural identity for a proportion of men. Considering the role of religion and Church communities in the lives of the majority of Pacific Islanders in Australia opportunities harm minimisation and education could exist through collaboration and discussion with Church groups. Finally it is important to recognise that it is a very important issue for a proportion of the population but for some Pacific Islanders kava use and kava laws were considered unimportant and a distraction from other issues facing the community.
6 Kava use among Aboriginal people in Arnhem Land

Throughout this report the term Aboriginal has been used to identify Indigenous communities in Arnhem Land. Aboriginal people in Arnhem Land commonly use the term Yolngu to describe themselves and their communities. The term Yolngu has not been used in the current report as a caution against the assumption that all Yolngu communities are kava using communities; this said the term Yolngu is used by many participants in the key informant interviews and appears in the analysis.

6.1 Methods

To examine current kava use and impacts of kava use among Aboriginal people in Arnhem Land, Northern Territory (NT), and in keeping with Rapid Assessment Methodology (RAM) principles, two data collection methods were used. These were group and individual key informant interviews and a textual review of NT Police media reports. In total 75 people participated in key informant interviews. Key informants included: Aboriginal community members, representatives of community controlled organisations, representatives of government and non-government health and welfare agencies, law enforcement officers, and representatives from other government agencies. Police media reports were used to triangulate the qualitative data and also to provide additional context to the NT Police kava seizure data provided in Chapter 4 (page 113). Twenty three reports were sourced from NT Police Fire and Emergency services website dating from 9th January, 2009 to 22nd November, 2011 (Northern Territory Police Fire and Emergency Services, 2011). Transcripts of the key informant interviews and content from the media reports were placed in the same data base and analysed together and are reported below.

Factors impacting on data collection

A range of factors impacted on the methodology, data collection procedure and data collected, these include the following.

Political context – broad

The Northern Territory Emergency Response (NTER) and recent Shire amalgamations by the NT Government have had a significant effect on Aboriginal communities and were implemented during the time period in which the kava import restriction was applied. These policies were implemented with minimal local consultation, as explained by the Australian Indigenous Doctors’ Association and Centre for Health Equality Training’s Health Impact Assessment:
At no point in the introduction and implementation of the NTER were Aboriginal community leaders and stakeholders engaged in discussion about the specific measures, about the implementation or about the likelihood that the NTER would achieve its intended health outcomes. (Australian Indigenous Doctors’ Association & Centre for Health Equity Training Research and Evaluation UNSW, 2010).

They concluded that the health outcomes of the NTER are unlikely to be successful and that:

It is predicted that it (the NTER) will leave a negative legacy on the psychological and social wellbeing, on the spirituality and cultural integrity of prescribed communities. (Australian Indigenous Doctors’ Association & Centre for Health Equity Training Research and Evaluation UNSW, 2010)

Considering this, it is not surprising that the NTER has had an impact on the willingness of some organisations to participate in research, particularly when that research is for Government. Many agencies in the consultation of this project were cautious of entering into formal relationships and described past frustrations at consultation experiences. For these agencies engaging in KI interviews was the preferred method of data collection.

**Political context – kava**

Kava and the implications of the sudden implementation of the import restrictions on the business of kava licensees is still an issue for many community organisations and community members. As a consequence several organisations and individuals did not feel comfortable discussing the current and previous prevalence of kava and impacts on communities. Several organisations are also actively lobbying to have kava licenses re-introduced and this has meant that the political climate in some communities and between some organisations has made it difficult an organisational level for agencies to collaborate on kava research.

**Over-consultation and over-research and a history of inappropriate consultation and research**

Aboriginal communities in Arnhem Land are some of the most researched in the country and many respondents reported feeling consultation fatigue. Many described experiences in which they participated in research or consultation that they felt had a predetermined agenda and that their voices and opinions were noted but not considered. It is likely that these experiences also affected individual participation rates in the current research. Similarly, the sheer number of health priorities and requests made to health services made it very difficult for health services to provide in-depth or ongoing support to the current research.

**Kava import restriction**

The illegality of kava has had a large impact on the collection of data and the results. It is important to acknowledge that because kava is illegal it impacts
how comfortable many community members were in discussing kava use, and for those who do not drink kava it is regarded as difficult to estimate prevalence because the use patterns are now hidden.

**Climate and geographical diversity**

During the course of this research a record wet season, which resulted in roads being cut off to many Arnhem Land communities, prevented or delayed a number of site visits by the researchers. During this time there were urgent needs that many communities were responding to, such as organising food drops, which made it difficult to prioritise kava research.

**Key informant interviews**

As described in Section 3.1 (page 110), key informant interviews were identified as the methodology for the current report following extensive consultation with community organisations in Arnhem Land. The key informant interviews were conducted using semi-structured interviews with both individuals and groups. In total 41 key informants (KI) interviews were conducted with a total of 75 participants. The aims of the KI interviews were to gain an understanding of people’s perceptions about kava use, current and previous patterns and prevalence of kava use, the current and previous impacts of kava use on individuals and communities, the access and cost of kava, the extent of the black market and the impact of import restrictions.

The semi-structured interview schedule included both standardised and open-ended questions. It included questions related to basic demographics, observations of current prevalence, pattern and contexts of kava use, descriptions of kava use, polysubstance use, impacts of kava use on health and wellbeing, reasons for using kava, community opinions about kava, and impacts of the current regulation and previous regulations. Questions asked of participants depended on their experience and knowledge of kava. The questions did not ask participants about their own kava use, however some KIs did use personal experience to explain certain points.

**Sampling and recruitment**

Considering the diversity between different Arnhem Land communities sampling aimed to ensure participants included people from kava using and non-using communities, furthermore to ensure the anonymity and confidentiality of individuals and groups specific communities are not identified in the analysis except in discussing the geographic prevalence of kava.

As with the sampling procedure for the data collection among Pacific Islander participants described in Section 5.1, targeted and snowball sampling methods were used. Individuals were sought who could discuss different elements of the kava use and the role of kava in different communities and over different time periods (i.e. before and after the import restriction in 2007).
Initially identification of potential KIs came from community controlled organisations, state government departments whose work impacts or is impacted by kava use, community controlled and government health services, and interested community members. Snowball sampling was then used to further expand the network of participants. The KI sample size was determined by both saturation (Trotter, Needle, Goosby, Bates, & Singer, 2001) and also situational factors described above. Also it is important to acknowledge that there was no targeted sampling of the education sector. Although it has been previously suggested that kava availability has impacted on school participation as a consequence of parental over use, the sheer size and volume of policy changes and education initiatives that have been made over recent years creates a confound. It would not be possible to assume that any changes in school attendance could be attributed to regulations around kava; as a consequence it was not considered appropriate to seek data from the education sector.

Community groups and individuals identified as potential KIs through literature, internet searches and personal networks were invited to participate in the research. KI’s were initially contacted via email or telephone and provided with an information sheet and invitation to participate. The information sheets explained the purpose of the study, confidentiality, voluntary participation and data security. Interviews were conducted either face-to-face or via telephone. Face to face interviews were conducted where possible and all group interviews were conducted face to face; in total 80% of the KI interviews were conducted face to face. All interviews were conducted in English, however in some group interviews discussion was carried out by participants in Yolgnu Mata (Yolgnu language) and translated back to the researcher. At the conclusion of the interview participants were asked if they knew anyone who may be interested in participating to assist with snowball sampling.

All participants interviewed were informed about the role of the researcher and how the information was to be used. Participants gave verbal consent for the researcher to take notes and it was explained that they may be quoted, without being identified, should their story assist in explaining findings.

**Profile of key informants**

During the KI interviews basic demographic information was collected and is described below. All KI participants were over 18 years of age; participant’s gender and ethnicity were recorded and are presented in Table 6.1 (page 188).
Table 6.1 Aboriginal status of key informants

<table>
<thead>
<tr>
<th></th>
<th>Male (%)</th>
<th>Female (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aboriginal</td>
<td>35 (47%)</td>
<td>13 (17%)</td>
<td>48 (64%)</td>
</tr>
<tr>
<td>Non-Aboriginal</td>
<td>19 (25%)</td>
<td>8  (11%)</td>
<td>27 (36%)</td>
</tr>
<tr>
<td>Total</td>
<td>54 (72%)</td>
<td>21 (28%)</td>
<td>75 (100%)</td>
</tr>
</tbody>
</table>

To preserve confidentiality of participants, specific details regarding profession and organisation are not provided, however the sample comprised of members of: health organisations (including GPs, nurses, Aboriginal Health Workers and allied health from primary health, mental health and drug and alcohol sectors working in both Aboriginal Community Control and Government health services) (31%), Community controlled organisations (not health) (25%), Police and Licensing (6%), academics (3%), NT Government and Shire representatives (5%), and Aboriginal community members not representing an agency (30%).

Limitations of the sample are worthy of note and include an under-representation of Aboriginal women. The discrepancy between the number of Aboriginal women and men who participated in the interviews may be partly explained by Aboriginal women holding fewer positions in the community organisations who participated in interviews. In community member KI interviews there were equal numbers of men and women, however it is possible that the views of women are underrepresented.

In addition to the 75 KI’s who participated in the study, participation was also sought from three NT Government departments, three community agencies, two health agencies, two shires and two academics, however non-response to telephone and email messages were taken as a reluctance to participate. The following details represent responses from the 75 participants who completed the study.

**Police media reports**

Police media reports were collected by using the search term ‘kava’ in the NT Police Fire and Emergency Services (PFES) media centre website (Northern Territory Police Fire and Emergency Services, 2011). The search yielded twenty three reports from 9th January, 2009 to 22nd November, 2011. The reports were collated and text was analysed for the method of kava transport, quantity of kava seized and police operations described.
6.2 Results

Considering the differences between experiences of Aboriginal and Pacific Islander peoples the categories and themes presented in the current section differ from those presented in Chapter 5 (page 131). A recurrent theme in the present analysis was comparisons between the current situation and the situation under the previous licensing arrangements. Although this research did not aim to compare the current situation with that of the licensing period, these changes are the context in which most KIs explain kava availability and kava related harms. In structuring the results the emphasis is on the current status of kava and kava use in Arnhem Land, however where appropriate participant descriptions of the licensing system are included. In considering the findings it is important to note that the vast majority, if not all, kava consumed in the Arnhem Land communities comes from the black market so many of the comments and discussion relate to the role of the black market and the impact of the black market.

Many of the comments used to illustrate themes in the analysis below contain Yolgnu Mata terms, these are: balanda (white or European people), ngarti (cigarettes), wei me (cannabis) and rupiah (money). In addition the term intervention is frequently used for the NTER.

Prior to presenting the findings it is important to consider how the broader context in which any changes relating to kava since 2007 that have occurred are understood and experienced by KIs. As previously described, the timing of the kava import restriction coincided with the controversial Northern Territory Emergency Response (NTER) implemented by the Federal Government and a range of changes commenced by the Territory Government, including the amalgamation of small community councils into larger regional shires. These policy changes create a confound in understanding kava availability, kava related harm, how willing people are to discuss kava and how the results can be understood. Furthermore many KIs understood the kava import restriction and shire amalgamation to be part of the NTER. Two areas that are worthy of initial comment are KI attitudes toward, and experiences of, the NTER and the changes in alcohol restrictions that occurred in 2007 and in 2011. Whilst it is beyond the scope of the terms of reference to discuss the impact of the NTER and alcohol restrictions, given the impacts of these issues on understanding kava use, a brief summary is presented below.

**Broad Context**

**The Northern Territory Emergency Response**

The majority of participants, both Aboriginal and non-Aboriginal described the NTER and the impacts of the NTER in negative terms. The key themes discussed by participants included: the lack of genuine engagement and consultation both currently and prior to the NTER, powerlessness, a lack of control over community activities, shame, and stigma. In addition, the termination of the CDEP program which resulted in employment losses
coupled with an increase in non-Aboriginal staff in communities have left many individuals feeling powerless and alienated. These themes are exemplified in the comments below.

There is no freedom here, my heart aches for freedom to do what we want to do. We cannot choose to work anymore – there is nothing for us.

With the new system, the GBMs (Government Business Managers) and the non-Yolgnu staff come and go a lot quicker, they are paid a lot more, make decisions then leave. Local people have no voice and no say.

The new shire system, this ‘intervention’, means people have less connection and identity with the governing organisation. Community assets are now pooled and they move in short period of time. People are experiencing a loss of control.

These comments are important to consider, because they emphasise the context within which the import restriction on kava is understood. Despite the comments, one positive aspect of the NTER as described by many participants has been the increase policing presence in communities. There is now a police presence in most major communities (with Millingimbi being a notable exception). The increased police presence has left many participants feeling more secure in communities however it has impacted how comfortable many people are about openly discussing kava use.

**Alcohol restrictions**

As part of the NTER, prescribed communities were declared alcohol free during September 2007, the restrictions prevented the sale, possession, transportation and consumption of alcohol (Origin Consulting & Bowchung Consulting, 2010). These restrictions were applied despite the majority of Arnhem Land communities already being designated ‘dry areas’. The restrictions did not apply to the township of Nhulunbuy in East Arnhem Land that continued to sell both takeaway and over the counter alcohol. In 2011, the Northern Territory introduced another range of alcohol restrictions that prevents the purchase of takeaway alcohol, including in Nhulunbuy, without a licence. In discussing alcohol many participants reported frustration with alcohol laws that were applied in communities who had already chosen to limit alcohol. However KIs who lived in communities close to Nhulunbuy reported that the permit system has had some affect. For example:

Now that the permits are coming in it has enabled the community to work better, we have a better workforce and violence has reduced.

Since the permit system there are not drunks wandering around. Before we could fill two 44 gallon drums with cans from all the drinking - not anymore.
Considering how much of the discussion around the introduction of kava into Arnhem Land and benefits of kava are the use of kava to reduce the harms associated with alcohol, the effects of alternative measures to address alcohol related harm may have an impact on communities’ attitudes toward kava.

**Prevalence and availability of kava**

KIs were asked about the current prevalence of kava use in kava using communities, most reported that it was very difficult to determine and felt unable to respond specifically. Key themes that emerged in broader discussions of prevalence were: changes in the community wide use of kava, the demand for kava and geographic distribution of kava. Among those who did suggest prevalence levels of kava use, responses varied greatly, for example:

In communities where people use 65% of men, 50% of women.

I think before 80% of people used now I think 10%.

I would say 30% of men drink I think that has been stable for the last three years.

Men and Women use – maybe 60% men, 40% women. In terms of regular drinkers 50 – 60% of women would not be regular drinkers but only 30% of men would not be regular drinkers. I would say 30 – 40% of men who use it do so with an abuse pattern.

These responses reflect both the differences between communities and also the difficulty in estimating prevalence. Interestingly non-Aboriginal KI’s estimates of prevalence were higher among police than those working in the health sector. Despite this difference it was consistently reported that there is less kava consumed now than during the licensing period, but that the amount consumed fluctuates based on kava availability. For example:

Since the intervention kava has decreased, but it fluctuates, it revolves around availability.

My understanding is there a lot less now – you don’t see as much on outstations but it is still there.

Not clear if the supply is continuous – it is definitely harder to get now than before.
Considering that kava in Arnhem Land is bought from the black market, perceptions of black market activity are useful indicators of kava availability. In general, participants reported that immediately following the ban there were low levels of kava available but that it has been steadily increasing. This observation has been consistent across law enforcement, community health, and community member KIs.

It went right down, but it is on the way up again.

The black market is getting stronger; I think there is a bit more around at the moment.

Despite the findings that the overall availability of kava in Arnhem Land appears to have decreased, many participants commented that the demand for kava had not changed, for example:

The demand is the same as it ever was.
Heavy kava drinkers are all still kava drinkers.

It is very hard to get a picture of kava use prevalence across Arnhem Land without any clear data related to how much kava is entering Arnhem Land or comprehensive sampling of the population, which was beyond the scope of the current research. The current results suggest that population prevalence rates of kava use in kava using communities remains high (probably 30% or more males using in kava using communities) as does the demand for kava, although the overall amount of kava in Arnhem Land has reduced. This final finding is to be understood with caution as several participants noted that there had been recent increases in use.

**Geographic distribution of kava use**

Historically kava has been used in predominantly East Arnhem communities and some West Arnhem communities. Participants were asked if kava use existed in the same communities or whether any changes had occurred. Participants described very little change:

It is rife in Millingimbi, Minjilang, Elcho, Ramingining, Yirrkala, Warruwi and out on some of the Laynhapuy homelands.

Kava stops at Walker River basically. Ramingining is somewhat of a hub – from there it is distributed to Millingimbi and Galiwinku. Galiwinku is a key market for kava. In Maningrida a few families use but it is more of an alcohol using community. Kava stops in Maningrida. It was also rife in Warruwi (Goulbourn Island), Minjilang (Crocker Island) and Yirrkala.
It dropped right off in Gapuwiyak, but the black market is emerging there now, it is in all the same places.

These comments are consistent with the findings that demand for kava is largely unchanged and emphasise that communities with a history of kava availability still have kava. This includes both communities who did and did not previously hold a kava licence. Similarly in communities that have not had a kava using history it appears that it has not gained in popularity, for example:

In Maningrida it is not part of culture, people who drink it here are from communities that have kava.
On Groote there are people who use kava, but they have links to other mainland communities, overall kava it isn’t popular.

**Other indicators of kava use**

Considering the lack of clear indicators of kava use, or empirical evidence, KIs from health services were asked about the prevalence of kava dermopathy as this was considered an unambiguous indicator of heavy kava consumption. The majority of participants reported that it was now rare to see patients who had kava dermopathy (also known as crocodile skin), for example:

We rarely see people with the skin condition in the clinics now.

