



Considerations for the ethical commercialisation of bush foods from Aboriginal and Torres Strait Islander cultures

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Executive summary

Individuals, companies and governments have exploited the cultural heritage of Aboriginal and Torres Strait Islander peoples for more than two centuries, often with little regard to the interests of hereditary custodians. The commercialisation of bush foods is a case in point. This paper explores that commercial context to offer information and analysis that informs an ethical model for bush food enterprise development. The paper looks at a range of issues that may impact such a model, many of which arise in other commercialisation contexts. These include issues of informed consent and benefit sharing; participation by traditional custodians; regulatory requirements; intellectual property (IP) management; product research and development procedures; approaches to marketing; and the international transfer of plant genetic resources, materials and products. The impact, shortcomings and policy implications of the current legal framework are also discussed. Both the issue discussion and suggestions for ethical bush food commercialisation have application to other cultural heritage commercial development contexts.

1. Introduction

In recent decades, there has been a growing market in Australian ‘bush foods’ – products based on staples of Aboriginal and Torres Strait Islander traditional diets. While bush food products derived from Australian native plants are developed, the impact of commercial utilisation on Aboriginal and Torres Strait Islander people’s interests, culture and legal rights should be considered (Merne Altierre-ipenhe Reference Group et al. 2011). While the issues raised by these Aboriginal and Torres Strait Islanders’ interests and needs should be respected by any new venture, there are numerous specific matters that must be addressed to ensure ethical practice in commercialisation of culture-based products. This paper uses the experiences of a seven-year research and development project to propose the elements of a model for ethical commercialisation that encompasses:

- traditional custodian engagement – the consent and participation of Aboriginal and Torres Strait Islander people; formal ethics processes; legislative, regulatory and administrative procedures; working with people on their Country; and sourcing items from lands under Native Title
- background research on the product and its origins – anthropology, biology, regulatory and legal requirements for biological resource exploitation, quality assurance and food regulations, marketing and supply chains
- safeguarding the interests of the traditional custodians – safeguarding traditional knowledge of plants and bush foods, commercialisation issues from the perspective of the Aboriginal and Torres Strait Islander people, the international context, capacities of the current legal framework, the governance environment, strategies to support the interests of traditional stakeholders, policy review and law reform prospects
- product development opportunity in view of these factors – production methodology and development, maintenance of ethical practice, marketing approaches and value-chain arrangements.

Further, the project work has given bush food business people suggestions about how to meet the issues and challenges of applying an ethical approach to commercialisation. The research project was designed to apply an ethical approach to commercialisation of new varieties of bush food plants developed by the project (specifically *Solanum centrale*, bush tomato – refer Lee 2012). Importantly, the work was intended to serve as an exemplar of best practice in this field. The project employed Aboriginal and Torres Strait Islander people as researchers in much of the work and was guided by an Advisory Group that included Aboriginal and Torres Strait Islander participants.

2. Preliminary considerations

Aboriginal and Torres Strait Islander peoples have used Australian native plants as a food source for millennia (Denham et al. 2009, Gammage 2011). Aboriginal and Torres Strait Islander people’s survival depended upon these bush foods, as they are now called, and on the development, maintenance and transmission of traditional knowledge related to plant husbandry, uses and properties. Traditional knowledge underpins the modern Australian bush food industry. Knowledge contributions of the traditional custodians include:

- land management techniques to promote plant growth
- processing, cooking and consuming methods to remove toxins and promote palatability

- harvesting, handling and storage methods to maximise plant quality and nutritional benefit
- species identity, distinctions and characteristics
- growing habits, seasonal availability and ecological factors.

(Chase 1989, Cribb and Cribb 1987, Denham et al. 2009, Latz 1995)

Today, the bush food industry based on Australian native plants includes commercial markets for 15 main species, including macadamia, lemon myrtle, wattle, bush tomatoes, Kakadu plums, muntries and quandong. There are emerging markets for eight other species and identified potential markets for a further 10. Recent estimates place the sale of raw bush food ingredients at over AUD \$18 million a year (excluding macadamia, which alone is a \$200 million industry), with product enhancement potentially increasing this figure ‘by up to 500%’ (Clarke 2012, p. 56). Value-added products include processed ingredients from wild-harvested and cultivated produce supplied to restaurants and used in catering meals, gourmet sauces, relishes and flavourings – this use is particularly the case for bush tomatoes, which are not consumed as a fresh product. To a lesser degree, seedlings of bush food plant varieties for use in horticultural production and for domestic and amenity horticulture are also considered a value-added product.

Although the technical challenges of production and marketing will inevitably dominate the attention of an entrepreneur seeking to develop a new venture, in the case of products based on plants associated with Aboriginal and Torres Strait Islander culture there is also a range of important social and cultural issues that must be addressed at the outset.

2.1 Consent and participation of the traditional custodians

The ethical commercialisation of products that are founded in Aboriginal and Torres Strait Islander culture must assume that there will be an impact on the interests of those hereditary custodians of the traditional knowledge and lore associated with the objects or representations in question. Therefore, it is fundamental at the outset to discuss these impacts with the Aboriginal and Torres Strait Islander stakeholders. Ethical commercialisation must be contingent upon obtaining their informed prior consent (Taylor 2006). For example, Davis (2005) and Rea and Young (2006) explain the underlying principles and protocols for working with Aboriginal people in central Australia as required by the Central Land Council (CLC) and other agencies overseeing the engagement of Aboriginal communities with external parties. Moreover, it is desirable, as well as potentially beneficial to the venture, to engage the active participation of the traditional custodians.

Engagement with Aboriginal and Torres Strait Islander communities requires sophisticated understanding of intercultural communication, protocols for good practice and knowledge of community relationships and networks (Hill et al. 2013, Kimberley Land Council 2011, Rea & Young 2006). This expertise provides the foundation for consultation and negotiation with community members, which must include provisions for benefit sharing with Aboriginal and Torres Strait Islander people, obtaining clear informed written consent, clarification of potential impacts on participating individuals’ livelihoods and agreement on participants’ roles. The expected benefits must also be clearly described. The ways in which ongoing involvement with the community will occur must also be established, along with arrangements to ensure that timely feedback is provided in regard to all aspects that relate to the interests of Aboriginal and Torres Strait Islander community stakeholders (Rea & Young 2006).

AIATSIS (2012) describes in detail the ethical principles and considerations required in working with Aboriginal and Torres Strait Islander communities. Fourteen fundamental principles are defined, founded upon respect for culture; rights of Aboriginal and Torres Strait Islander people to have the value of their heritage recognised; their right to be included, consulted and acknowledged respectfully; and their entitlement to provide consent (or to withhold it) in regard to dealings with their culture and heritage. In an example related to CLC processes, these principles are elaborated by Davis (2005) as defined protocols, procedures and forms applicable to the various types of activities that may occur in engaging with Aboriginal and Torres Strait Islander communities. The issues relating to biological resources in particular is presented below, and a detailed treatise is also provided by Craig and Davies (2005).

2.2 Ethics compliance

Ethical conduct of investigations involving people in Australia is governed by the *National Statement on Ethical Conduct in Human Research* (Australian Government 2014). Ethical practice specifically regarding work with Aboriginal and Torres Strait Islander people is defined by Davis (2005), Rea and Young (2006) and AIATSIS (2012). Before beginning any investigative activity involving Aboriginal and Torres Strait Islander communities, formal ethics approvals must be obtained. Consultation is required with location-based ethics approval agencies such as:

- the Central Australian Human Research Ethics Committee (CAHREC) and the Top End Human Research Ethics Committee (TEHREC) in the Northern Territory (Northern Territory Government 2017)
- the Aboriginal Health Research Ethics Committee in South Australia (Aboriginal Health Council of South Australia n.d.)
- the Western Australian Aboriginal Health Ethics Committee (Aboriginal Health Council of Western Australia 2017)

and similar agencies in other states. A clear insight into ethical procedure particular to bush foods is provided by Merne Altyerre-ipenhe Reference Group et al. (2011), which includes nine definitive guidelines for proper practice, consistent with the principles presented in literature cited above:

- Guideline 1: Learn and act on ethical and social responsibilities related to bush food species, their custodians and knowledge experts
- Guideline 2: Ensure fair and equitable benefits and returns for Aboriginal people and their communities
- Guideline 3: Use an ethical approach to negotiate agreements about intellectual property derived from Aboriginal knowledge and custodial rights
- Guideline 4: Enable Aboriginal employment and training within bush food enterprises and industry
- Guideline 5: Support older Aboriginal people to pass on knowledge about bush foods and their importance to younger people
- Guideline 6: Improve governance roles for Aboriginal people within all stages of the bush foods economic chain and wider industry
- Guideline 7: Restore Country, ecology and bush food species through natural and cultural resource management and landcare
- Guideline 8: Identify and label the geographic origin of plants under the directions of local custodians

- Guideline 9: Communicate with Aboriginal people using clear and accessible media with relevant and useful content about developments in bush produce research, enterprises and industry (Merne Altyerre-ipenhe Reference Group et al. 2011, p. 25).

Private organisations and individuals are obliged to observe these ethics approval procedures if planned activities require engagement with Aboriginal and Torres Strait Islander people in matters relating to their culture. Employees of Australian institutional organisations must also undertake internal ethics approval processes as well as the location-based ethics approval. Most large organisations use the Human Research Ethics Application (HREA) hosted by the National Health and Medical Research Council (NHMRC n.d.) and comprising a network of cooperating human research ethics committees (HREC). The HREA process is nationally unified, including bodies such as CAHREC and TEHREC, and it is important to consult with all relevant ethics agencies in regard to their specific requirements and process integration. The potential psychological/spiritual impact of research and development of bush food production opportunities that entails interaction with Aboriginal and Torres Strait Islander people and the gathering of information from them must not be underestimated (Merne Altyerre-ipenhe Reference Group et al. 2011). Accordingly, ethics processes are essential.

2.3 Regulatory requirements of governments and administrative organisations

The administrative requirements of various government departments and statutory organisations must also be accommodated. In Australia, state government legislation and regulations are numerous, differ from state to state, change periodically and typically relate to specific fields of activity. Accordingly, bush food commercialisers must be familiar with the specific government requirements that may affect their work. Governments impose particular requirements in regard to accessing biological material. For the Northern Territory (NT), the Parks and Wildlife Commission provides advice. If an activity involving biological resources has any prospect of yielding a commercial benefit, NT legislation (*Biological Resources Act 2006*) requires that a benefit-sharing agreement be entered into, either with the NT Government or with the agency responsible for the biological resource. This benefit-sharing process is managed by the NT Department of Primary Industry and Resources. However, the NT Parks and Wildlife Commission facilitates the initial stages and permit applications to take wildlife (NTG 2016a).

Similarly, permits are required for collecting plant and animal samples in South Australia, Queensland, Western Australia, New South Wales, Victoria, the ACT and Commonwealth lands (Government of South Australia 2017; Queensland Government 2016; Government of Western Australia 2016, 2017; Service NSW n.d.; State Government of Victoria 2017; ACT Government 2017; Australian Government n.d.a). Information and contacts are available regarding access to biological resources in Commonwealth areas (Australian Government n.d.b) and in the various states and territories (Australian Government n.d.c).