There are not a lot of very heavy users anymore – we very rarely see the kava skin these days. It isn’t obvious that there is a 'kava problem' here.

When it was first banned you could see the difference in heavy drinkers – gained weight, skin clear, looked healthy but kava is back and there are signs of it around, but I haven’t seen the weeping eyes and crocodile skin.

In contrast, one respondent commented:

At the health clinic we still see signs of overuse quite regularly – the skin.

Participants were also asked about the other indicators of kava overuse, the results were consistent with the above with the majority responding that pattern of liver function abnormalities are greatly reduced.

The liver pattern is less now, but there have been other general health improvements. In the 90’s if I went on leave I would come back to work to find out who’s gone. Now it is more predictable. We lose people with chronic health.
These findings are consistent with the KI discussions around prevalence and suggest that although demand persists and there is the possibility that kava is increasing again, there is little kava use occurring at levels that have been detected within the primary health context.

**Demographic characteristics of people who drink kava**

When discussing who was likely to use kava in kava using communities, discussions emerged around the themes of age and gender. It was consistently reported that both men and women drink kava but that men are more likely to drink. Most participants also reported that men would drink in groups of only men or in mixed groups, whereas women were unlikely to drink kava in women only groups. There was also suggestion by many participants that the proportion of women who use kava has changed. As explained by one participant:

> Women have always drank kava with the men, but often only on the fringes. When kava was legal a lot of women started drinking kava. They were the first to stop too – I think maybe they used it when it was cheaper and easier to get.

In discussions around age KIs reported that kava use was more prevalent among older individuals. For example:

> It is the older age group from mid 30s and up who drink the kava.

> Mostly middle aged men drink kava, all ages drink it but mostly older. Younger ones prefer grog or gunja.

More discussion around the age of kava use is presented in Section 6.3 (page 227) discussing the course of kava use. The findings from KIs were largely consistent; kava use in kava using communities is described as more among males over 30 years than other groups. In non-kava using communities those who drink kava were described as people who have family and strong connections to kava using communities.

**Patterns of kava use**

In discussions around pattern of kava use, the theme of ‘binge consumption’ consistently emerged:

> Feast and famine. This is the pattern when it is available it will get used without restraint.

> Those who drink it, drink it till the cows come home – yes like a binge. Sit down and drink it till it is all gone.
Several participants suggested that there had been some changes in pattern of consumption since the import restriction was implemented and kava availability has been reduced for example:

I guess the pattern in binge – but people don’t share as much anymore – don’t encourage others to get together and drink anymore because it scarce.

Now people drink fast, don’t want to get caught – people do not drink safely now.

There was always tomorrow for a packet, didn’t matter if it ran out. But now it comes in black market better hurry up and drink it all at once. Drink more and faster now.

Now we make it weaker – try to make it last longer.

Some of these comments suggest the drinking tempo may have become faster, which may put some kava consumers at greater risk for harm, whereas others report mixing weaker kava which may have a harm minimisation effect.

Despite general descriptions about binge consumption few participants were comfortable, or had sufficient experience, to describe frequency and quantity of use in more detail. Those who did described different patterns of use, one participant explained:

There are a core group of people who have always drunk and once a month or so when it comes in they go into the bush and drink it until it is all gone.

Others commented:

Maybe two small bags (about x2 matchbox size) – maybe 100g – have in the evening sometimes before going hunting maybe twice per week.

... bags available are smaller so people use less; people are less likely to share with larger group.

These comments all suggest a reduction in the frequency and quantity of kava use. In contrast several respondents suggested that there were still a few people who would drink every day; however only one respondent thought the majority of people who used to use kava were still able to access it every day.

In discussing pattern of use, some participants commented that there were some people who drank kava only occasionally (during funerals and the Christmas – New Year period) however the majority of participants suggested that there was very little diversity in patterns of use. For example when discussing patterns of kava use during the licensing period one participant commented:
Previously people drank all day and did again the next day, it was all or nothing, very few people had a bit and then went home.

Although the evidence presented is somewhat limited it appears that the current patterns of kava consumption tend to be ‘binge episodes’ where available kava is consumed in a short period of time. It is likely that these occur in smaller groups, more infrequently and using less kava than during the licensed period.

**Kava use practises**

Consistent with drinking in a ‘binge pattern’ of consumption in which intoxication is likely to occur several KIs described practises that were thought to enhance the effects and level of intoxication experienced when drinking kava. These are worthy of note as they may impact on kava related harms. Consistent with the drinking practises of Pacific Islanders, it was commonly reported that people drank soft drinks, ate lollies or other sugary foods when drinking to offset the taste of kava, however a number of participants suggested that this was also done to achieve an additional intoxication, for example:

People drink it with red cordial; have bright red teeth when they drink kava to get that sugar hit. Some people say it makes the high better and makes the kava taste better.

We would have sweetened condensed milk with it for the taste and for sugar buzz, but it is very bad for diabetes.

In addition to this one participant also explained:

Some people have paracetamol to enhance the kava feeling and drink caffeine so they can drink for longer – that is how younger people use.

These findings suggest that it reasonably common for people who drink kava in Arnhem Land to consume other foodstuffs with the expectation of increased intoxication. The extent of these practises is unclear, however considering high rates of diabetes among Aboriginal people and that kava can impact on the metabolism of other substances these practises may put kava drinkers at risk for harm.

**Context of kava use**

KIs described that kava use occurs in a social context in which groups of, on average, 6 – 10 people, including both men and women, sit around a bucket of kava and drink from cups often made from the cut off bottoms of a 600ml soft
drink bottles. KIs reported that it would be very rare for people to drink kava alone.

Many participants explained that the way in which kava drinking groups met and drank had changed. Participants described that in the past (both during licensing and prior to licensing) large groups of kava drinkers would gather at all hours of the day and night and drink in the open. As described in the previous (Chapter 5, page 131) kava groups now contain fewer people as there is less kava to share. Participants also suggested that places and times of kava consumption have changed. The most commonly discussed themes are that kava use has now become hidden, as exemplified by the following comments:

It is more covert now. I think people drink out by the (...) these days. You don’t see people sitting around and drinking during the day.

Contexts are more reduced now. Kava is never on the street now; people are more secretive in public.

We have to hide now. We drink in the bush or in homes at night. We can’t get caught walking down the street with a bucket. Police know that is for kava. It is secret, private. Don’t talk about it anymore.

Comments from KIs suggested that communities differed in the times of day in which kava was drunk, in some communities participants reported kava was no longer consumed during the day, whereas in other communities kava was drunk during the day but hidden inside homes or in the bush.

Several participants also explained that kava use occurs with gambling in social contexts:

People have kava and ngarli, and play cards, gamble, and have kava.

... talk, have kava, play cards sometimes.

This is not a surprising finding given the high rates of gambling throughout Arnhem Land; however the extent of kava consumption in a social gambling context requires further investigation.

Participants were asked if it was common for children to be present while kava was being consumed, the answers suggested that it depended on where the kava was being consumed and what was taking place while kava drinking, for example:
Sometimes if we are telling important stories, old stories, or songs kids will come near and they can listen and talk. Other times we might tell them to go away if it isn't right.

There has been some discussion that kava use has been integrated into some ceremonial practises in some Arnhem Land communities, when this was raised with participants responses were mixed with some explaining that cultures change and adapt over time and that kava was something that had been adapted into aspects of ceremony for some groups. As described by one participant:

Sometimes it is in ceremony if it fits; some ceremony it doesn't fit and wouldn't ever have kava.

In contrast others felt that kava had not been integrated into culture.

In summarising the contexts of kava use, the findings demonstrate that kava use is predominantly consumed in social groups in which kava is mixed centrally and shared among participants. Kava drinking is now a hidden activity with participants explaining that it was rarely consumed in public or discussed in public. Kava drinking groups contain both men and women and can occur when children are present. Finally, there is some suggestion that kava has been integrated into some ceremonial practises for some groups but the extent of this is unclear.

**Course of kava use**

In discussing course of kava use, there was consistency among KI reports. Initiation to kava was thought to occur younger in homeland communities than in townships

In the homelands people might start drinking earlier like fifteen, sixteen, because there isn’t much other stuff. In towns and communities people probably move to kava when they are twenty.

A common theme among many participants was that kava use was a part of a transition through substances, particularly for males, and that kava use was one part of an overall consumption of substances, for example:

My feeling is youngest kids try sniffing and then they move into gunja and grog and from gunja into kava. There are transitions through substance use.

... younger ones prefer the grog and the gunja, have kava later, maybe twenty-five or thirty.

Similarly one participant suggested that men who did not drink kava had never been alcohol drinkers. These observations are important and require
further investigation; set trajectories through different substances over the lifespan are unlikely to be the only patterns of substance use. Indeed several KIs explained that there are men and many women who have never used other substances except kava. It appears likely that kava use typically emerges in mid-adulthood, for some individuals it may be part of a substance use trajectory whereas for others it is the only substance they have consumed.

Stopping or quitting kava use was discussed with KIs however very few people felt though that it was a common to cease consumption or that there were particular patterns in ending kava use. The exception to this being that some KIs felt that women drink less now because kava is no longer legal and is more expensive. Those who were aware of people quitting kava use felt that it was typically triggered by health and wellbeing problems or changes in employment circumstance. For example:

There are some people who quit – through sickness, or have had enough – or might have a job. There is a small percentage.

Community level course of substance use was also discussed, considering that kava was described as a drink of older men, participants were asked if they thought that the popularity of kava in kava using communities would change and if many young people were now taking it up. Responses were mixed, for example:

I don’t think many new people have started drinking it. Some young people drink kava but they usually swap a few different things.

I think it is losing its appeal, but there is still a market there.

I don’t think kava will fade out with the current generation but there are different age groups that drink it. I think it suits older men and not wanting to go out and rush around anymore.

These responses suggest that there is a possibility, or opportunity, that kava popularity may be declining as the generations change, however this is unclear and warrants further investigation. The findings around course are similar to that among Pacific Islander Australians and suggest that the social context and intoxication of kava is more appealing to older than younger people and therefore may remain in communities as a substance of choice for older men.

Alcohol and kava use

Participants were asked about patterns of alcohol and kava use because of previous anecdotal report that they were used together and because of
literature describing the potential risks of combining alcohol and kava. Discussions about alcohol broadened to general discussions with many participants. The key themes that emerged, other than the concurrent use of alcohol and kava, were substance substitution at the individual level and differing availability of both substances at the community level.

Overall, although there was some difference of opinion it was considered very rare for alcohol and kava to be used concurrently, as described participants:

I don’t think alcohol and kava were or are mixed very often. I have heard the rumours but not seen it.

No, not drinking alcohol and kava, people just don’t do it.

Yes it is used with alcohol, not all the time but it does happen.

People who drink kava might also drink alcohol but mostly not together.

The availability of alcohol in communities is difficult to ascertain particularly in light of the recent changes in alcohol legislation and the introduction of the permit system, however most participants regarded alcohol availability as inconsistent, for example:

Alcohol is sporadic and short-lived. It arrives and disappears.

The availability of alcohol is also described as higher in communities closer to regional centres (i.e. Nhulunbuy) that have access to alcohol.

It is commonly argued that kava use was introduced as a substitute for alcohol and a strategy for minimising alcohol related harm. Substance substitution and community availability of both substances is therefore an important topic. Considering that the kava importation restriction was implemented prior to the tightening of alcohol availability in 2007 many KIs were concerned that the end of licensed kava presented a risk for increased alcohol related harms as people may switch from kava to alcohol. Participants had mixed thoughts; many participants felt that alcohol use increased following the import restriction:

I think alcohol went up when kava stopped, that is what I heard.

When the kava stopped people did go straight to alcohol and there was no permit system in place. The community was not a nice place to be in at that time.

Others have argued that alcohol use and harms did not increase, for example:

Many of the older men are arguing that there has been a shift back to alcohol since the kava ban. But I am not sure this is a valid argument. There was an
observed drop in violence when kava came in – but that drop is still continuing – how much is related to alcohol?

In (this community) grog comes and goes this did not change when kava was used.

A possible explanation for these discrepancies includes factors affecting individual communities, for example:

(This community) for example was a very dry community so it was kava only. In (other community) I think it was used as alcohol substitution initially but now we worry about alcohol and gunja being more common. I think in (other community) there is more grog since the ban.

Other factors were also present when the kava importation restriction was imposed which may have also affected alcohol consumption, in one community sport finals and a large funeral soon after the ban possibly accounted for some of the increase in alcohol consumption. Indeed some participants felt that alcohol use did increase following the kava restriction but that this was short-lived.

I was not here when the ban came in so maybe there was an increase in alcohol; but it didn’t last.

Not surprisingly there are also now concerns that a reduction in alcohol following the introduction of the permit system is creating a larger black market for kava.

... black market kava is appearing in communities as alcohol is getting reduced.

In bringing together the findings there is little evidence that both substances are used together on a regular basis, however there is a proportion of the population who use either alcohol or kava depending on availability. It is clear that in some kava using communities that both alcohol and kava availability fluctuates, the degree to which this happen is likely to differ between communities. Further, for some communities alcohol use may have increased following the kava import restriction however if this is ongoing requires further investigation.

**Polysubstance use**

Polysubstance use, beyond alcohol use, was also discussed in KI interviews. Cannabis and tobacco were the two substances that emerged as possible concerns. The concurrent use of kava and tobacco was considered reasonably
common and was a concern for several KIs who worked in the health field. The concurrent use of cannabis and kava was thought to occur among young people, albeit rarely.

Maybe have some with gunja – some people will have anything – but many of the kava drinkers drink only kava.

In (this community) yes there would be gunja and other things; it would be opportunistic rather than a behaviour that is sought out or of choice.

There were some people who used kava and gunja but I don’t think it was widespread.

As with alcohol, availability and substance substitution emerged as themes in discussing polysubstance use. Many participants suggested that for some individuals, use depends on availability preferred substances, whereas for other people kava is their substance of choice. As explained by one participant:

People like different things. Wei me smokers, would go to alcohol or kava if no wei me around. Lots of kava drinkers won’t go to alcohol if there is no kava around, but alcohol drinkers might have kava.

In contrast, a participant from a non-kava using community suggested that cannabis users would be unlikely to use kava if there was no cannabis available.

Given the inconsistent availability of kava, cannabis and alcohol it is not surprising that concurrent use of substances is rare. However many individuals appear to use a range of substances either across their lifespan as suggested in Section 6.3 (page 227) or opportunistically based on availability. Inter-relationships between different substances are complex and influenced by individual preferences, community preferences and substance availability. Finally the use of kava and tobacco is a possibly a concern due to the associated health risks of both substances.

**Reasons for kava use**

When asked about why people use kava the key themes that emerged can be summarised as kava use to increase positive feelings, for example to experience relaxing effects of kava and to enhance the social environment, and kava use to avoid negative feelings for example coping with alienation, marginalisation and a lack of meaningful activity. As explained by participants:

I have kava in town, in town it is good to have kava, but in the homelands, away from here – then I don’t need kava to relax, I feel at peace.
Drink kava all day and all night till morning again. There is nothing to do the next day so sometimes keep drinking.

Some participants suggested that the experiences of the NTER and other recent policies may have increased demand for substances because the experiences of alienation have increased, for example:

Since the Intervention, governance here has gone out the window. Any resurgence in kava and other substance use is because there is nothing. All agencies have only a narrow vision they only look at their own things. Communities cannot make their own decisions, even less than before. The community pays for this, there are less opportunities now. It is human nature for some people to use substances when things are bad, when there is no freedom. Now there is nothing so people want to use more.

Reasons for kava consumption described by participants are consistent with theoretical understandings of substance and underscore the importance of both the social determinants of health and wellbeing and the individual emotional needs that are met by substance use.

**Black market kava activity and police operations**

Supply of kava currently in Arnhem Land is a product of black market activity and police operations. Under the import restriction, law enforcement is the only avenue being used to address kava availability. As described in Section 1.8 (page 81) the black market has had a consistent presence in Arnhem Land and has existed throughout the licensing periods and the periods when kava has been illegal. Thus, not surprisingly the black market was a topic of concern for many KIs. Furthermore given comments that the black market is currently increasing it is worth detailed consideration.

In examining both KI interviews and NT Police media reports it is clear that three main avenues are being used to bring kava into Arnhem Land, by road, by air and by post. KIs and media reports describe that the starting point for kava entering Arnhem Land is from the Eastern States of Australia and not directly from the Pacific Islands. The majority of kava appears to come from Sydney with a smaller proportion from Queensland and Victoria. Further to this the participants reported that the black market is predominantly organised by Tongan groups. For example:

Mostly it comes in from Sydney. Auto check-in at the airport means that it is difficult to monitor persons of interest. A lot of people profit out of this.

It is all Tongan, no Fijians, and no Samoans. There is one guy in Melbourne – the rest are in Brisbane and Sydney.
Was before and still is brought in by the Tongans – they use it to build churches.

Comments such as these are supported by media reports which have identified Tongan nationals in detailing arrests. In addition, there are a number Aboriginal people involved in the trade; KIs suggest that Aboriginal people are often involved in the distribution and delivery of kava, for example:

When it comes in, use Yolgnu for distribution. It was all Tongan run.

Kava arriving in Arnhem Land by road tends to be driven in from Darwin after kava is brought in by air from Sydney or via the NT border with Queensland.

Seems that a lot comes in via air from Brisbane or Sydney into Darwin. Yolgnu then get a car to drive off in with all the kava – that is their payment. They (black market) also may drive up to the border but not cross into NT from QLD, hand the kava to Yolgnu at the border.