2.4 Aboriginal and Torres Strait Islander people's interests

Since the earliest times of European colonisation of Australia, objects from and representations of Aboriginal and Torres Strait Islander culture have been misappropriated. Typically, this has occurred with little or no consent, acknowledgement or return of benefit to the traditional custodians, arguably because Western IP law is ill-suited to protecting traditional knowledge (Janke & Quiggin 2002, Smallacombe et al. 2007). Moreover, when Aboriginal and Torres Strait Islander people are themselves involved in

harvesting bush foods from the wild, material gain is often only a small part of their motivation; often, the more important aspects include social interaction with family, providing experience to young people, intergenerational transfer of cultural knowledge, intellectual interest, being on Country, gaining exercise, collecting other bush foods and resources and sharing bush foods with kinship groups (Walsh & Douglas 2011). Thus, Aboriginal and Torres Strait Islander people's interests in traditional embodiments and expressions extend far beyond their value as simple commodities for consumption or exploitation. The significance of the cultural and spiritual aspects of traditional pursuits is typically unrecognised in the process of commercialisation of culture-based products (Merne Altierre-ipenhe Reference Group et al. 2011).

2.5 Arrangements for sourcing materials from Aboriginal Title lands or for using cultural representations

Permission is required, under certain circumstances, to enter Aboriginal and Torres Strait Islander lands, and there are internet resources to help researchers and others determine the permits that may be required for various activities in the Northern Territory (NTG 2016b), Western Australia (Government of Western Australia n.d.), Anangu Pitjantjatjara Yankunytjatjara Lands (APY n.d.) and the other states (Tourism Australia 2017). In addition to these procedural requirements, it is necessary to obtain the separate consent of local communities in order to undertake work with Aboriginal and Torres Strait Islander people. This requires discussion and negotiation with appropriate community representatives or organisations and strict observance of protocols and procedures regarding etiquette and consent. Letters of support from participating community organisations or representatives are submitted as attachments to the HREA and applications to HRECs, which may not approve activities in communities without appropriate written support.

Depending on the purpose and proposed activities, one or more of a variety of CLC permits may pertain to activities in central Australia (CLC n.d.a). Similar permits are required from the Northern Land Council for work in the Top End (NLC n.d.a), and it should be noted that appropriate permits, if required, apply to various specific circumstances in each jurisdiction; an Entry Permit (CLC n.d.b) or Transit Permits (CLC n.d.c) may be needed, for example. It is advisable to liaise with the CLC or NLC to ascertain what requirements are applicable. Approval provisions vary with the locations: for example, less stringent requirements may apply to disturbed areas such as roadway precincts and other developments; conversely, known sacred sites will have significant constraints and a Sacred Site Clearance Certificate (CLC n.d.d) is required. Some activities may require a Special Purpose Permit (CLC n.d.e) or a Research Permit (NLC n.d.b).

These permits may not pertain to actual collection of items or representations from Aboriginal lands, however; and whereas government permits do apply to such activities, permission must also be obtained through negotiations both with local Aboriginal community representatives and with the authorised oversight body (e.g. CLC, NLC).

2.6 Ethical commercialisation

The measures above are the starting point in employing ethical process in commercialisation of a culture-based product. Figure 1 illustrates the procedure based on development of a bush food product sourced from Aboriginal titled lands in the NT. Similar processes are required in other jurisdictions.

This does not, however, mark the end of ethical considerations in commercialisation of culture-based bush food products. Ethics and the accommodation of Aboriginal and Torres Strait Islander people's interests should remain central throughout the product development process and into the product marketing phase. Nonetheless, at present, there are few legislated restrictions on the commercialisation of culture-based products, and ethical practice in such enterprises relies upon the moral discretion of the proponent. This paper outlines ways in which the interests of hereditary custodians of traditional culture may be better safeguarded.