Consistent with this comment media reports describe numerous kava seizures that have occurred through random vehicle searches, via tip-offs, and during targeted police operations on the Central Arnhem Highway between Darwin and Nhulunbuy. In examining the media reports it is clear that the majority of people arrested are male, a significant proportion of those have been reported as being from Arnhem Land, with several reports also mentioning the arrests of men from New South Wales and one from Tonga. Many of the reports detail kava being trafficked and seized late at night. It is important to note that at the time of kava seizure, under the Kava Management Act, police also seize the vehicle which can have a flow effect for families and whole communities.

Participants reported that kava arriving via air does so through both commercial flights and charter flights. A number of police reports document that kava arrives in Nhulunbuy (Gove Airport) and is distributed through Arnhem Land from there. Police reports document seizures from flights arriving from both Cairns and Darwin. Police reports also document the seizures of kava from charter flights and small commercial flights to remote communities.

In addition kava arrives in Arnhem Land via the postal system. KIs and police reports document kava arriving in the mail into Darwin, Nhulunbuy/Gove and Winnellie. Police media reports and KI reports have also described police operations which have specifically targeted mail. As explained by one KI:

We did a mail blitz, lots of packages under 5kg, but we cannot keep the operation up.
Police media reports document the mail operation, the timing of which is consistent with the increase in trafficable kava seizures in April 2011 as described in Figure 4.4 (page 124). It is likely that a reasonable amount of black market kava arrives in small packages through the postal service however the NT Police, and indeed Australia Post have limited resources with which to continue to target kava mailed into the NT. This further underscores the difficulty in estimating the current amount of kava entering Arnhem Land.

KIs have suggested that the methods used by those in the black market are changing, for example:

- People of interest now send family members so it is difficult to track and assess. They use mules might get $500 for a trip. Dealers are changing their methods and using post and scatter in. There is little remorse and a great deal of persistence by the dealers. Very difficult to make inroads.

- The Darwin – Gove flight gets checked more often now and we are finding that black market kava is instead entering in through the remote homelands and is being distributed back through centres.

Policing in remote areas is a particularly challenging area. In relation to kava, police operations are limited by a number of internal and external factors which include resourcing and difficulties with covering such vast geographic distances, as described by one participant:

- Police cannot track all the airports all the time. Police cannot go out at night without permission from Darwin, so they can’t just head out and be a presence on the road. In (this community) police come from (another community) on Thursday, so everyone knows where the police are. People know they can they can do things at night.

- We are alone, it is very difficult to get support from other jurisdictions, they are responding to their own issues, their own drugs.

Observations by participants that NT police are addressing kava largely in isolation are consistent with the discrepancy between customs seizure data and NT police seizure data presented in Section 4.3 (page 128). Many KIs, including police, described frustration and difficulties in arresting and convicting those known to organise the kava black market out of Sydney. Consistent with this the vast majority of arrests, as described in Section 4.3 (page 128) are for low quantities of kava seized and are more likely to be local Aboriginal residents than interstate kava importers. Police and other KIs have argued that difficulties in prosecution and conviction mean that those involved in the black market see the opportunity of being caught as low.

Taken together the results demonstrate that the kava black market in Arnhem Land appears to be well organised and adaptable. The majority of kava is
thought to arrive in the NT from Sydney by Tongan networks working with Aboriginal people in Arnhem Land to distribute kava. NT police have used a range of measures to target the black market including monitoring kava by road, mail and air, however many of these operations are costly and cannot be sustained. Furthermore, the difficulties in prosecuting major persons of interest have meant there is little deterrent for the kava black market.

**Kava quality**

Considering that kava in Arnhem Land is bought and sold through the black market concerns around the quality of kava was discussed with participants. A common theme that emerged among participants was the prevalence of kava cut with either flour or powdered milk, although it is not clear how common the practise of cutting kava is. As explained by participants:

> I think in a 50g bag you get 45g kava the rest is flour or milk powder.

> There was a time when I had powdered milk in it. Drank it anyway. Heard about flour not sure if I have had that though.

A significant number of participants also reported rumours that some kava had been cut with cement powder although no participants reported any direct experiences of this. Clearly there are concerns around quality of kava being sold in Arnhem Land, and cut kava may constitute a health risk in the case of uncooked flour or cement.

**Cost of kava**

Participants were asked about the current cost of kava, participants consistently described kava as costing at least $1000 per kilo:

> It costs $100 for 100gms in (this community).

Several participants also described the cost of kava based on the deal bags kava is sold in, and explained the changes and fluctuations in price:

> Before when we had the license, we could only get 2 packets a week. Packets were $15, but much bigger than we get now. The ones we got then would cost $100 – $200 now.

> Bags will cost between $25 and $40. Sometimes up to $70 if the number of packets are in short supply.

In reviewing NT police media reports describing kava seizures it appears that deal bags of kava come in two different sizes 15g and 50g, and NT police estimates of the street value of kava are conducted using the $1000 per kilo ratio.
The cost of kava currently is greater than it has been previously, for example the highest estimated price previously was $400 per kilo (see Table 1.5, page 79) which was described in 1997. Considering this high cost it is likely that purchasing kava will have an economic impact on families and communities.

**Health effects of kava use**

In discussing kava and health many participants discussed the effects of kava they had seen over a number of years. These are presented below and are followed by a summary of current effects. No participants described positive health effects from kava.

**Past observations**

Health effects discussed by key informants were related to both the effects of kava and also effects from the way in which kava is consumed. The majority of informants described chronic health effects of kava use. Dry skin (kava dermopathy) was the most commonly described health effect and several members of the health workforce expressed concerns that dry skin could predispose people to other skin problems such as abscesses, boils and scabies. Other commonly discussed health effects include liver function changes, dry red eyes and overall poor health. Several participants also commented on possible effects including cardiac and respiratory complications:

We saw a lot of dry skin, yellow eyes indicating liver problems, malnutrition, some hair loss, and some cardiac problems. There are difficulties with differential diagnoses with kava and the liver, the ALT could but hep B, Gamma GT goes up with alcohol and kava so it was sometimes hard to pick exactly, but people who had been here for a long time could recognise a kava liver pathology when the blood results came back. We see a lot less of this now.

Dry skin, leading to abscesses, boils and other skin infections. Poor immunity and respiratory infections, dehydration, reduced nutrition, very dry eyes but I don't know what the impact of the dry eyes really is. It might be part of dehydration. People used to come in every day for eye drops. Appearance would be rundown.

Kava is a silent killer to Indigenous people in Australia. It effects our skin, liver and hearts.

People got too skinny with kava, bad skin and skinny.

As with all substances of abuse a number of health professionals expressed concern about the effects of kava in utero, for example:

We see some women drink when they have babies, worry about the baby. Mum had raised LFT (liver function tests) not sure what that meant for baby.
Comments relating to harms caused by the way in which kava is used include poor kava preparation hygiene, inadequate diet, dehydration and lack of activity.

Kava impacts the compliance with medications, hygiene, school sores from not moving all day.

Circulatory system is a big worry – people sit too long. In (this community) there were people who had facial swelling from sitting all day.

When they are drinking kava not much else goes into the body so dehydration is my biggest concern.

Kava and not eating is a problem, kava is not good for people drinking without food.

Illness and I think heart attacks because people do not move around enough.

Several community members also commented that they had concerns about the amount of sugary foods people consumed while drinking kava.

Participants were also asked about addiction to kava use, substance dependence and substance abuse. The majority of participants reported that they thought kava use was addictive and that many heavy kava users in the community previously reported ‘starving for kava’ if supply was low or they were trying to cut down. Participants were not able to explain if there was a specific withdrawal syndrome from kava, but suggested that intense cravings for kava were common.

Two additional health concerns described by KIs are worthy of comment. Firstly one participant from a health clinic described a case example of unreported injury arising from the anaesthetic effects of kava.

... he was drinking for longer than 36 hours on a veranda, stood up and fell over, possibly due to blood pressure or too much kava. Fell on his face. Wife brought him to health service due to some bleeding. He reported no pain, but returned two days later with a fractured jaw – he had not felt it. We also had another patient who presented a couple of days after a serious finger dislocation who had not initially felt the pain.

Secondly, several KIs reported concern that some side effects of kava were caused by kava cut with uncooked flour.

You look at the side effects of ingesting uncooked flour – I wonder how much of the health problems were caused by that, not kava.
This is important to consider, however difficult to assess in detail, as it is unclear how much kava has been cut by flour or other substances.

Finally, several participants described their own experiences of kava use, these experiences relate to both acute and chronic effects of kava use.

Kava makes me feel weak.

... eyes are sore and itchy, skin is dry and itchy, sometimes can get bad headache, feel sick in the stomach.

**Current observations**

As described in Section 6.3 (page 227), health services have reported that they see much less kava related health problems than in previous years, and as a consequence several participants explained that kava use was not a clinical priority for health services.

The health service is not greatly impacted by kava at the moment.

Kava use doesn't come up as a health priority in the clinic, we do not spend much time on day to day management of kava.

Despite this there is some concern that kava is still being used at unsafe levels with some participants reporting that they still see kava dermopathy among clients. In addition some participants reported emerging concerns about kava quality:

Recently we have had some people who have some swollen faces – possibly due to adulterants in kava – we know they were drinking kava the night before – but we can only speculate what the causes are. Also saw someone with severe swelling in the throat wonder if it was cut kava that did this.

A range of negative health effects caused by kava use have been described by participants. The majority of these effects are rarely noted at the current time in clinical settings and in the community, the observed reduction in chronic effects of kava use is consistent with descriptions of fluctuating availability of kava. Despite this it is possible that some chronic effects of kava use are going undetected as kava use is not a current clinical priority. Harms related to patterns of drinking such as sitting for long periods, dehydration and the potential for negative effects related to cut kava remain a health risk.

**Effects on community and social wellbeing**

Participants were asked about the effects of kava on community and social wellbeing. As with health consequences the majority of discussion centred on participants’ observations over time, these are described below followed by a description of the current harms described by participants. In reviewing these
comments it is important to recognise the impact of the context in which kava was introduced to Arnhem Land, which includes high levels of alcohol related harm and the challenges faced by communities in addressing these harms. Many comments by participants compared the effects of alcohol to kava. Participants described both positive and negative effects of kava on community and social wellbeing.

Not surprisingly many of the positives of kava use were related to the relaxing effects of kava intoxication. The key themes which emerged were related to community harmony, minimising the effects of alcohol, and keeping men in communities.

Kava makes people happy and brings them together.

There was less crime because people were drinking kava.

It has a calming effect, people are not upset on kava and that is good.

Relaxing, less fighting in the family. It can be good to learn, it helps you relax, then you can learn stories and songs. Later have confidence to speak aloud to people.

Men leave the homelands for grog, but for kava they will stay.

Several KI’s also argued that kava reduced violence, for example:

Some people are less violent with kava.

Kava stops the violence.

However other participants disagreed with this suggestion and argued violence could emerge from disagreements about money used for kava:

Money troubles caused by kava does lead to violence.

The negative effects of kava on community and social wellbeing described by participants included individual level effects on finances and role participation, and whole of community effects that emerge when a significant proportion of population were using. These included community participation and functioning and money diverted from family spending. As summarised by one participant:

In the bad days – before licensing – kava circles formed of 20 or 30 people and went all day – could go for 2 days. Children would not be fed, it was a significant problem. Families were hugely affected. Non-drinkers were humbugged – both men and women were drinking. Different from alcohol in that more people were
involved. At (this community) people didn’t get out of bed till 4pm. (other community) went from being clean and beautiful to somewhat neglected.

These effects were also described at the individual level by one participant who shared their own story:

I used to drink every day, all night. The next day I would have trouble going to work. I used to work as (...) and I stopped that. Just stopped going there anymore. Everyone was drinking, it was difficult not to. I was so tired all the time. Wasn’t looking after the kids, they went everywhere, there was no money for food.’

The majority of participants explained that as a consequence of kava use there was a diversion of money from food and a diversion of time from productivity. The impact on families and children was described as both economic effects and effects of lack of supervision of children:

Impacts on family incomes, all the money got used, when the money goes to kava – what doesn’t get bought? The kids suffer from kava.

Before (in this community) we used to pick up kids late at night because of gambling and kava, the kids had nowhere to go.

Community participation prior to the licensing period and during the licensing period was the most emotive topic discussed by participants as exemplified by the following comments.

Vibrant communities falling asleep. It was like someone had snuck up and turned all the lights out.

When the kava shop was open there was too much community enterprise going in to kava. All activities were about kava. That was too much. Long lines down the street.

During the license period everyone was just a little bit out of it.

It was like garden gnomes, everywhere there were garden gnomes just sitting doing nothing but kava.

Communities just stopped, a tap stops working – no one noticed till the water ran out. Grass stops getting mowed. Community pride disappeared.

Kava makes people lazy, makes them disappear.
However several participants cautioned that it was very difficult to say that all negative effects attributed to kava were caused by kava only, and warned against assuming that kava was the sole cause of community problems.

The issue of community participation is hard to separate from alcohol and the other issues in the community.

People said kids acted up and did nothing because of kava, well there is less kava now but kids still act up? I think maybe too much was blamed on kava.

Consistent with the literature reviewed in Chapter 1 (page 3), these findings demonstrate that over time high population rates of kava use, at the very least contributed to lower levels of community participation and community functioning as evidenced by a reduction in activities in the community being completed. Further, the time and money individuals spent on kava are likely to have had negative effects on the children of kava drinkers. However for many individuals kava use is a pleasant activity in which intoxication is experienced as a relaxing social event which brings people together.

**Current negative impacts**

The general consensus from KIs were that social and community harms are much reduced from previous years but still emerge from time to time. As explained by participants:

Kava people get useless, they don’t think anymore, don’t do anything. There are still people who get lazy from kava.

In the past there would be whole communities of zombies. Now only a dozen at a time.

When supply is there people drink. When kava turns up in small towns the community just shut down. We had a meeting planned one day and no one showed up because kava was around.

Women can be pressured to have some of their basics card in cash and that goes to kava – that is the big problem with the kava drinkers.

When asked about the current social impacts of kava use the majority of participants described harms linked to black market kava activity. The key themes which emerged were that the black market brings outside influences into communities; money leaves communities; legal consequences of engaging with the black market, and the direct consequences of black market activity.

People spend too much money on kava. All our money is going to Tonga. Our money builds churches in Tonga.
People have to go to court, this is the main problem, sometimes they cannot get to court, then get a warrant and go to jail or have fine. There are too many people locked up for kava. Have to hide it have to be sneaky now. That isn’t nice.

People are charged and have to go to court when found with kava, but we can’t get to court without car, they take the car if they find kava.

If you have a conviction for kava then you can’t be a board member anymore, things like that are a worry for men.

Black market isn’t just about money and court but people take risks at night when they know the police will not be looking, deaths on the road because of kava.

People are getting killed on the road when they are bringing in kava.

These findings emphasise that previously experienced harms caused by kava are still present, yet to a lesser degree, however new harms have emerged in relation to the access of black market kava.

Knowledge of kava related harms

Overall participants reported that Arnhem Land communities had a good knowledge of the well-established health effects of kava use, such as effects on skin, liver function and eyes. Several participants pointed to the proactive involvement of community organisations in participating in research as evidence that communities are interested and engaged in understanding the effects of kava. This said, many KIs felt that community knowledge was limited to the health effects of kava use, which are conflicting at best. Other KIs felt that research conducted to date was ‘agenda driven’ and were not sure how to interpret the findings. In examining KIs responses it was also apparent that discussions with KIs from health services contained two distinct levels of knowledge, a proportion of the KIs were local people or had worked in Arnhem Land for many years, these participants had a comprehensive knowledge of kava use and kava related harms. In contrast a proportion of health service KIs were new to the region, these participants reported knowing very little about kava and kava related harms.

KI’s reported that community knowledge about the harms associated with indirect health effects of kava use, such as dehydration and sitting for long periods, were less well developed than knowledge of direct health effects. Similarly, some participants reported that links between kava use and social harms were poorly understood as was the capacity of individuals and groups to recognise over use and the consequences of over use. For example:
People don’t always make the link between starving for kava, humbugging for kava and addiction.

There is a general recognition that kava was abused but and everyone knows about the skin. People have mixed feeling about the consequences.

While it is not clear from the present study if kava related harms are well understood, considering the conflicting literature regarding the health effects of kava it is not surprising that KIs report that community knowledge of the effects of kava are mixed. The results suggest that there are opportunities for health promotion and education around the indirect effects of kava use, identifying over use and the social effects of kava use.

**Treatment and intervention**
Participants were asked if there were any current treatments or health interventions available for kava use, how successful they were, and if they required additional resources. In addition participants were asked where someone who wanted to cut down or quit might go to seek help. There were very few responses by KIs to these questions with most reporting that there were either no services available, or that they were not sure where to go. Other responses are given below and are predominantly from KIs who worked for health services.

**Health promotion and education**
Despite community agencies and health services having previously developed several health promotion resources (as described in Section 2.2, page 105) participants explained that there were very few resources currently being disseminated or used.

Further others felt that kava drinkers in the community were less responsive to harm minimisation messages than previously, for example:

*Harm minimisation is harder to get through now, I think the messages like drink water in between are harder to get through.*

Additionally participants were unsure if there was a current need for active health promotion and education activities. For example:

*We don’t do any preventative health activities around kava, we could do I suppose, it isn’t a clinical priority at the moment so it could be hard to resource.*

More community awareness and health promotion might be helpful. But we have 1300 community members and five staff, we are not resourced to do enough health promotion with anything, let alone kava.
**Primary health care interventions**

Primary health care services in Arnhem Land provide a comprehensive range of clinical services and are typically the entry point for responding to alcohol and other drug use. In previous years primary health care services in Arnhem Land have been at the forefront of responding to kava related health concerns and involvement in research. As described previously staff in primary health care services have reported a drop in the prevalence of kava related harm and that kava is no longer a clinical priority. In addition participants reported that most clinics now conduct little individual screening or community level monitoring of kava use:

We used to screen for kava but we don’t as much now. Computer systems have changed a few times and it has dropped off what we do. There has been no recent push for kava to be on the health agenda.