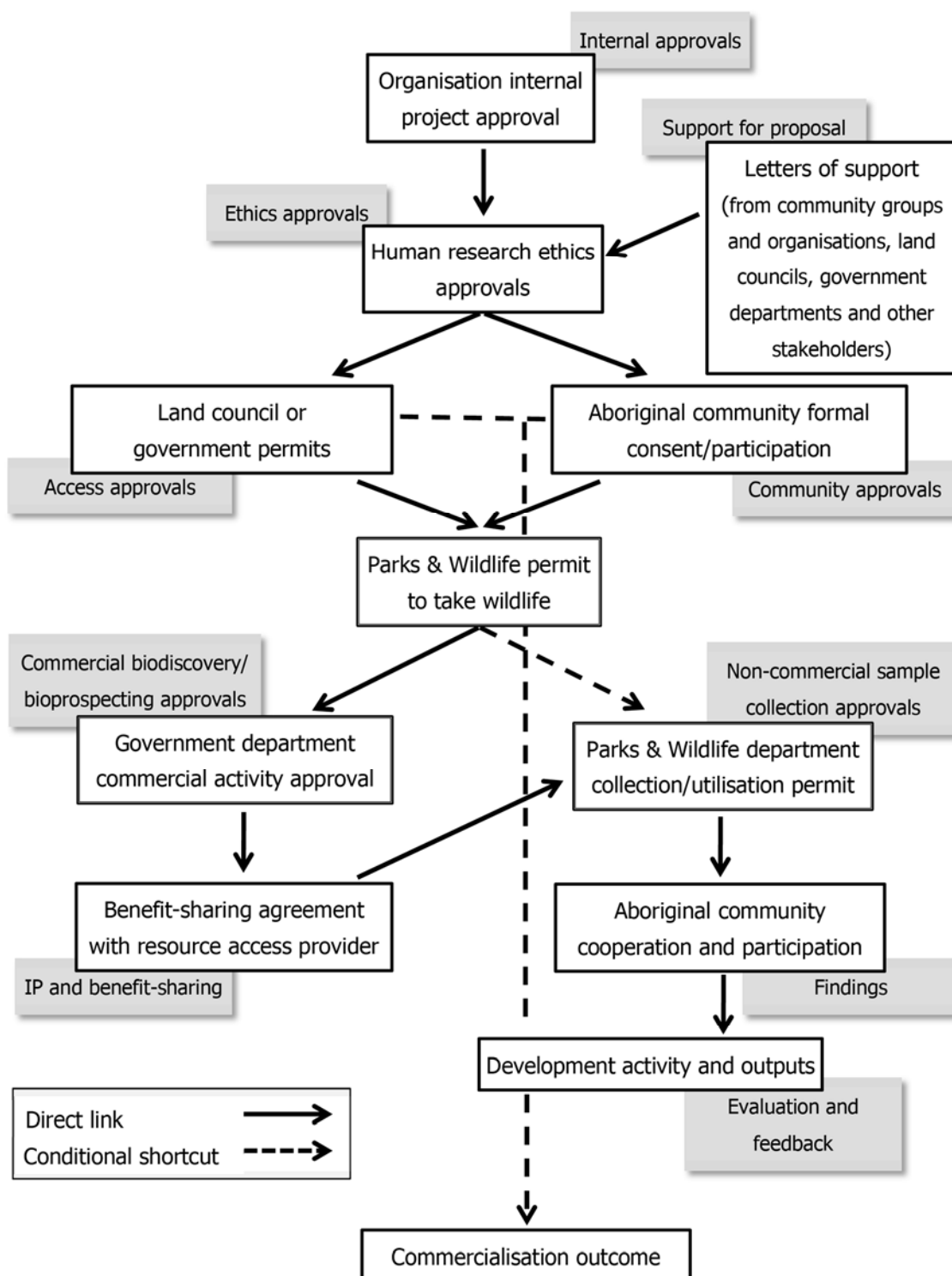


Figure 1: Roadmap to conducting bioprospecting research with Aboriginal communities in the NT

3. Background investigation

The preliminary stage of developing a new bush food business initiative entails researching product-specific aspects of a range of factors. Typically, there will be a body of information from previous work that can be tapped (e.g. Lee 2012). This was the case for development of bush tomato, which was the specific instance investigated in this project. In addition to accessing documented information for this purpose, our project also drew on the knowledge and experience of our Aboriginal researchers and our project Advisory Group. Such direct engagement and participation is vital in research, development and commercialisation undertakings that involve traditional knowledge.

3.1 Anthropology

Understanding the anthropological and ethnobotanical aspects of a bush food plant that is targeted for commercialisation is fundamental to ethical practice, but it also has other benefits. Since the pioneering work of O'Connell et al. (1983), there has been considerable study of bush food anthropology and ethnobotany (Berkinshaw 1999, Walsh 2008, Merne Altyerre-ipenhe Reference Group et al. 2011, White 2012, Cleary 2014). Such work reveals the complex relationships that traditional cultures have with their natural resources, and it is only in this context that the significance of ethics in commercialisation of culture-based items can be appreciated. Anthropological nuances vary between clan groups, locations and plant species, so specific information is generally more useful to each particular situation – see, for example, Peterson (1979) and O'Connell et al. (1983). Bush food commercialisation in ways that are respectful and safeguard the interests of traditional custodians can only occur when there is awareness of such cultural background.

Furthermore, appreciation of the cultural context of a bush food may benefit the commercialiser in their endeavours. It provides a potentially valuable marketing advantage by appealing to the socially conscious consumer. As will be discussed, various marketing strategies such as certification, fair-trade and cultural-origin labelling may be used to create high value niche market opportunities.

3.2 Biology

In the establishment of any new crop production initiative, plant biological aspects, along with marketing, are typically the commercialiser's primary concerns. Comprehensive knowledge of the plant and its environmental requirements are key to the satisfactory crop production performance of the venture. In the case of emerging bush food industries, many aspects of the required knowledge may be poorly developed (Ryder et al. 2008, Lee 2012). That situation notwithstanding, a significant amount of diverse information can be gathered from disparate sources – see, for example, Brand et al. (1983), Latz (1995), Ahmed and Johnson (2000), Gorst (2002), Miers (2003), Ryder and Latham (2005), Ryder et al. (2008), Vincent (2010) and Wurm et al. (2012). As described by Lee (2012) in the case of bush tomato (*Solanum centrale*), the aspiring bush food grower will need information on the plant's biology, optimal agronomic practices for the target bush food, the pests and disease problems that it may incur, its genetic constitution (particularly whether individuals are highly variable), whether there are any benefits to gain from breeding or genetic selection, how it is best propagated/reproduced and how it needs to be handled after harvesting in order to reach the marketplace in satisfactory condition.

3.3 Regulatory and legal requirements

Australian law imposes few obligations on entrepreneurs to regard the interests of Aboriginal and Torres Strait Islander people in the transformation of their traditional knowledge into market products, such as in bush food commercialisation. This ignores the fact that Aboriginal and Torres Strait Islander people should be considered as key stakeholders behind the commercialisation process, a position derived from the complex cultural relationships between Aboriginal and Torres Strait Islander people and plants. These traditional relationships may be utilitarian, such as the use of native plants for food, medicine and shelter. They also arise when a species is a family totem, used to organise social relationships and in governance roles within a group (Latz 1995). For example, customary law may direct those with totemic connections to decide how others in the group can use their totem and any associated knowledge, to maintain the species and knowledge and to ensure third party uses accord with customary law (Rose 2013). Culturally, native plants form the subject matter of important songs, stories, art and ceremony.

Modern relationships with traditional plant-food-related practices include economic opportunities from the sale of wild-harvested produce. However, wild harvesting also provides Aboriginal and Torres Strait Islander families with opportunities to pass on and refine knowledge, socialise, exercise and carry out land management activities. In addition to being an alternative source of commercial bush food production, this adds a further layer of social complexity to the commercialisation framework (Lee 2012).

Apart from the institutional requirements regarding ethical practice and government regulations for collection of physical samples, there are few other regulatory or legal constraints to proceeding with research, development or commercialisation of culture-based products that involve the interests of hereditary custodians. IP laws in Australia are inadequate in protecting collective Aboriginal and Torres Strait Islander IP that embodies traditional knowledge (Janke & Quiggin 2002, Evans et al. 2009, Morse 2010, Rose 2013). International systems are similarly limited in their capacity to protect interests of Indigenous stakeholders (UK Commission on Intellectual Property Rights 2002).