We do ask about cigarettes, gunja, alcohol and kava but we have paper records and no resources to monitor beyond that.

In addition several KIs explained that health service staff turnover has meant that many individuals who had developed a comprehensive understanding of kava related health impacts no longer work in Arnhem Land communities and some of their knowledge is thought to be lost.

**Treatment**

There are very few alcohol and drug services in Arnhem Land, there are beds available for detoxification in the Nhulunbuy/Gove District Hospital and one drug and alcohol worker for the entire region employed by NT health. Not surprisingly, there are no specialised kava treatment services available and there are limited services beyond training and health promotion provided by the alcohol and drug worker. Several community controlled services do employ alcohol and drug workers however few of these have the resourcing and capacity to provide evidence based treatment for alcohol or other drug problems. Consequently most discussions around treatment for kava with KIs were around the themes of limited resources in the entire drug and alcohol sector.

When asked how individuals who want to cut down or give up kava seek support respondents reported that people tended to rely on family and friends who did not use kava, physically moving away from kava and getting advice from GPs, nurses and health workers. As explained by one participant:

Quitting was difficult I was starving for kava, go looking for rupiah for kava. I moved to a new place away from kava – we don’t have kava in this house, no one can come in here with kava.
Resourcing of treatment and intervention

As described above resourcing for alcohol and drug support in Arnhem Land is considered dire by the majority of respondents, and many reported having inadequate support or practical guidelines in responding to kava use. As a consequence many KIs from health services described feeling unprepared and unsupported when it came to helping clients address any kava related health problems or helping people reduce or quit kava use:

So hard to know what to say and what to do – we do not have good information we are guessing what the effect of kava is most of the time – we think heart but we don’t know. Wonder about immune system as well.

One lady wanted detox, wanted to go to hospital, hospital didn’t know what to do, couldn’t give clear advice.

If someone presented with kava problem – we would not know what to do or what to look for.

Of particular concern, one health service staff member explained the concerns that emerged when the importation restriction was implemented:

When the ban came we asked for advice about withdrawal and we were sent a flyer about the effects of kava on health from the NT government. We don’t know about the short and long term effects – no one can be clear with us.

The lack of clear information and research regarding how kava effects health has had an impact on the confidence and preparedness of health service staff to respond to kava use; the lack of clinical resources, let alone physical resources combined with high turnover in staff means that some primary health care services are ill equipped and unsupported in helping patients with kava use.

The discussions around treatment and intervention suggest that since the import restriction, kava use has ‘gone off the radar’ and is no longer a central concern to health and wellbeing services, this is further exacerbated by staff changeover with many staff having limited experience with kava related health concerns. Whilst this is understandable given the complex multiple health needs that services respond to in Arnhem Land, if kava harms re-emerge it is possible that services may not be equipped to respond, and that NT health is not equipped to provide adequate information and support.

The kava import restriction

In analysing participants descriptions of impacts of the import restriction three areas of importance emerged and were analysed separately: impacts of
the implementation of the restriction, the impacts of the restrictions, and community attitudes to the import restrictions.

**Implementation of import restrictions**

The way in which the import restrictions were implemented and the rationale presented to communities with kava licenses was discussed in negative terms by the majority of participants. The restriction, and consequent end to licensed kava, was regarded as occurring without consultation and communicated poorly. The implications of this are frustration and confusion at the decision leading to feelings of resentment and feelings of persecution. In addition, as previously described, the import restrictions were also regarded as a component of the NTER. The following comments provide examples of how the implementation of the restrictions affected KIs and communities.

This was about the intervention, the intervention humiliated our law.

When the ban came it was done within a week. It was copied from alcohol legislation and there was no meaningful consultation. (this community) was a bad place then, people were very angry, black market came straight back. The anger came through.

It was FACHSIA driven, no consultation, linked to intervention. Embarrassing to explain. Shameful.

There is a lot of resentment because when the ban came other communities with no kava and similar problems didn't have alcohol taken away. It was only kava using communities who were punished.

Everything has been taken away, by a whitefella who nobody has met, who has not seen anyone in the community.

What is trying to be achieved? That is not clear. People aren't foolish – the ban was quick, but the actual efforts to help communities are not. What are we protecting with this ban? Rumours start through the lack of communication and support.

The last quote is particularly important as it highlights the perceived impulsive nature of the import restriction and lack of follow up support; many KIs repeated this sentiment and explained that the law was implemented with no planning for any other assistance to communities. For example:

Problem is people did get addicted and they changed that law overnight, there was no help for people.

Further several non-Aboriginal participants who work in roles associated with the kava licensing reported that they felt undermined by the implementation of the law and ashamed when meeting with Aboriginal community leaders.
It is also important to acknowledge that the rapid implementation of the import restriction had a significant impact on the businesses of the community controlled kava licensees. Many of these organisations had committed funds from projected kava earnings into community projects. The restriction and subsequent loss in profit had wide-ranging impacts on these organisations including financial over commitment, job losses, inability to pay contractors and inabilities to complete work undertaken. Regardless of the ultimate impacts of the import restriction the implementation of the law has had a lasting negative impact on Aboriginal communities in Arnhem Land in many ways.

**Impact of import restriction**

As described in the current section analysis of the KI interviews suggests that a number of changes have occurred since the implementation of the import restriction. These include the reduced availability of kava, reduced prevalence of indicators of heavy kava use, and the reduction of some social harms attributed to kava. In addition the findings suggest that patterns of kava use and contexts of kava use have also changed. The black market has become more active and the cost of kava has risen dramatically, and negative impacts of the black market have emerged. It is important to acknowledge that these changes have occurred in the context of a range of other changes in communities both driven internally and externally (e.g. the NTER). Consequently it is not possible to determine if any changes can be seen as a direct result of the import restriction. Participants were asked how they felt the import restrictions had affected kava consumption and community functioning, these results are summarised below.

Participants commonly acknowledged that kava availability and use had been limited by the import restriction. Several participants also reported that kava consumption had been affected by the import restriction indirectly through the increase in price which occurred when kava was only available through the black market and proposed that this has influenced how much kava people use.

Sometimes it is so expensive we buy food first and then there is no money for kava left.

Maybe it is a good way to slow people down, no rupiah can’t have kava. Can’t go looking for it when you can’t pay for it.

Maybe some people drink only what they can afford. Other people maybe buy the wrong things first.

A number of participants reported that the import restriction, and reduced availability of kava have led to improvements in community functioning, for example:
I was away when the change happened. Before you could not see people in the community in the morning. After you could see people with clear eyes and being alert, going to work in the morning. I think the community is better for having no kava.

Participants also discussed several negative effects of the importation restriction. These included some participants arguing that the import restrictions had resulted in return to the use of alcohol and alcohol related harms such as violence, which was discussed in Section 6.3 (page 227) and summarised by the following quote:

Before there was money problems leading to family fighting and DV and all the health issues. I don’t think that the end of kava licensing resulted in an increase in violence. Kava is less violent than alcohol but there was a lot of fighting over money when kava was readily accessible.

A number of participants also reported that reduction in kava availability following the import restriction has influenced men to leave smaller communities and homelands and move into regional centres:

There were fewer long grassers in when there was kava. With alcohol limits and permits people were pushed out of communities – but for kava they stayed.

... the alcohol restrictions, it moves grog and people to Darwin, women prefer kava because it can keep younger men in town.

The growth in the black market was seen as a serious negative consequence of the import restriction, the harms of which are described in Section 6.3 (page 227). Several participants also expressed concerns that the offence provisions in the import restrictions were poorly designed and difficult to enforce making prosecution and also deterrence difficult to achieve.

The legislation is poor – it is very difficult to prosecute people. Offenders know that – they know what they can get away with.

The financial impacts directly coming from the import restriction through the end of licensed kava retail and indirectly through money being spend on the black market and leaving communities was a commonly repeated theme by participants.

The findings suggest that although the import restrictions are likely to have resulted in reduced kava availability, levels of kava consumption and kava related harm, the import restrictions are limited in that they have not prevented the growth of the black market.
Community attitudes to the import restrictions

KI were also asked about the current broad community attitudes to the import restrictions particularly given the passage of time that has elapsed since the restrictions were brought in. The responses of Aboriginal participants are described below. Attitudes were diverse with some members of the community supportive of the restrictions and other opposed. In addition to this themes around the motives behind decision to restrict kava and the rationale used to explain the restriction were identified during analysis.

A number of participants although acknowledging kava related harms, felt that logic behind the import restriction was flawed, for example:

At the time kava was banned some of things they were blaming on kava was actually gunja.

There were individual health problems presenting, leathery skin. People were underweight – some people are overweight though. People went too far with kava, but blaming kava for all problems is a bit narrow minded.

Many of the reasons it got banned, like kids not going to school, are still problems – kava was a cop out.

Other participants described community attitudes about the development of the law itself arguing that it was unfair decision based on a lack of understanding and consultation and cultural myopia:

The Balanda have alcohol when they have ceremonies and the Yolngu have kava for their ceremony. People don’t ask the Balanda why they want alcohol.

There is a biased enforcement of the law – for alcohol – let people have a little bit, but not for kava, it just is banned.

Law says you can only have the poison we choose for you and that’s alcohol and tobacco.

We get given kava, they tell us we are not doing it right then they take away the kava. They want to turn us into them; they want us to drink beer!

Kava is one more thing the Balanda have taken away, and it was something that communities had some control over, and could profit from, there was some power and pride in that. Regardless of the consequences it is not surprising that many people want to fight the government and have it back.
Those in support of the import restriction tended to be supportive of the reduction in kava availability:

Current law is fine from a health perspective.

I can’t deny some homeland communities are healthier without kava.

The importation ban is the right thing – I would not like to see kava back again the way it was.

It sounds bad but things are better when there is just black market kava around.

Finally some participants criticised the import restriction as a piece of legislation arguing that kava should either be legal or not legal, for example:

Whatever happens we need to be clear about the message – 2 kg is confusing. If kava is there people will drink it. If it is banned you can arrest people. At the moment it is neither. It should be black or white – illegal, then develop penalties, or allow it.

Non-Aboriginal viewpoints typically emphasised the importance of community control over decision making, yet felt the reduction in kava use was positive. The findings demonstrate that Aboriginal community attitudes to the kava importation law are largely negative, which is consistent with the experiences of communities around how the laws were implemented. Despite this, many participants described that the outcomes of reduced availability as positive and therefore supported the imported restriction.

**Attitudes to the licensing system**

Considering the rapid termination of and the absence of an evaluation of the licensing system many participants were keen to talk about the impacts of licensing and their experiences of the licensing system. Although a discussion of licensing is not central to the current status of kava use in Arnhem Land it was considered important to acknowledge the issues raised by participants and recognise how these issues impact current community sentiment to kava and indeed the import restrictions. There were mixed responses in discussing the kava licensing system, it was commonly acknowledged that the system had problems, but many felt that they did not have the opportunity to address the problems and improve the system. Many KIs also described the development and implementation of the system with a sense of pride as it was regarded as having been developed with genuine community consultation.
The consumption of kava under the licensing system was regarded by the majority of participants to have been too high, for example:

There was open slather on kava; there was a lot of consumption.

Despite this widespread assessment, many KIs from kava licensed communities reported that there had been recognition of over-consumption but that licensing had been terminated prior to action having been taken.

It wasn't perfect; it was a work in progress that was getting traction. The Kava Health Education Advisory Group had only just got going but it was not run effectively, health services often didn’t come to the meetings and there were cancellations. This needed a lot more work. It does mean that it is time consuming but it could have been effective if well managed.

We were improving it, we were about to start tracking of kava sold. There was a lot of illegal on selling within and between communities. Licensed kava was going to non-licensed areas. We started to make plans, then they just banned it.

The community licenses were not all well run but people understood the issues around kava, had some control over them and money was spent on the community. They said they were going to change how much kava was sold.

Participants also expressed concern that licensed communities created population shifts as people who wanted to drink kava left non-licensed communities and moved to licensed ones. This had an impact on community resources in licensed communities.

When we had a licence people from (non-licensed communities) used to come and have kava here. It got too big; there are already too many tribes that live here. Now they have moved back.

An important theme emerged around the relationship between selling kava at profit and maintaining healthy communities. For example:

It was actively marketed as a product. It became about making money, selling and making money.

Limits for healthy drinking were applied but enterprise took over. There was more profit in selling more.

... licensed means tax. Just like ngarli, the government can make money from people getting sick.
Several KIs involved in licensing argued that the challenges licensing presented were about getting a balance right and many likened their experiences and challenges to that faced by governments managing alcohol, tobacco and gambling.

An important theme that emerged from a range of participants was the impact that licensing had on money available within communities to spend on community priorities, for example:

Licensing is interesting; it created a power shift in communities because communities had more power to purchase things for the community and therefore to prioritise for their own community rather than imposed priorities.

This experience has had a significant impact on how participants have understood the import restrictions, for many in the environment of poor communication which surrounded the import restriction it was interpreted that government did not want community organisations to have their own money and spend money on their own priorities.

**Current community attitudes to kava regulation**

Participants were asked how they understood current general community feelings and attitudes to kava regulation. This was considered important as discussions about the import restrictions were influenced by the negative experiences of how the restrictions were implemented and designed and their perceived links to the NTER. Participants were also asked about future options for addressing kava related harms in the community.

KIs perceived that community attitudes to kava were diverse

You will get different stories – people who drink, say all is fine and people who don’t say you should ban it.

KIs explained people who were in favour of legal availability of kava typically had the following arguments, enjoyment of kava, integration of kava into ceremony, preference of kava over alcohol, kava keeping men in communities, kava profits remaining in communities and the risks of the black market. For example:

Kava drinkers stay in the community and drink kava whereas a lot of alcohol drinkers will go long grassing for a while and then come back – so many people prefer kava in the community as it keeps people together.

The Board is generally in favour of a return to kava because kava has been integrated into ceremonies at funerals and disputes and the fact it supported business was a bonus.

... kava drinkers are better to have in the community – don’t cause problems for everyone else like alcohol.
Probably better for community if kava was legal at least the community would keep the money.

Participants reported that community sentiment against kava was centred around disagreeing with those who support kava, fears of a return to previous levels of kava consumption and harms, and those calling for a complete ban on kava.

Community opinion is dominated by very vocal men, women are not interested in it returning.

There are some vocal people who want it back – but the issue is largely mute. Community are aware of the negative effects.

Yolngu with a vested interested want it back, but just for money. Other families got sick.

I think not having money makes people suffer more than not having kava.

Kava is not good, it is not useful for the community, you can’t get much progress with kava, people are vague, uninterested and waiting for the next kava bowl.

Women are concerned that men won’t do anything, if kava comes back – they don’t want it back.

Some people want it banned altogether. No two kilogram – two kilogram is confusing.

Other participants argued that people should have the right to choose if they have kava or not without prosecution

I don’t drink kava because it is not my culture, I drink turtle soup, but if people want to, they can – that is a decision for them to make.

Participants were also asked if debate around kava was a current topic of concern in communities; the consensus among KIs was that aside from a vocal minority, many people felt that the debate about kava was no longer a community priority in the broader context of other issues facing remote communities.

People do not talk about kava much now. Hierarchy talk about kava, senior men want kava back.
Homebrew and gunja are bigger concerns for the community. Most people have moved on and don’t think about it. People were angry and some of them have made their own arrangements.

I don’t think that the community is particularly concerned about kava – except when arrests occur.

There is not much general discussion in the community – but it is divided. People don’t complain that there is too much kava at the moment.

In discussing the options for future policy around kava participants expressed the complexity of weighing up the black market and licensing systems that have been previously experienced. As summarised by participants:

... the debate is about harms caused by access vs. harms caused by unfettered access.

We need to strike a happy balance between cheap to reduce black market but be able to better restrict consumption.

Many participants argued that debate and regulation should consider that lower levels of kava use are not harmful and that any regulation should prevent uncontrolled access.

If managed properly, it’s acceptable, if there are limits.

If there was regulation and kava was reintroduced, regulation would need to be tighter, we need to be encouraging healthy choices instead of banning things. We need ongoing support for building positives and putting our resources into helping those people who do.

They need to stop making laws about kava unless they are good laws that make people eat before they drink kava. Yes you can drink but you must eat first, must not drink in the day.

However some community members argued that controlled availability was not realistic arguing that consumption in Aboriginal communities was only ‘feast and famine’, and therefor that kava should be completely eliminated. Whilst these opinions are important to consider, it is also important to acknowledge that many Aboriginal people did not agree with this argument.
Other participants emphasised that kava is still regarded as an accepted substance and that whilst it is accepted controlled use will be a challenge for policy:

Need to consider availability, price and acceptability – kava is still an accepted drug, but people only talk about availability and price.

The risks of legal kava returning are that a market and demand will be created again. We don’t want it to be normal and wouldn’t want to risk increasing use.

Of particular importance, many participants described that any future policies around kava needed to consider the level of alcohol and alcohol regulations in communities.

Under the current AMP (alcohol management plan) it would be dangerous to reintroduce kava. People are drinking less. Limited kava is available – if it was more available it would open up substances to the wider community. If there are a core group (of kava drinkers) people will always join to be part of it. If that is restricted we have a chance to minimise it. There is an opportunity to get healthy. If it comes back it will grow quickly.

Bringing kava back now would be risky; there is too much going on with alcohol.