3.4 Quality assurance and food regulations

In Australia and New Zealand, the marketing of food products is controlled by a strict regulatory environment, administered by Food Standards Australia New Zealand (FSANZ), requiring compliance with the Australia New Zealand Food Standards Code (Australian Government n.d.d). The regulations apply to (among numerous other things) factors related to health and safety, claims and labelling (Australian Government 2015a, 2015b). The bush food business owner has a legal obligation to comply with all FSANZ regulations. Hegarty et al. (2001) provide specific food safety information that relates to bush foods, and Faragher et al. (2008) describe the challenges that the industry must meet in regard to food safety and labelling.

3.5 Marketing

A key to business success in any new enterprise is a clear and comprehensive understanding of markets and the value chain between the producer and the consumer of the product in question. Bush foods is an emerging industry presenting a diverse variety of products; unsurprisingly, market perceptions are wide-ranging and lack clear definition (Cherikoff 2000). Although there are common themes, recent research (Clarke 2012) reflects that each bush food product has its unique market considerations depending upon the source, supply, perishability, processing requirements and end use. As a result, supply-chain arrangements vary. However, value chains are typically short and simple (Bryceson 2008) due to the

relatively small size and immaturity of each industry (Robins 2008). In the absence of major processors, the bush food industry supply chain consists of individual arrangements and networks established by each business (Robins 2007), and this lack of critical mass results in problems of inconsistency of supply and variable quality (Bryceson 2008). The displeasure expressed by retailers over unreliable supply (Cherikoff 2000, Bryceson 2008) persists (J. Robins pers. comm., 2015) and presents a significant challenge to the development of bush foods industries, which Bryceson (2008) had characterised long ago as a ‘chicken and egg’ problem.

Ideally, supply-chain arrangements should include the close involvement of Aboriginal and Torres Strait Islander stakeholders (Robins 2007, Robins 2008) to foster ethical commercialisation. As discussed later, in the case of bush food products based in traditional culture, various additional marketing approaches are available that may be utilised to advantage. Strategies such as certification schemes, fair-trade and traditional cultural-origin brands provide an opportunity to create valuable niche markets and consumer appeal.

4. Interests of hereditary custodians

Accommodating the interests of Aboriginal and Torres Strait Islander stakeholders in culture-based product commercialisation comprises a broad range of issues.

4.1 Traditional knowledge, plants, bush foods and commercialisation

Commercialisation of culture-based products, including bush foods, has often proceeded with little regard to or acknowledgement of the interests of Aboriginal and Torres Strait Islander hereditary custodians. Morse (2005, p. 7) points out:

Of primary concern at the national scale is the bushfood industry’s failure to satisfactorily deal with the fundamental role of traditional Aboriginal knowledge.

In recent times, however, numerous organisations have intensified efforts to redress this situation – for example, the bush foods peak body Australian Native Food and Botanicals (ANFAB n.d.), Outback Spirit Foundation (2015) and Coles Indigenous Food Fund (Wesfarmers 2016).

Mainstream society has a purely utilitarian or commercial outlook on plant resources. Conversely, while traditional societies do utilise plants for practical purposes, the very significant distinction is that they place even greater value upon associations such as spiritual, totemic and cultural beliefs (Cleary 2009, 2012; Drahos & Frankel 2012; Lee 2012, 2015; Merne Altyerre-ipenhe Reference Group et al. 2011; Walsh et al. 2013). As Yates (2009, p. 50) explains it:

For Aboriginal people, the idea that their traditional foods could be a mere commodity is almost beyond comprehension. To them, these are not just foods: they are bound up in stories of creation, in kinship, and in multiple layers of personal and collective memory, recalling people, places, times and Tjukurpa (Dreaming). For Aboriginal people, it is as though bushfoods are an inseparable part of themselves.

This stark difference in perception is rarely taken into account, or even understood, by commercialisers, and it is fundamental to the offence and sense of disrespect felt by many Aboriginal and Torres Strait Islander people when confronted with commercial exploitation of their culture.