In reviewing the overall discourse around kava it appears that much policy decision making, or at least people’s perceptions of policy making, has centred around the argument that kava has negative health effects. Considering the conflicting information and lack of clear empirical evidence around the purported effects of kava, and the levels of use at which harms emerge, it is not surprising that a number of people are sceptical as to the rationale and wisdom of the import restriction. For example one participant, an elder community member explained:

If I can be shown it damages health then I will say no.

It is possible then that a reframing of the debate is warranted with more consideration given to the social harms associated with kava use and recognition that different levels of kava use have different impacts. Arguments that propose that kava is bad for health are quickly dismissed by examination of the evidence and through individual’s experience.

Regardless of the diversity of opinion and debate a key theme which emerged among all participants was the right of the Aboriginal communities to self-determination, or at the very least, to be actively involved with making of laws which affect them. As summarised by one participant:
We need to rewind the intervention, make them all go away. Then we can look at kava again look at reports, look at reports that talk about us, and decide what we need for kava.

6.3 Summary

The findings of the current section provide an overall description of kava use in Aboriginal communities in Arnhem Land. Whilst the prevalence of kava use is difficult to determine, the results suggest that the overall consumption of kava use has declined since the import restriction on kava was enforced. In addition, indicators of heavy kava use, notably the presence of kava dermopathy have also decreased. Despite this, it is estimated that the demand for kava remains strong and the black market for kava is extensive. Indeed the findings suggested that the availability of black market kava has been steadily increasing since 2007. Kava use continues to exist in all Arnhem Land communities that have had a history of kava use; it does not appear to have spread to new communities. The results discussed below relate to kava using communities, including both those that have held kava licenses and those that have not.

Kava is used by both men and women, however use among males was described as more common and kava was also thought to be more common among people over the age of 20 years. Whilst kava use is common at funerals and can be used in some ceremonies, participants explained that the majority of kava use occurred in social settings where the typical pattern of kava use is ‘binge use’. The findings suggest that available kava is likely to be consumed over a short period of time until it is finished. This pattern of use is regarded to be the same that has existed since the introduction of kava, although it is possible that reduced availability has resulted in kava being shared between fewer people, being mixed more weakly and consumed more rapidly. The concurrent use of alcohol and kava, and cannabis and kava was considered rare, however participants explained that sugary foodstuffs and paracetamol were used by some people to increase experiences of kava intoxication. Kava available in Arnhem Land is commonly reported to cost upwards of $1000 per kilo and is sold in deal bags of either 50 g or 15 g. Of particular concern was the finding that it black market kava is often cut with flour or powdered milk, and there are rumours it has been occasionally cut with cement.

The social settings of kava use were described as small groups of males and females or only males, but rarely only females. These groups drink kava covertly in houses or in the bush to avoid detection. Participants explained that kava drinking was a peaceful and relaxed group activity. In examining the health effects of kava use the findings demonstrated that since the introduction of kava into Arnhem Land a range of negative effects related to chronic kava use and kava use practises have been detected. These include lower overall health, kava dermopathy, liver function changes, sore and red eyes, and the impacts of poor hygiene, sitting for long periods, dehydration,
poor nutrition and undetected injury. The prevalence of these effects is currently considered low. However there are some concerns that some effects are going undetected and that there may be emergent health effects caused by adulterants in black market kava.

The most commonly reported social effects of heavy kava use on individuals and families were time and money spent drinking kava that have previously led to effects such as low levels of community participation and neglect of family responsibilities. These effects have been particularly concerning during periods in which kava availability has been high and when a significant proportion of a community is using kava. The current negative social effects of kava use described by participants include the cost of kava, the financial impact of money leaving communities and the impacts of the black market. The effects of the black market on communities include the legal ramifications for those caught with kava, the impact of vehicles being seized on communities and risks taken by those involved in the black market resulting in road fatalities.

Throughout the findings the relationship between alcohol and kava was a recurrent theme. This is not surprising given that kava was initially introduced to Arnhem Land with the goal of reducing alcohol related harm. Many participants reported that kava did minimise alcohol related harm such as violence, community disharmony and men leaving small communities to drink in regional centres (long grassing), others have argued that community disharmony and violence caused by alcohol have been reduced through a range of factors and not simply kava. There were widespread concerns that when the kava import restriction was implemented that there would be a return to alcohol consumption. There is conflicting evidence as to whether this occurred. Not surprisingly, the recently implemented alcohol permit system in the NT has raised concerns that reduced alcohol availability will strengthen the kava black market and lead to a resurgence in kava use. The actual levels of substance substitution between alcohol and kava is unclear, whilst there are likely to be a sizeable number of people who use both alcohol and kava opportunistically there are others who consume only their substance of choice and do not switch when it is not available.

Considering that the demand for kava is high, the prevalence of kava use under the current system is likely to be dependent on kava availability which itself is determined by black market activity and NT police operations. The kava available on the black market is thought to come mostly from Sydney and occasionally from Queensland (Cairns and Brisbane) and Melbourne through Tongan and Aboriginal networks. NT police have conducted numerous successful operations targeting kava arriving into Arnhem Land by road, by air and through the mail, however the NT police have limited resources to conduct sustained operations throughout the large Arnhem Land region. The findings suggest that these operations are further complicated by the adaptability of the black market and difficulties in prosecuting major
suppliers. Furthermore the findings suggest that the NT police have limited support from other jurisdictions in preventing kava from entering the NT and pursuing persons of interest outside the NT.

A clear limitation of the import restriction is that it relies on lower levels of kava availability and high kava prices of the black market as measures to reduce kava use, leaving law enforcement as the only resource to combat kava heavy use. The results of the current study demonstrate that there have been to date, and continue to be, very little resourcing and effort in prevention, harm minimisation and treatment for heavy kava use let alone strategies to address the social determinants of kava use. In remote areas the majority of alcohol and other drug interventions are conducted through primary health care services. Findings from the current study suggest that the majority of remote clinics do not regard heavy kava use as a current high priority and they undertake few activities in the addressing or monitoring kava use. This is not surprising considering the complex health needs of the communities which primary health care responds to. Furthermore, clinics reported limited resourcing and support to address kava use if the need arose. It appears from the findings that following the import restriction kava use has been overlooked and there is little ongoing effort to monitor use or kava related harms beyond the efforts of police.

The impact of the import restriction on kava implemented in 2007 was also addressed in the current study. The findings are complex as they are interwoven with the effects of the NTER which was commenced during the same period. The findings clearly demonstrate that the development and implementation of the import restriction have had lasting negative impacts on Arnhem Land communities. No consultation was conducted prior to the restriction and there was poor communication of the intent of the law change to communities and organisations holding kava licenses. Additionally no plans were put in place to address the needs of people using kava following the restriction or to manage the timing of the kava import restriction and alcohol restrictions. The impacts of the import restriction over time are hard to determine given the number of confounds that exist, however the findings suggest that overall kava availability, level of consumption and level of kava related harms have decreased, and that the activity of the black market and the cost of kava have increased. It is important to acknowledge that there has not been possible to examine with any specificity the availability of kava over time, and there are concerns that the black market is steadily increasing. Community attitudes to the import restrictions are mixed, there are those who argue the laws are insufficient as they do not ‘ban’ kava completely, others who argue that a return to controlled availability, such as licensing is a better alternative and those who are supportive of the current status. In considering future policy directions for kava a clear finding was the need for community involvement in the development and implementation of policy. Further effort is required to try to balance the impacts of the black market with the impacts of legally available kava. Controlled availability (licensing) was regarded by some
as a viable policy alternative however many others felt that previous licensing systems had failed to adequately control consumption levels. Finally, participants cautioned that no changes in policy should be made without consideration of the current alcohol restrictions and the availability of alcohol.
PART III SYNTHESIS OF FINDINGS AND RECOMMENDATIONS

7 Synthesis of findings

A synthesis of the findings of this report in relation to the Terms of Reference specified by the Department of Health and Aging is presented below. The synthesis takes into account the literature review (Chapter 1, page 3), impacts of kava control measures and interventions (Chapter 2, page 86), review of existing data (Chapter 4, page 113), rapid assessment of kava use in Pacific Islander communities (Chapter 5, page 131), and rapid assessment of kava use in Arnhem Land Aboriginal communities (Chapter 6, page 184).

7.1 Term of reference 1

Examine the health impacts of kava use

As described in Chapter 1 (page 3) much of the research examining the health impacts of recreational kava use have been descriptive studies examining a large number of variables with opportunistic samples, and ethnographic studies. There are no longitudinal studies and few which have used random or matched sampling. In general terms this has resulted in evidence which is at its highest level III-2 according to the NHMRC levels of evidence framework (National Health and Medical Research Council, 2009; Rychetnik & Madronio, 2010). As a consequence conclusions drawn must be taken with caution. To support the evidence from studies on recreational kava use the literature review also considered the research pertaining to the use of kava extract in natural medicine. Kava extract used in natural medicine contains the psychoactive components of kava (kavalactones). In examining the health impacts of kava use distinctions are made between acute effects, chronic effects and health impacts related to preparation and method of kava use (indirect effects), a summary is presented below.

The acute adverse effects of kava on health are generally mild; the following have been described in the literature and in the current qualitative findings: dizziness, nausea, red weeping and irritated eyes, local anaesthesia, muscle relaxation, headache and fatigue. There is little research investigating the incidence, cause or clinical significance of these effects. In the current research experiences of dizziness, nausea and headaches are not common to all kava drinkers. At high doses kava can also cause ataxia and uncoordination. These effects are dose responsive yet there is no evidence
indicating at what doses they are likely to occur. There are some concerns that muscle relaxation, ataxia and unco-ordination may predispose individuals to accident or injury, particularly if driving or operating machinery. Further as described in Chapter 6 (page 184) there are case examples of individuals experiencing injury whilst drinking kava and delaying medical treatment due to the anaesthetic effects of kava preventing the consumer from recognising the injury.

A potential health impact of kava worthy of note is the effect of kava on the metabolism of other substances (including medications and alcohol). It is not known whether recreational kava use has been indicated in drug interaction effects or consequences. There is mixed evidence from self-report research that kava use causes appetite loss, however this effect has not been confirmed in controlled experimental research. Taken together the research suggests that acute effects of kava present mild risk for harm.

In terms of the chronic health effects of kava use, research has consistently shown that after prolonged heavy use kava drinkers are likely to experience kava dermopathy – a scaly skin rash. The evidence suggests that there is a dose dependent relationship between kava use and kava dermopathy, the condition is reversible on reduced consumption or cessation of use. The results from the current study suggest that some people with kava dermopathy experience the condition as itchy or uncomfortable whereas others report no discomfort. Little is known about the long term consequences of kava dermopathy, its progression or the level of kava use at which it emerges. Anecdotal evidence from the current research demonstrates that some medical practitioners have concern that kava dermopathy may predispose individuals to more serious skin conditions such as scabies, abscesses and boils, further research is indicated.

The most well studied and controversial purported chronic effect of kava use is on the liver. In both medicinal and recreational contexts kava has been found to affect liver functioning as demonstrated by increased levels of the liver enzymes gamma-glutamyl transpeptidase (GGT) and alkaline phosphate (ALP) in a dose dependent fashion. It is important to note that no studies to date have demonstrated that hepatocellular damage or hepatic failure has occurred as a result of changes in liver enzymes. Only two case studies of liver toxicity among recreational kava users have been reported to date (Russmann et al., 2003). Thus the clinical significance of raised ALP and GGT is unclear. The possibility that prolonged high levels of kava use may permanently affect liver functioning and liver damage cannot be ruled out, however moderate and short term use is unlikely to cause irreversible liver damage.

Additional effects of kava on health are less well understood, and are described in detail in Chapter 1 (page 3). Possible effects worthy of note include evidence which suggests that kava use may have an effect on cardiovascular functioning, particularly in an exercise context. Self-report research
in both Arnhem Land and the Pacific has suggested that chronic kava use can result in general poor health, a finding which also emerged in the current study. How kava may cause poor overall health is not clear, and no matched studies have been conducted. To date one brief study has been conducted (A R Clough et al., 2003) which found kava users had indicators of lower immune functioning, however the results were not sufficient to conclude that chronic kava use compromises the immune system. Clearly it is a possible that observed patterns of low health may be related to patterns of kava use in which health is neglected.

Lethargy, tiredness and fatigue are commonly thought of to be a characteristic of chronic kava use and a ‘hang-over’ effect following an episode of use. These symptoms have not been systematically operationalized or studied so it is not possible to describe them in any detail. They may arise from an unknown mechanism of kava or be related patterns of kava consumption such as duration of kava use. Further research using controlled experimental conditions and/or matched controls is required.

Several documented effects appear to context specific. There has been evidence from Arnhem Land that kava use has been associated with low body mass index (BMI) and weight loss however this finding has not been demonstrated in any research in the Pacific Islands. Considering there is no detailed research into whether kava acts as an acute appetite suppressant, it is possible that the low BMI reported in Arnhem Land and not in the Pacific are related to pattern of kava use and overall diet.

In terms of serious consequences of kava use on health, beyond concerns about the liver, there have been some concerns that kava can be related to seizures as a component of either toxicity or withdrawal. Evidence regarding seizures is limited to one case study (Spillane, Fisher, & Currie, 1997) and a retrospective review of the medical notes of 21 cases (Clough, Cairney, Maruff, Burns, & Currie, 2001). Seizures have not been described in any detail in literature from the Pacific, and results from the current study did not indicate that seizures had been recently reported in response to kava use in either Arnhem Land communities or among Pacific Islander communities.

Identification of harmful use of substances and substance dependence are important topics in understanding the effects of any substance with the potential to be misused. To date the research into kava use has neglected looking at the clinical significance of heavy kava use. There has been insufficient research into tolerance to kava and kava withdrawal from which to make any firm conclusions. As described above, there is evidence that seizures may very rarely occur during kava withdrawal, and health workers in the Pacific have described clinical presentations they regard as kava withdrawal. Thus it is possible that a kava dependence syndrome exists. There is evidence that people consume kava at levels consistent with the characteristics of a substance dependence syndrome (See Chapter 1, page 3),
including craving, neglect of roles in the family and community, difficulties controlling kava use, and continued use in the face of persistent negative consequences from use. Prevalence of use at this rate is unknown.

Many of the health effects described raise the question of how to identify what 'high levels' of kava use are. Seminal research conducted in the late 1980s in Arnhem Land (Mathews et al., 1988) described ‘heavy users’ as those using over 310 g of kava powder per week, ‘very heavy’ users using over 440 g per week and ‘extreme users’ as those using over 900 g per week. These distinctions have been subsequently used in numerous studies in Australia and the Pacific however the rationale for these distinctions is not clear. In examining the medicinal kava research the World Health Organisation reported that doses of up to 210 mg of kavalactones are associated with few negative consequences. They argue that doses of 400 mg of kavalactones daily (approximately 0.4 g of kava powder), and above are associated with the development of kava dermopathy and other negative adverse effects (World Health Organisation, 2007). These doses are small compared to the amount of kava consumed by recreational kava drinkers described in both the current and previous research. To date it is not clear at what level of kava use harm is likely to emerge, and ‘moderate use’ has not been operationalized.

There are potential indirect health effects related to the way in which kava is consumed and the quality of kava which is used. Sub-standard kava including kava which is harvested from the immature plants, kava powder which includes root stems, kava from non-noble cultivars and kava cut with other substances may constitute a health risk. Indirect health effects related to preparation of kava, including unhygienic preparation of kava, being seated for extended periods and becoming dehydrated, are summarised in 7.6.

In the current study there were very few reported chronic effects of kava use with the exception of kava dermopathy. To put the incidence of the health effects of kava in context, the findings of the WHO review into kava hepatotoxicity commented that although an adverse event rate for kava is difficult to identify because information on the total exposed population to kava is lacking, they estimate an adverse event rate from kava may be 1 in 100 000 (World Health Organisation, 2007). The current review of existing information and qualitative findings does not provide evidence contrary to the conclusions of the Food Standards Australia New Zealand (2005) review into safety of kava and the WHO (2007) review which both concluded that there is no evidence that low or moderate use of kava has adverse health consequences. This said there insufficient evidence regarding the health effects of high levels of kava use; it is likely that heavy kava use can result in adverse health effects. This said there is insufficient evidence regarding the health effects of high levels of kava use; it is likely that kava use can result in adverse health effects.
7.2 Term of reference 9

Review the social and cultural context of kava use and how this impacts upon health

Kava use by Pacific Islanders in Australia takes place in a range of contexts; the most common of these contexts can be summarised as:

*Ceremonial and Formal* Common among Tongan, Fijian and Samoans - ceremonial and formal kava use is a ritualised practise often associated with formalising events (e.g. weddings, funerals, family discussions) and as part of celebrations (e.g. welcoming visitors, celebrating National days)

*Social* Common among Tongan and Fijian males. The social context of kava use for Tongan males tends to occur in organised kava clubs which may be secular or Church organised. Fijian social kava use tends to be in less formal social gatherings among friends or family. The vast majority of social use occurs in the evening and at night.

*Church* For some members of the Christian denomination Churches, particularly Free Wesleyan and in culture specific (Tongan) congregations of the Uniting Church kava is used within Church service.

Kava is also consumed in medicinal and fundraising contexts which are described in more detail in Chapter 1 (page 3) and Chapter 5 (page 131). Consumption of kava in a non-group context was considered very rare across all Pacific Islander groups. Contexts of use are generally culture specific, for example very few non-Tongans attend kava clubs. The findings highlighted that in considering the context of kava use it is important to recognise that kava use occurs within a broader experience of being a Pacific Islander in Australia - specific issues such as migration stress and adjustment to life in Australia, changing gender roles, and challenges of addressing youth crime were key themes that emerged in discussions about kava use.

In considering the impacts of contexts of kava use on health it is acknowledged that ceremonial and formal forms of kava use are unlikely to have an impact on health.

Social use of kava may present some risks to health. The use of kava at kava clubs by Tongan men is worthy of attention. Kava clubs exist across Australia; there are an estimated 80 clubs which operate in Sydney. Kava clubs may be linked to a specific church congregation, location in Australia or be a broad social organisation, such as branches of the international Fofo'anga Kava Clubs. Although there are kava clubs in Sydney which operate nightly, kava is typically available at kava clubs between 3 and 6 nights per week. Kava clubs are self-regulated and as a consequence vary in their operation. They are located at private residences, multipurpose halls and in premises rented specifically for a kava club. The primary risk to health at kava clubs comes...
from the varying degrees of hygiene in the preparation and sharing of kava, the available toilet and washing facilities, and available drinking water. Several clubs have taken steps to ensure members use one cup all night and have easy access to toilets, hand washing and dish washing, whereas other clubs are not able to provide these amenities. The majority of kava clubs are ‘smoke free’ and require club members to smoke away from the kava drinking. An additional risk identified in the current report is that the majority of kava club attendees report driving after drinking kava, considering kava may impact on driving through fatigue (related to being awake for long periods), the soporific effects of intoxication and impacts of unco-ordination, driving home from kava clubs may present a risk.

Additional concerns related to health include the impacts of sitting for extended periods of time and the use of sugary foodstuffs and, caffeinated soft drinks and energy drinks while drinking kava. Whilst the health effects of consuming caffeine and kava are unknown, the increasing practise of consuming soft drinks and energy drinks may come at the cost of drinking water whilst consuming thus presenting a risk of dehydration. The use of sugary foods is popular to hide the taste of kava and counteract the mouth numbing sensations associated with kava use; several participants in the current research were concerned about the use of sugary foods considering the high rates of diabetes among Tongan males.

Kava clubs have mixed attitudes to alcohol, with some allowing people to drink alcohol alongside those drinking kava, some prohibiting alcohol from being in a kava club, and of concern, there are a small number of kava clubs who on occasion provide kava to alcohol intoxicated people to ‘nullify the effects of alcohol’ which presents a risk to health. A final concern worthy of note is the desire by many clubs to attract young males, particularly those under the age of 18, into kava clubs as a means to prevent them engaging in alcohol use and antisocial behaviour. The value of kava as a diversion strategy raises concerns.

Fijian social contexts of kava use are less formal than Tongan kava clubs, however similar concerns around hygiene, sitting for long periods, driving after kava use and the consumption of sugary foodstuffs may present some risks to health. In addition, due to the additive effects of kava and alcohol, the practise of ‘washing down’ kava with alcohol may present a risk – particularly in the context of driving.

Harm minimisation practises are ingrained in both Tongan and Fijian social contexts of kava use and include drinking at a slow tempo, eating before and after kava consumption, sleeping after kava consumption, and drinking water to clear dehydration. These practises serve to minimise the effects of kava on health.

Kava use in Arnhem Land communities occurs in a social context in which groups of, on average 6 – 10 people, including both men and women to drink
kava. As with Pacific Islanders it was reported that it would be very rare for people to drink kava alone. Following the importation ban there has been some shifts in the context of kava use, kava is no-longer consumed in the open and has become a hidden event, kava drinking groups are smaller than before the import restrictions and there is less kava available to share. Health risks associated with kava drinking which have been noted since the introduction of kava in Arnhem Land include sitting for long periods, poor hygiene practises in the preparation and consumption of kava, and not drinking sufficient water or eating sufficient food whilst drinking kava. In addition there are concerns that because kava use is now a covert practise people who drink kava are less likely to report kava consumption to health services and to drink in unsafe environments.

The practise of using paracetamol and sugary foods (condensed milk, red cordial) to attain an extra ‘buzz’ from kava has also been reported and may constitute a health risk, although the extent to which this occurs is unclear. Finally the use of black market kava presents a health risk, it is possible that kava is being cut with uncooked flour, milk powder and possibly other substances to increase weight.

There has been some discussion that kava use has in ceremonial as well as social contexts in Arnhem Land. The extent to this is unclear, kava use may have been adapted into aspects of ceremony for some groups, however what this practise looks like and how it may impact on health is unclear.

7.3 Term of reference 2

Examine the population rates of kava use

There is no data available from which to estimate the population rates of kava use in Australia. It has not been possible to examine indicators previous kava availability through the amount of kava legally imported into Australia under the National Code of Kava Management (prior to 2007) because data available did not distinguish between imports of kava for recreational use and for medicinal use. Further, under the current import restrictions no data is collected by Customs or the Australian Quarantine Inspection Service from incoming passengers from which to estimate how much legal kava is bought into Australia under the 2 kg per adult traveller allowance. The only available information regarding kava at a national level comes from the National Drug Strategy Household Survey (NDSHS) (Australian Institute of Health and Welfare, 2011) which has included questions about kava since 2001. The NDSHS asks participants about their opportunity to use kava. The results from 2001 to 2010 are consistent and describe that less than 2 % of the Australian population over the age of 16 years report an opportunity to have used kava in the previous 12 months. A cautious interpretation of this data is warranted because it is not clear if the broader Australian population has sufficient awareness of what kava is to answer the question reliably. It
appears likely that opportunities to use kava, and kava use itself is rare at the population level in Australia. This conclusion is supported by the review of internet forum and drug information service call activity (See Chapter 4, page 113) which demonstrates very little discussion or enquiry about kava occurs at a national level. Indeed it is possible that exposure to kava use beyond Pacific Islander communities and Aboriginal communities in Arnhem Land occurs primarily though tourism to the Pacific.

7.4 Term of reference 8

Examine observable trends in kava use and kava seizures since the importation restriction

In the absence of existing quantitative data, trends in kava use in the current study were examined using qualitative data guided by rapid assessment methodology (RAM) procedures and available literature (see Chapters 1, 4, 5 & 6 for detailed analysis). Observable trends differ between different Pacific Islander groups and Aboriginal groups in Arnhem Land.

Prior to considering Australian trends it is worthy to note that kava use was described in the literature and by the current participants as increasing throughout the Pacific. Increases have been described in frequency, quantity and prevalence of kava use. Increases are thought to be occurring in social contexts of use as opposed to ceremonial contexts of use and are influenced by the following factors: democratization of kava use, commercialisation of kava, increased availability, increased leisure time and increased disposable income.

The current report investigated observable trends in kava use among Tongan, Fijian and Samoan people in Australia. The majority of Pacific Islanders have reported that the import restrictions have done little except change the cost and methods of accessing kava. For some Fijian men, who report occasional social drinking, there may have been a decrease in frequency of kava use following the importation ban, but for most there has been little change. The notable exception to this has been the impact of the restriction on cultural and community organisations demonstrating kava ceremonies in public forums in some states and territories.

The findings (described in Chapter 5 (page 131) in detail) suggest that among Tongan males who drink socially in kava clubs that kava use is increasing over the previous decade. This increase has continued despite the import restriction, although it is possible that the increases in consumption are to a lesser extent than in the Pacific. For example, several kava clubs do not open for as many nights as they would prefer given difficulties in sourcing kava.

Among kava using communities in Arnhem Land a decrease in kava consumption has occurred following the implementation of the import
restriction. The evidence presented in the current report suggests that this includes a decrease in the number of women drinking kava, a decrease in the overall availability of kava leading to a decrease in the frequency of kava use and possibly quantity of kava used, and a decrease in indicators of heavy use (i.e. kava dermopathy). There is some evidence that kava use is now increasing as the black market gains strength, however these increases have not resulted in levels of use which have been previously reported (See Chapter 1, page 3; Table 1.4, page 71) and impacts of use which have been previously described. Importantly participants in the current research reported that there had been little change in the demand for kava.

Trends in kava seizures were examined through data provided by the Department of Customs and Immigration (Customs) describing the number of seizures and quantity of illegal kava seized at Australian ports, and data from state Police departments describing number and quantity of kava seizures (See Chapter 4, page 113, for detail). Customs seizure data suggests that there has been an increase in the number of kava seizures made since the import restrictions were implemented, however the quantity of kava consumed has remained low (below 500 kg per year), with the exception of one four tonne seizure in 2008. The data confirms that the majority of illegal kava enters Australia through NSW, Vic and Qld which is consistent with where the residence of Pacific Islanders in Australia and the ports of entry for aircraft from the Pacific. Interestingly there were a number of seizures recorded in WA. This raises the question of how kava is entering WA; it is possible that it may arrive in WA via New Zealand as WA is a port of entry for aircraft from New Zealand, but not for aircraft coming directly from the Pacific.

In general the data suggest that kava is more likely to be seized when entering Australia by cargo or mail; it is unclear whether this reflects more kava entering Australia via this method or that this is more closely checked. However there is a steady increase in the detection of air passengers and crew bringing greater than 2 kg of kava into Australia, this finding may reflect either an increase in passengers bringing in greater than their allowable limit or an increase in vigilance toward kava. In summary the Customs data demonstrate that there has been an overall increase in the number of seizures made since the tightening of import restrictions and suggests that kava remains available in Australia despite the restrictions. However the amount of kava seized is low and there are no clear trends in amount of kava seized.

Police seizure data were requested from both New South Wales Police and the Queensland Police Service, both jurisdictions reported no kava seizures have been made since 2007. This is significant in the context of the current findings which suggest that kava use is increasing in some sectors of the Pacific community in both these states. Police seizure data from the Northern Territory police was examined in detail in Chapter 4 (page 113). The data is incomplete which prevents the examination of trends, further the data is
confounded by the difficulties of the NT police in resourcing continued operations aimed at kava.

The amount of kava seized per year by the NT police far exceeds the quantity of kava detected by Customs nationally. There is insufficient data to clearly determine if there have been changes to the amount of kava being seized under the import restriction compared to the previous legislation however anecdotal report suggests that the amount of kava entering the NT illegally is increasing.

Police report seizures of kava arriving by air, by mail and by road, methods of importation change frequently. There is some suggestion that kava is now entering Arnhem Land via remote communities and being trafficked back into larger communities, which is more difficult to police than kava entering major communities and being trafficked to more remote communities. The majority of kava seizures made in the NT originate from New South Wales, further anecdotal report in the current research, previous research (d'Abbs, 1993) and police media reports suggest that kava imported into the NT is done so through Tongan networks linking with local Aboriginal people. The majority of convictions related to kava seizures are recorded against Aboriginal people.

7.5 Term of reference 3

Examine the current extent and patterns of kava use in Aboriginal and Pacific Islander communities

The extent of kava use among Pacific Islanders in Australia is variably described with different patterns of use linked to different contexts of use. The primary contexts of kava use among Pacific Islanders are described above in Section 7.3 (page 237) and in Section 5.2 (page 136) and include ceremonial, social and church based kava use (these are summarised in more detail in 7.6 (page 242) and presented in Section 5.2 (page 136). Current prevalence of kava use was difficult to estimate from the data however, both the qualitative and questionnaire data suggests that the majority of Pacific Islanders in Australia use kava ceremonially, this may involve drinking kava, presenting kava or being present during a kava ceremony. Prevalence appears higher among newer arrivals to Australia. Kava use is markedly more common among males than females, kava consumption by women occurs predominantly in a ceremonial context, although there are some Fijian women who drink kava socially. Kava use is more common among males over the age of 25 years than younger age groups.

In understanding patterns of kava use, three patterns tended to emerge from the current research: those who use only ceremonially, those who use ceremonially and socially, and those who use ceremonially, socially and/ or for church. The use of kava in a church context is limited to Tongan men.
Ceremonial and formal kava use may occur on several occasions throughout a year. Ceremonial kava use is highly ritualised and tends to include the consumption of small amounts of kava over a brief period of time. The exception to this is kava consumed during funeral times, which may include nightly kava consumption over a period of several days, kava is reportedly mixed weaker during this time. Kava used in social contexts in consumed in greater quantities and over a longer time period.

Among Tongan males, two particular contexts worthy of note beyond ceremonial use, social kava consumption at kava clubs and kava consumption at church. Kava consumption in a church context is largely restricted to members of the Free Wesleyan Church. Patterns of use in the church context include consuming kava once a week for a short period of time (1–3 cups of kava) prior to, or during church service, and/or drinking for a more extended period of time after church service.

It is difficult to estimate the proportion of Tongan men who attend kava clubs; prevalence is higher among those of the Free Wesleyan faith and men over the age of 30 years. Among Tongan men who regularly attend kava clubs the current report suggests that it is common to drink kava approximately 1–3 nights per week for a periods of 6–8 hours. During that time it is common for participants to drink more than 400 g of kava person. Kava use does vary in the kava club context with some men attending kava clubs only periodically and others attend a kava club nightly. These results are consistent with results from a sample of Tongan men in NSW (Maneze, Speizer, Dalton, & Dennis, 2008) which was conducted prior to the import restriction.

Among Fijians patterns of social kava use differ greatly among individuals, the findings suggest that although there are a small proportion of Fijians who use kava socially several times a week or more, the majority of Fijian kava drinkers consume kava occasionally, with many suggesting that a common pattern of use is once a month for 3 – 6 hours. From the data collected, the prevalence of social and church kava use among Samoans in Australia is very low, although this finding requires further clarification.

The evidence presented in the current research suggests that the extent of kava use in Arnhem Land remains unchanged and is restricted to the communities which have a history of kava use (Yirrkala, Ramingining, Warruwi, Gapuwiyak, Galliwinku, Minjilang, Millingimbi, the Ramingining and Laynhapuy Homelands and to a lesser extent in Maningrida). Kava is noted at various times in other communities however this typically related to small groups with links to kava using communities. As described earlier there has been a reduction in the overall consumption of kava in Arnhem Land. Whilst kava continues to be used by both males and females, it is described as more common among males. Kava use is also more common among those aged over 20 years.
The frequency and quantity of kava use has changed and kava use no longer occurs at the levels described in previous research (see Table 1.4, page 71). There are few individuals who have sufficient access to consume kava daily. In general, the pattern of use is consistent and dependent on activity of the black market, and for some, but not all, kava drinkers, the price of kava. When kava is available it continues to be used in a similar fashion as described in previous research in pattern best described as episodic binge use where available kava is drunk until it is all consumed.

Patterns of polysubstance use were investigated in the current research and worthy of note. Among both Aboriginal and Pacific Islander kava users, although many reported also consuming alcohol, the concurrent use of alcohol and kava was considered rare. Among Pacific Islanders concurrent alcohol and kava use is largely restricted to a Fijian practise of ‘washing down’ kava with beer or wine at the end of kava session. This pattern rarely exceeds the consumption of two alcoholic drinks. Among Aboriginal people who use kava, both alcohol and kava availability is inconsistent and it was considered rare to consume both alcohol and kava, except by a minority of people who may do so opportunistically.

7.6 Term of reference 4

Examine the observed consequences of kava consumption and behaviour related to the access and distribution of kava

In examining the consequences of kava use and the sourcing of kava both health and social impacts were considered. Among Pacific Islanders the findings of the current study are consistent with research conducted by (Maneze, et al., 2008) among Tongan males prior to the import restriction, and suggests that majority of Pacific Islander kava users report little to no health effects from kava use. Experiences of kava dermopathy, and lethargy and tiredness following kava use were common, however these effects were not considered by participants to be problematic.

Many participants in the current research described positive consequences of kava use including the effects of relaxation and the social effects of fellowship and companionship. For many Tongan men kava clubs provided a space in which they felt accepted and have the opportunity to learn about, and maintain, culture through discussion, singing of songs and the telling of stories. Regular social use is not considered a ‘cultural’ practise by a large number of Pacific Islanders, and the use of culture to justify use frustrates some members of the community, this debate aside the experience of kava clubs for those who attend is one that culture is supported. Consequently it is possible that kava clubs provide a mechanism for supporting cultural identity and belonging, which themselves are factors promoting resilience.
The primary observed negative consequence of kava use among Pacific Islanders is the amount of time spent in activities related to kava use by regular kava drinkers and the impact of this on families. This is more pronounced among Tongans than Fijians and Samoans. The results from the qualitative data and questionnaires suggested that for many Tongan women time spent at kava clubs by men creates relationship distress, and increased responsibilities for child caring and household chores. Further there is concern that time spent at kava may contribute, in some instances, to disconnection between children and adult males, however others regard kava clubs as an opportunity to preventing disconnection. The effects of kava on employment and finances were considered rare or minimal, which is in contrast to effects reported in the Pacific.

Accessing kava through only the black market or the 2 kg passenger allowance has increased the price of kava from $30 per kilo to $60 per kilo. Although most regard the price change as frustrating none reported that it had a significant effect on available money for families. The results suggest that the observed consequences of accessing kava through the black market are minimal for Pacific Islanders, this is not surprisingly given the lack of arrests and kava seizures outside of the Northern Territory. Beyond the inconvenience at sourcing kava and the price increase there appear to be no negative consequences sourcing kava from the black market.

In Aboriginal communities in Arnhem Land excessive kava use has contributed to a range of individual and community level social consequences since its introduction in the 1980s. The literature and results from the current study suggest that prior to the import restriction the primary social consequences of kava use were a diversion of money from food and a diversion of time from productivity and family. At a community level, when a sizeable proportion of the population engaged in high levels of use for an ongoing period of time the cumulative effects arguably resulted in, or contributed to, the neglect of children, community participation and services, and loss of money from communities. These consequences of kava use are described as currently occurring either not at all or only sporadically when there is high availability of kava.

In summarising the social effects of kava use, it is important to acknowledge that consequences of kava use are understood by many in the context of alcohol related harms which have persisted in many Arnhem Land communities. Many people regard kava as having reduced alcohol related harm through a reduction in violence and keeping men in the community. Kava use is described by users as a pleasant activity in which intoxication is experienced as a relaxing social event which brings people together. Consequently it is not surprising that the import restrictions have had little effect on the demand for kava.
The results of the report suggest that the majority of current harms related to kava use are linked to black market kava activity. The key impacts of the black market are:

- bringing outside influences into communities;
- high cost of kava (now upward of $1000 per kilo) impacting of family budgets;
- money leaving communities;
- the legal consequences (fines, court appearances, incarceration, criminal record) of engaging with the black market; and,
- direct consequences of black market activity (car accidents when driving at night to traffic kava).

The current cost of kava at $1000 per kilo and above can be compared with Table 1.5 (page 79), which shows that previously the highest cost of kava was estimated to be $400 per kilo in the period before the NCKM. At this price there is a risk for the cost of kava to have a significant negative impact on communities.

The currently observed health effects of kava in Arnhem Land are considered minimal. Health services are reporting a reduced number of presentations consistent with heavy kava use, including incidences of kava dermopathy and red eyes. This finding needs to be interpreted with caution as many health services report no longer screening for kava use.

Among both Aboriginal and Pacific Islander communities the harms which cause the most concern for communities are the diversion of time and money from other activities. These concerns emerge when the pattern of kava use is clinically significant (i.e. consistent with a diagnosis of harmful substance use or substance dependency – See 1.4.10 for a discussion). Among Pacific Islander populations in Australia this pattern of use appears to be present among a minority of kava drinkers and impacts on the families of these individuals. In contrast, prior to the import restriction, in kava using communities in Arnhem Land large proportions of the population were drinking at this level and the negative effects experienced were cumulative and impacted whole of communities.

### 7.7 Term of reference 6

**Examine community awareness of the effects and consequences of kava among Aboriginal and Pacific Islander people**

In examining community awareness of the effects and consequences of kava use in the current study it is worthy to note that data collection occurred in
the context that kava is no longer legal to import and sell under license. Many participants engaged in the research were actively opposed to the current laws and therefore possibly not comfortable, or open, talking about negative effects of kava use, results were interpreted with caution.

The results suggested that Pacific Islanders have good awareness of kava dermopathy, lethargy following kava use and the debate around time spent at kava on wives and families. For many kava drinkers though these consequences were not considered indicative of harm.

Most participants felt that overall people did not understand have a good understanding of kava related harms beyond lethargy and dermopathy. Many respondents is the current research reported concerns that kava could affect health, but were not sure how - this not surprising considering the lack of clear findings in the literature and the lack of health promotion resources regarding kava. Perceptions of what moderate and safe kava use was varied amongst participants.

The potential for kava to cause harm was dismissed by many Pacific Islander participants; these attitudes to potential kava related harms are likely to be influenced by the attitude to kava across the Pacific where kava use is often encouraged and there is rarely public discussion about kava and health.

The findings presented in Chapter 6 (page 184) demonstrate that Arnhem Land communities have a reasonable knowledge of the well-established health effects of kava use, such as effects on skin, liver function and eyes. Several participants pointed to the proactive involvement of community organisations in participating in research as evidence that communities have interested and engaged in understanding the effects of kava. However for many community members these effects are considered insignificant in the face of harms caused by alcohol.

Much community knowledge around the effects kava is limited to the direct health effects of kava use – which are conflicting at best - knowledge about the harms associated with indirect health effects of kava use, such as dehydration and sitting for long periods, were less well developed. Similarly, some participants reported that links between kava use and social harms were poorly understood, as was the capacity of individuals and groups to recognise clinically significant use and the consequences of heavy use.

The findings suggested that the knowledge of kava use and kava related harms among health practitioners in Arnhem Land were diverse. Among health service staff who were local people, or who had worked in Arnhem Land for many years knowledge of kava related harms was high. In contrast health service staff who were new to the region reported knowing very little about kava and kava related harms or where to access information.
For many people, both Pacific Islander and Aboriginal, kava related harms are understood through comparing kava to alcohol and other drugs, and as such kava is not recognised as harmful or it is described as not as bad as alcohol.

Finally, Aboriginal communities tended to have a good awareness of the consequences of the complexities of selling kava within the community and making profit from a substance which may cause harm; this was not discussed in Pacific Islander communities despite community kava clubs and churches using kava clubs for fundraising.

Overall the results suggest that within Aboriginal and Pacific Islander kava using communities that knowledge around the effects of kava on health are consistent with the state of the literature. Knowledge related to indirect health effects and social consequences of use were mixed, and often understood in the context that they are not as bad as alcohol related harms. The results suggest that there are opportunities for health promotion and education around the indirect effects of kava use, identifying over use and the social effects of kava use.

7.8 Terms of reference 5 & 7

Review intervention options available to reduce harmful consequences of kava use.

Examine community and key informant attitudes regarding opportunities for intervention, current available interventions and barriers to interventions.

Put simply, the review found few intervention options, either nationally or internationally, described in the literature or in qualitative data to reduce harmful consequences of kava use. General best practise recommendations for alcohol and drug interventions can be applied to kava use, but there is no evidence base specific to kava from which to determine best practise for kava interventions. Approaches to limit harmful kava use in Australia have been limited to supply reduction regulations targeted at the NT (see 7.10). Demand and harm reduction interventions to reduce harmful effects of kava use in the NT have been poorly attempted in the case of licensing or completely lacking in the case of kava being banned or unregulated. There are no documented interventions targeting kava related harm in the Pacific Islander community in Australia.

Existing interventions

The findings of the current study demonstrate that if intervention for kava use is required that people will respond to harm by accessing support from internal and informal community connections and support provided by churches, family and community organisations. There are no existing health
promotion resources around kava use known to Pacific Islander communities, however harm minimisation practises such as eating before and after kava are ingrained in kava use and taught from generation to generation. Self-directed harm minimisation in some Tongan kava clubs and some Fijian social groups have been attempted to reduce the risk for harm, this includes the banning of smoking inside kava clubs and steps taken to improve the hygiene of kava preparation and sharing.

Existing interventions in Arnhem Land communities have been severely limited by a general lack of resourcing to drug and alcohol services and primary health care. Several health promotion interventions have been described and include the development of health promotion materials aimed at harm minimisation (including efforts to promote responsible consumption, good hygiene and prevent the use of kava by pregnant women) and health promotion which describes the health effects of kava use. None of these resources have been evaluated, and most are not currently available. As described in Chapter 2 (page 86), the majority of interventions to date have been directed at primary health care services and include regular screening kava use, health checks for kava users which include liver function tests, and training for health staff about the effects of kava use. Clinical protocols for kava were developed in 2004 (Clough, 2004) and provide three dot points of advice for health practitioners. There are no specialised kava treatment services available in the NT and there are limited services beyond training and health promotion which have been provided to existing services. There has been no training or resource development since the implementation of the import restriction, and the findings of the current report suggest that many health services are not sure how to respond to heavy kava use.

To date, the development, evaluation and dissemination of interventions to support people who use kava is severely lacking. Health promotion materials that have been developed appear to have been part of short term projects without evaluation or dissemination components. Similarly there have not been attempts to update clinical protocols for kava use in primary health care and no effort to develop assistance for alcohol and drug service provision around kava use.

**Current attitudes, opportunities and barriers for intervention**

Kava use is not regarded, either in Arnhem Land or Pacific Island communities, as a high current health priority. As described in Chapter 6 (page 184), in Arnhem Land, kava use has largely fallen off the health agenda since the importation ban, and as described in Chapter 5 (page 131) among Pacific Islander kava users there are few reported significant health effects from using kava and a general attitude that the effects of kava, such as kava dermopathy, are either not harmful or not indicators of harm. This said, in reviewing the findings of the current report there are a range of opportunities from which to approach reducing kava related harm. A summary of the main
areas in which intervention is needed, barriers and opportunities for intervention are presented below.

**Health promotion and harm minimisation among current kava users**

The findings suggest that the harms associated with kava use which cause the most concern and warrant intervention are indirect harms (such as hygiene practices, consuming alcohol or other drugs, driving after kava use), social impacts of kava use (time away from families) and recognising levels of kava use consistent with harmful use or dependence. In addition, the monitoring of overall health and liver functioning among kava users is worthy of attention and health checks should be encouraged.

There are a range of barriers to implementing health promotion and harm minimisation. These include the following

*Imposed health promotion messages*

Both in Arnhem Land and among Pacific Islanders in Australia imposed health promotion messages are unlikely to have a positive effect. Consequently only health promotion messages designed collaboratively are likely to be accepted by those who use kava.

*The framing of harm*

The discourse around kava both in policy making to date has centred on the argument that kava has negative health effects. Considering the conflicting information and lack of clear empirical evidence around the purported effects of kava and the levels of use at which harms emerge, it is not surprising that many Pacific Islander and Aboriginal kava users are dismissive of messages about kava and health. A reframing of the discussion around kava and health is warranted with more consideration given to the social harms associated with kava use and recognition that different levels of kava use have different impacts.

Caution also needs to be taken in the framing of harm, particularly around alcohol. As explained by a key informant in the current research:

> "The challenge is how harm is framed; people are very alarmed at alcohol. They have learnt that illicit drugs make you crazy and alcohol makes you violent, harms associated with kava are not regarded in the same light."

Awareness and experience of alcohol related harms is high in both Aboriginal and Pacific Islander communities and recognition that alcohol is accepted legally whereas kava is not is a cause of frustration for many kava users, consequently harms associated with kava can be easily dismissed as not as bad as alcohol. Efforts need to be taken to clearly describe harms associated only with kava, in a realistic and non-sensationalist way.
The import restriction
As a consequence of the import restriction people who drink kava feel persecuted and judged, this may prevent openness to receive health promotion information.

Resourcing
The lack of ongoing or appropriate resourcing is barrier to the efficacy of interventions to reduce kava related harm.

Despite these barriers opportunities for delivering health promotion among existing kava users exists. A number of systemic strengths exist in Australian Pacific Islander communities which can facilitate health promotion and harm minimisation for existing kava users. For the Tongan community, churches and kava clubs provide an opportunity for harm minimisation. Many kava clubs have a track record of attempting to reduce harms by banning smoking, in working with kava clubs there is the opportunity to support them in addressing indirect effects of use (hygiene, alcohol consumption, driving after consumption) and limiting excessive consumption through negotiating supply of kava, such as club opening hours. Similarly churches provide extensive support to their congregations and provide a centre point for many communities, supporting churches in facilitating the responsible and moderate use kava may assist in reducing social harms associated with kava use such as time spent away from families. Among Fijian kava drinkers, although social kava consumption occurs in a less structured context, opportunities to promote health exist through community organisations and churches. Through these networks regular kava drinkers can be also encouraged receive regular health checks.

In Arnhem Land communities community controlled primary health care services and other agencies are positioned to best support their communities. There are extensive demands placed on primary health care services, however ongoing monitoring and screening of kava use and providing information to new staff about the effects of excessive kava and indirect effects of kava use (particularly dehydration and under eating) should be encouraged. Existing harm minimisation efforts should be revised and re-issued. Community controlled agencies in remote communities are best positioned to identify and respond to emerging social harms of kava use, appropriate resourcing and support of these agencies can ensure health promotion messages are produced, disseminated, evaluated and sustained in a format which best suits the local community.

Treatment for those currently experiencing harm
Those using kava at harmful levels are likely to be doing so because of a range of existing social and personal factors; efforts to address kava use must also address these underlying determinants of kava use. Specific kava related treatment services are not indicated, support to existing services is likely to be the best avenue for helping those experiencing harm.
There are a range of barriers to providing treatment for those experiencing kava related harms.

No evidence base for treatment
Services in a position to provide support for those experiencing harm from kava have no evidence base from which develop treatment. Best practises in alcohol and drug treatment are therefore recommended.

Availability of appropriate treatment services
In Arnhem Land there is a lack of drug and alcohol services, consequently the availability of treatment, for any substance, including kava, is low. The findings in the current research suggest that many Pacific Islanders do not feel comfortable attending mainstream services and prefer to manage difficulties, including alcohol and drug problems, within the community. Furthermore kava is not regarded as a ‘drug’ by many Pacific Islanders and therefore individuals who are experiencing harm are unlikely to seek help from drug and alcohol services.

In considering these barriers, the opportunities for providing support to people using kava are described below.

For Pacific Islanders, the current findings demonstrate that any individuals who may want or need assistance for kava use are likely to seek that assistance from family, the church, or even a kava club. Consequently engagement with churches and kava clubs is the best opportunity to provide support for those experiencing harm. Support for churches may include providing training in recognising kava related harms and unhealthy patterns of kava use; and providing churches with potential referral options to culturally appropriate services. Up skilling multicultural drug and alcohol and other health and welfare support services to recognise and respond to kava use would also be an advantage.

Among Arnhem Land communities opportunities for intervention can be best achieved through increased resourcing and support to existing community controlled agencies.

Prevention of the uptake of harmful use
In considering the prevention of the uptake of harmful use it is important to recognise kava is regarded as harm minimisation and a diversion from alcohol related and other harms both in Pacific Islander and Arnhem Land communities.

In Pacific Islander and Aboriginal communities well-resourced alternative strategies to address alcohol related harm and other youth problems are required.
In Pacific Islander communities, the use of kava in controlled environments, such as kava clubs and social family settings, which ensure the responsible consumption of kava are likely to facilitate the development of moderate patterns of use.

The use of kava by those under 18 years (except in ceremonial use) should be discouraged.

7.9 Term of reference 10

Review the range of control measures and their impacts in Australia and other countries

Control measures in Australia were reviewed in detail in Chapter 2 (page 86), and triangulated through qualitative data collected in Chapter 5 (page 131) and Chapter 6 (page 184). Prior to 2002 control measures have tended to apply to only Aboriginal communities in Arnhem Land and not to Pacific Islander people elsewhere in Australia. To date six different periods of regulation have been applied in the NT, of concern only one regulatory period has been subjected to evaluation. Four types of control measures have been applied to date, these are summarised below (see Chapter 2 (page 86) for a detailed review) followed by a summary of the policy approaches to kava as applied to Pacific Islanders in Australia and their impacts.

Unregulated kava availability

The limited evidence suggests that the unregulated kava availability from the early 1980s until 1990 resulted in a per capita increase in kava consumption in Arnhem Land, the emergence of kava related harm and increases in personal and community wide economic burden. Furthermore there were no opportunities for funds spent on kava to be used for the benefit of communities and there no avenues from which to monitor kava availability. The lack of overarching regulation places responsibility solely on communities, with no resources and no legal power, to try and prevent the aggressive sale of kava and kava related harm. Not surprisingly attempts at self-regulation were undermined and left communities powerless to respond to aggressive selling of kava.

Kava ban

Kava was banned in the NT between 1998 and 2002, there is mixed evidence as to whether it reduced kava consumption. The banning of kava may have led to reduced availability of kava; however it did little to prevent the demand for kava or black market activity. Attempts to control kava consumption through banning kava are limited in that it becomes entirely a police responsibility. The penalties associated with kava possession in the NT at this time were relatively weak, making it hard to convict and deter suspected
traffickers and difficult for the police to justify pursuing kava at the expense of other policing priorities. There is no evidence regarding how the banning of kava impacted on other indicators of kava use or kava related harm in the NT, indeed prohibiting kava prevents the collection of data to monitor kava availability and kava related harm. Furthermore there is little detailed information regarding the financial effects of the black market during this period and if the ban had an impact on other kava related harms. As with periods in which kava was unregulated, the prohibition of kava was not accompanied by funding or resources for health promotion and treatment for people who use kava. Although there is little discussion in the literature, an additional consequence of kava prohibition is the criminalisation and stigma of kava users.

In contrast to the NT, kava was banned in Western Australian (WA) in 1988. Whilst there is no data regarding per capita kava consumption in WA before or after the banning of kava, following the ban there have been no significant arrests or kava seizures or any evidence of emerging kava related harms. This suggests that banning of kava did not result in harms to the community or that an increase in kava availability via a black market occurred. The context and process of the ban in WA was considerably different to that in NT. The process of kava prohibition in WA was a collaborative and community lead policy, and it took place when attempts to establish a kava market were occurring but had not become established.

**Controlled kava availability**

Two licensing periods have been undertaken in the NT, the initial period of licensing was in place from 1991 – 1993, and the second period occurred under the National Code of Kava Management and was in force from 2002 - 2007. The initial licensing period was the only regulatory measure which has been subjected to evaluation, there was no evaluation of the most recent licensing period commissioned. Strict conditions were placed on the number and ownership of kava retail licenses. Applications to hold a retail license were subjected to whole of community consensus and not all communities with a history of kava use elected to hold kava licenses. Under the licensing systems, a per person daily limit of kava powder was available from a licensed outlet and could be consumed within a licensed community. It was hoped that licensing systems could achieve the following objectives: the responsible sale of kava, retaining money spent on kava in communities, reduction in the black market, funding of health promotion, intervention and research, and monitoring of kava availability. The outcomes of the licensing periods related to these benefits is summarised below:

*Responsible Sale* Responsible sale of kava included efforts to control availability through price controls, trading hours and daily limits per kava drinker. Responsible sale provisions also included not selling to individuals under 18 or to pregnant women. Despite this sales in both periods of licensing
increased steadily and did not result in a per capita decrease in kava consumption or an increase responsible use of kava. Adjustments to trading hours, price and daily limits were being reconsidered at the time the licensing system was terminated in both instances.

*Retaining kava money for communities* A review of the first licensing system reported a lack of appropriate controls over kava profits, which in all likelihood prevented the whole of the community from benefiting from kava income. This appears to have been improved during the second licensing period and many communities reported benefits from the kava profits being spent on community infrastructure and community priorities.

*Minimising the impact of the black market* Black market kava continued throughout the licensed periods and took two forms; the on-selling of licensed kava and the importation of kava without a license. In both licensings periods communities who elected not to have kava had difficulty in preventing kava bought from other communities being consumed, which undermined the community decision to ban kava. Further illegally imported kava was available outside retail hours and continued to be sold in many licensed communities, however by the end of the second licensing period the kava black market had arguably decreased.

*Funding for health* In the second licensing period goals to set up health research, health monitoring and health promotion were made, however the set up and execution of health responses was poorly managed and little had been achieved by the end of licensing period.

*Monitoring of kava availability and sales* Licensing systems enable the monitoring of kava availability, which can then enable monitor kava use and assesses of outcomes; however under both periods of licensing there were difficulties experienced by licensees in the accurate collection and reporting of kava sales.

In reviewing the initial licensing period d’Abbs (1993) concluded that objectives of the control measures were appropriate, yet failed to meet their objective: they failed to reduce the per capita consumption of kava use, there was a lack of responsible sale of kava and there was a lack of resources and regulations to prevent black marketing of kava. d’Abbs recommended changes to the licensing system including more accurate retail systems, more responsible service and sale of kava, funds allocated to health promotion and research and for the overseeing of licence compliance to be adequately resourced (d’Abbs, 1993). The second period of licensing aimed to address the concerns presented by d’Abbs and was an improvement on the first attempt at licensing however unsafe levels of kava were still being sold, kava sales were steadily increasing, community harms were still prevalent and there was a lack of a coordinated health response. Despite these problems only controlled supply strategies have had ongoing community consultation, clear objectives, goals and mechanisms to monitor those objectives and goals. Both periods of
licensing were terminated prior to those objectives and goals being adjusted in light of data suggesting increased sales and harms. Participants in the current research had mixed feelings about the licensing period with many concerned about the levels of kava being consumed, however there was widespread support for the money spent on kava remaining in the community and the reduction of the black market. Indeed an unfortunate consequence of the licensing systems has been that kava was increasingly regarded as an important source of revenue for communities at the cost of considering kava as a public health issue.

**Kava import restriction**

The kava import restriction is largely consistent with previous kava bans in Arnhem Land communities and relies solely on law enforcement as a strategy to minimise kava related harm. As described in Chapter 2 (page 86) and Chapter 6 (page 184), the lack of consultation prior to the import restriction and the rapid implementation of the restriction had a negative effect on communities, both financially and as an exercise in disempowerment which cannot be overlooked. There are three additional major concerns associated with the rapid end to licensed kava that have not been addressed in the literature but discussed by participants in the current research. Firstly the ban was not accompanied by additional or coordinated policing resources to prevent the resurgence of the black market. Secondly, there were no additional resources provided to health and drug and alcohol services to assist current users of kava. Finally the law has stigmatised kava users. As a stand-alone measure to increase the health and wellbeing of Arnhem Land communities the importation ban on kava was likely to have had little effect. Similarly as a stand-alone measure to reduce kava consumption it is unlikely to have a lasting effect. There is little published evidence as to the impacts of the ban, the current research suggests that following the ban there has been a decrease in kava consumption and associated harms. Importantly the reduced kava availability has prevented experiences of significant proportions of a community all using kava at one time. This said the demand for kava remains high and the re-emergence of the black market is resulting in harms.

**The impact of control measures on Pacific Islander people**

Broadly speaking the policy approach to kava use among Pacific Islander people has been to turn a blind eye to both the positives of kava use and the harms of kava use. Kava was unregulated in Australia (except the NT and WA) prior to 2002 and there is no information regarding kava availability prior to this time. In 2002 under the National Code of Kava Management (NCKM) a person wishing to import kava was required to hold both a License to Import and a Permit to Import a Controlled Substance from the Office of Chemical Safety. A further license was required to sell kava. In addition travellers to Australia aged 18 years or over were permitted to bring in up to two kilograms of kava without a license or permit. The NCKM included standards on the sale
of kava including not selling kava to people less than 18 years of age and recording all kava sales transactions. There is no evidence to suggest that standards on the sale of kava were ever monitored and there is no indication of adherence to the conditions. Findings from the current research suggest that licensed kava importation was adopted without difficulty or complaint from the Pacific Islander community.

The rapid implementation of the current regulations, which were developed without consultation, have had a negative effect on Pacific Islander communities with many people feeling targeted by the laws. Since the import restriction in 2007 there have been no seizures or arrests made in the Pacific Islander community with the exception of those involved in trafficking kava into the NT. Therefore the import restriction has presented a conflicting message, it has done little except created a black market for kava, increased cost and create frustration and anger among sections of the Pacific Islander community. The import restriction has not resulted in observable decrease in use or harms and there is no means by which to monitor how kava is used or sold.
8 Recommendations

Presented below are recommendations drawn from the present report. These recommendations include:

- recommendations for the future management of kava in Indigenous and Pacific Islander communities, including a discussion of policy implications and options and barriers to the implementation of recommendations;
- identification of issues that require clarification and further investigation.

8.1 Future management of kava use

Despite the mixed evidence around the impacts of kava on health, kava has the potential for misuse, and that misuse can cause harms to individuals and communities. Evidence to date suggests that moderate kava use does not present a significant risk to health or social wellbeing, consequently the aim of policy should be where individuals and communities decide to use kava, to facilitate moderate use, prevent heavy use and reduce the likelihood of kava related harms. The following policy recommendations can be made from the findings of the current research.

**Recommendation 1: It is recommended that future kava policy consider controlled availability or upholding the kava import restriction.**

The findings of the current report, and previous research, have demonstrated that unregulated kava availability can result in increases in per capita kava consumption and concomitant harms in Arnhem Land and as such is not recommended. In light of increasing kava use and harms across the Pacific, unregulated use may also have a negative effect on Pacific Islanders in Australia.

A national ban on kava is not recommended. Kava does not present an acute health risk and research suggests that moderate levels of kava use are safe, thus a national ban on kava does not appear warranted. In addition the use of kava for ceremonial practices among Pacific Islander Australians does not present a social or health risk and should not be prevented. Furthermore the prohibition of kava could strengthen the black market and could arguably lead to substance substitution among some at risk individuals.
The two policy options with the most promise for the future management of kava use are upholding the import restriction and a return to controlled availability. Recommendations related to each policy option and their strengths and weakness are described following general policy recommendations.

**Recommendation 2: The policy needs for Aboriginal communities in Arnhem Land and Pacific Islanders elsewhere in Australia should be considered separately and developed and implemented collaboratively.**

Appropriate policy to prevent excessive kava use may be different between Pacific Islander and Aboriginal kava consumers. In addition different Arnhem Land communities have different needs and should be supported in determining the best policy options for their community.

Any changes to policy should be developed and disseminated collaboratively with communities who are impacted. Collaborative development of policy is also more likely to result in community ownership and adherence to the law. The report demonstrated the negative impacts of inappropriate implementation of new policy; this should be avoided in the future.

**Recommendations 3: It is recommended that any policy should include an evaluation framework and the capacity to monitor trends in kava availability and kava related harm.**

At the current time there are relatively few harms related to kava consumption described by Pacific Islander and Aboriginal groups however there is no capacity to monitor kava availability or emergent harms. This prevents the development of proactive and appropriately targeted future policy.

A difficulty in determining the future policy options for kava is the paucity of quality research evaluating previous approaches. Ongoing and well-designed evaluations of policy are required.

**Recommendation 4: A national response to illegal kava importation and interstate trafficking is required.**

The results of the current report clearly demonstrate that few seizures of kava are made outside the Northern Territory. To minimise the impact of the black market in Arnhem Land, and elsewhere, police and customs need to be adequately resourced to limit the black market trade.
**Recommendation 5:** It is recommended that resourcing for health and social wellbeing interventions be included in any policy pertaining to kava use.

To date very little funding has been committed to addressing kava related harms outside of supply reduction measures, this has resulted in one sided approaches to minimising kava related harms.

**Recommendation 6:** It is recommended that international policy support be sought and provided.

Kava policy in Australia is vastly different to that in Pacific countries and other countries with high rates of migration from the Pacific, such as New Zealand and the United States. Australia’s kava policy has placed it at odds with Pacific nations because kava is a valuable crop. Whilst public health policy in Australia should not be driven by Pacific economic needs recognition of the regional implications of policy is required.

The current lack of relationship between Australia and Pacific Nations around kava has implications for monitoring the illegal importation of kava into Australia. Opportunities to build recognition of Australia’s policy approach should be taken. Furthermore whilst there is avoidance among kava producing nations to discuss kava related harms, there are increasing concerns across the Pacific at the increasing rates of kava consumption and emergence of harms. Consequently Australia may be well placed to support kava policy, intervention development and research among Pacific nations in the future.

In developing recommendations for the future management of kava use, evaluations of previous policies is recommended.

**Recommendation 7:** It is recommended that there be an evaluation of the National Code of Kava Management, its implementation and impact.

The current research provided an overview of the impacts of the National Code of Kava Management (NCKM), which applied from 2002 – 2007. There has been no detailed evaluation of the code despite much planning and consultation prior to its implementation. It is recommended that a review of the NCKM include a detailed independent review of the implementation and outcomes of the Kava Management Act and licensed sale of kava in the NT. Although it would be retrospective, if kava policy in Australia is to be revisited, a review of the Kava Management Act is recommended.

In addition it is recommended that a review of the licensed sale and import of kava outside the Northern Territory under the NCKM be conducted. The current research was not able to investigate the amount of kava legally
imported for recreational use into Australia, the number of licenses held or measures to monitor adherence to the code of responsible sale of kava. This research is required to assist in making informed future policy decisions around kava in Australia.

**Recommendation 8: It is recommended that there be an evaluation of the implementation of the kava import restriction.**

The current research identified that the implementation of the import restriction had a negative impact on both Aboriginal and Pacific Islander people. Both groups reported feeling persecuted by the sudden and poorly communicated implementation of the restrictions and felt that the rationale for the law changes was not clear. Appropriate policy implementation would have prevented or minimised these effects, a review is therefore recommended into how the policy changes were implemented and recommendations for improved policy implementation are required.

**Considerations for upholding the import restriction**

*Reconsider the offence provisions* The current report highlighted concerns that there are few convictions for kava offences in the Northern Territory. Of note very few convictions related to the supply of commercial and trafficable quantities of kava have been achieved. Consequently the offence provisions under the current Kava Management Act in the NT should be reconsidered.

*Reconsider the 2 kg passenger allowance* The findings from the current report suggested that 2 kg of kava per passenger were insufficient for many Pacific Islander people to maintain ceremonial kava use and avoid using black market kava, the merits and disadvantages of 2 kg amount should be reviewed.

*Allow public ceremonial kava use for Pacific Islanders* The current laws are confusing and differ between states. It is stated that the 2 kg passenger allowance has been maintained to uphold Pacific Islander culture however it is ceremonial not social kava use which has been prevented under the current laws in some states and the ACT.

Advantages of the import restrictions include:

- There has been a decrease in excessive kava use and kava related harms in the Northern Territory.
- There are members of both Pacific Islander communities and Arnhem Land communities who support the import restrictions.
The following disadvantages to the import restriction have been noted:

- Import restrictions rely on policing as the sole means to address kava availability and addressing the black market presents a significant challenge.
- To date the import restrictions have had little effect in the Pacific Islander community except facilitate the emergence of the black market, it consequently sends a mixed message.
- There is no funding to support health and harm minimisation efforts.
- The ‘illegal’ status of kava is a barrier to engaging with kava users around minimising kava related harms.
- There are no means available to examine trends in kava availability.

**Considerations for re-introducing controlled availability**

**Development of standards for kava retail and kava clubs outside of the NT**

Under a system of controlled availability standards of kava retail (take away kava powder) and consumption of kava in kava clubs (drinking in premises) can be set. This may include hours of sale, price, labelling of kava, use of kava profits, as well as quality standards.

**Development of standards for kava retail in the NT**

Consistent with findings from Recommendation 3, the development of standards for the responsible sale and service of kava should be developed. These considerations should not be limited to takeaway kava.

**Utilise existing strengths in Pacific Islander communities**

Churches, community groups and social clubs provide an existing systemic structure from which to develop controlled availability.

**Monitor adherence to licensing conditions**

Resourcing is required to adequately monitor licensing conditions.

**Support for communities who do not wish to have kava**

In the NT some communities with a history of kava use may choose to not have kava available, these communities require support to police the on-selling of legal kava.

**Consider the broader social context in the NT – Alcohol**

Given the findings of the current report and the changes in alcohol availability and alcohol regulation in the NT under the NTER, it is considered not appropriate to make any changes to kava policy until the current alcohol regulations have been fully implemented, adopted and evaluated.

**Consider the broader social context - Pacific youth**

It is a common perception that kava consumption can be used as a diversion strategy to prevent antisocial behaviour among Pacific Islander youth. This is unlikely to be an
appropriate strategy to address the determinants of antisocial behaviour, increased resourcing to Pacific Island groups is recommended to address youth issues in alternative ways.

*Monitor the use of kava by new populations* Although it is considered unlikely that kava use will be adopted by new groups, vigilance will be required if kava becomes legally available.

Advantages to controlled availability:

- Controlled availability provides the best opportunity to reduce the black market for kava and the sale of poor quality or adulterated kava.
- Controlled availability allows community self-determination in relation to kava use.
- Controlled availability facilitates the monitoring of kava related harm and kava availability.
- Profits from the sale of kava can be used to fund health promotion and intervention and for community benefit.

Disadvantages and barriers to controlled availability:

- To date attempts at licensing in the NT have failed to prevent excessive kava consumption and kava related harms. In particular they have failed to change patterns of episodic heavy use in which a significant proportion of a community may be intoxicated at any one time. Previous attempts at licensing have also failed to prevent the on-selling of kava in Arnhem Land to communities who chose to not have licensed kava availability.
- Many Aboriginal people in Arnhem Land do not wish to see a return to kava licensing.

**8.2 Health and wellbeing**

As summarised in Chapter 7 (page 231), and described in detail in Chapter 5 (page 131) and Chapter 6 (page 184), resourcing for interventions to reduce the harms associated with kava use have been either poor or non-existent under all kava regulation frameworks to date. Thus to date approaches to kava related harm have been biased toward law enforcement and resourcing related for health and community wellbeing interventions are clearly needed. Opportunities and barriers interventions were outlined in Section 7.9 (page 251).
Recommendation 9: In responding to the health and social harms of kava use it is recommended that principles of best practise in reducing alcohol and drug related harm in Aboriginal and Pacific Islander communities is applied.

Whilst there are no evidence based strategies specifically for kava use described in the literature, recommendations for the development of harm and demand reduction interventions can be developed through applying best practise in reducing alcohol and drug related harm.

Factors facilitating best practise in Aboriginal communities include, but are not limited to: Aboriginal community control, adequate resourcing and support (ongoing funding), and being designed for the needs of a particular community (see (Gray & Wilkes, 2010) and the National Aboriginal and Torres Strait Islander Peoples Complementary Action Plan for a review).

Similar to the above, best practise requires the facilitation of existing systemic factors in Pacific Islander communities; this includes engaging with, and resourcing, church and community organisations to develop appropriate strategies.

Best practise should be applied to: the development of health promotion and harm minimisation for current kava users, the development of treatment resources, services and pathways for those currently experiencing harm and the development of strategies aimed at preventing the uptake of harmful use kava use.

8.3 Issues for clarification and investigation

In 1993 a review of kava regulation d’Abbs questioned whether there is sufficient evidence about kava from which to design appropriate policy, it could be argued that almost two decades on the same question is relevant. Consequently improvements to the research base are recommended.

Recommendation 10: More rigorous methods should be employed in both research into the possible health and social effects of kava use and evaluation of strategies to reduce kava-related harm.

Considering the relatively low levels of evidence from which the current knowledge about kava is drawn an improvement in the evidence base around kava is needed. More rigorous research designs are also warranted; research using prospective longitudinal methods, controlled conditions, random sampling, matched sampling and large sample sizes are clearly needed to improve the quality of research evidence around the effects of kava use.

International collaborations are recommended. The majority of research to date has been conducted in either Aboriginal or Pacific Islander samples. Both
groups have different health and social challenges, therefore to minimise confounds in research collaborations that include Australia, New Zealand, Tonga, Fiji, Samoa and Vanuatu are recommended.

**Recommendation 11: It is recommended that specific research be undertaken into the prevalence of diverse patterns of kava use, the social contexts of such use, and its specific health impacts.**

To date the majority of research has been exploratory; research designs should now focus on specific hypotheses to resolve the existing literature. The current report has highlighted a range of topics which require further investigation, the priority areas include: liver function, cardiovascular effects, ocular health, kava dermopathy, acute and chronic effects on cognition, appetite suppressant effects, fatigue and lethargy, tolerance and withdrawal, identifying safe levels of consumption, the impacts of kava on driving and social harms related to kava use.

There has been no detailed research investigating the prevalence of alcohol and drug use among Pacific Islanders in Australia and no recent detailed research among Aboriginal communities in Arnhem Land. Prevalence research will assist in understanding a range of issues, including substance substitution which is of widespread concern to community members. Improved methods of identifying frequency, quantity and pattern of kava use are and/or validation of the grams per week distinctions is required. Research examining the kava lactone content and concentration of kava beverages in different groups who use kava is recommended.

Further research examining contexts of kava use in Australian Pacific Islander communities is warranted, including more detailed assessment of kava clubs, other forms of social use, kava use in the church context, and kava use for fundraising.
9 References


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