One the other hand, market demand for bush food products presents an opportunity for Aboriginal and Torres Strait Islander people to benefit from commercialisation. Many reports have been produced assessing the opportunities for Aboriginal and Torres Strait Islander people to engage beneficially in commercial activities that utilise their bush food culture, traditional knowledge and resources (refer Cleary 2009, Claudie et al. 2012; Evans et al. 2010, Gorman et al. 2006, Jones & James 2006, Merne Altyerre-ipenhe Reference Group et al. 2011, Miers 2003, Morse 2005, Smith 2006). Yet this assumes that the aims and aspirations of Aboriginal and Torres Strait Islander people will be the same as for other entrepreneurs. Evans (2007) tabulates the impediments and barriers faced by hopeful Aboriginal and Torres Strait Islander business people. In addition to the usual challenges of capital, management capabilities, marketing skills and remoteness of location that are faced by other people building comparable enterprises, there are additional issues of worldview, cultural values, community obligations and family commitments unique to Aboriginal and Torres Strait Islander peoples that may be contrary to enterprise development and business practice (Evans 2007). Nonetheless, the numerous reports cited above present a range of approaches that can integrate the diverse systems in culturally appropriate ways, to the potential financial benefit of hereditary custodians. Other examples are found in Bryceson (2008), Holcombe et al. (2011) and Walsh and Douglas (2011).

4.2 The international context

There is a vast body of work describing, analysing and critiquing the many issues in regard to Indigenous people's interests in plants and plant products in the international arena (e.g. De Jonge 2011, Drahos 2004, Twarog & Kapoor 2004, UNCTAD 2005). It is not our intention to review this area, which involves policies and experiences of many countries, United Nations conventions and declarations and the activities of genetic resource collection agencies throughout the globe. Notable among these are the implications for Aboriginal and Torres Strait Islander stakeholders of the terms of the UN Convention on Biodiversity (UN-CBD 1992) brought into effect by the Nagoya Protocol (UN-CBD 2011), the UNESCO Convention for the Safeguarding of the Intangible Cultural Heritage (UNESCO 2003) and the United Nations Declaration on the Rights of Indigenous Peoples (UN-General Assembly 2008).

It is therefore important to note that the interests of Aboriginal and Torres Strait Islander people in regard to commercialisation of their traditional knowledge and customary heritage stand within an international context of immense complexity. The Australian situation serves both as an exemplar for and can take lessons from the international experience.

4.3 Current legal framework

Lingard (2015a) examines the legal framework that provides limited support for the interests of Aboriginal and Torres Strait Islander hereditary custodians of plant IP and identifies areas where changes may yield an improved situation:

- connecting specimens to landowner interests
- connecting botanical and cultural data
- tightening consultation and benefit-sharing requirements
- creating a streamlined database service for pertinent records
- facilitating objections to IP applications
- utilising Reconciliation Action Plans
- facilitating collaborations with Aboriginal and Torres Strait Islander peoples.

However, due to the complexities of spiritual and cultural connection to the actual use of plants in commercialisation, a raft of other issues arises that requires the direct participation of hereditary custodians, including:

- control over access to and the use of bush foods
 - control over access to and use of bush food knowledge
 - fair share of benefits arising from bush food and knowledge use
 - development of bush food enterprises and partnerships
 - transfer and maintenance of bush food knowledge
 - participation in relevant law, policy and decision-making processes.
- (Lingard 2016)

The current legal framework lacks adequate provisions to satisfactorily empower Aboriginal and Torres Strait Islander stakeholders to protect their interests in these issues. An argument is put for bespoke sui generis law to be designed for these purposes (Lingard 2016).

4.4 Governance

While general government policy expresses widespread advocacy for meaningful governance systems for guiding best practice where commercial interests intersect with Aboriginal and Torres Strait Islanders' cultural interests, current Australian law provides little significant backing for such governance (Lingard 2015b – Chapter 6). Moreover, Lingard points out that more rigorous governance may invoke resistance from various quarters, for example:

- strengthening of governance in the area of flora management where it involves the interests of traditional custodians may encounter policymaker and business aversions in response to government control over economic development
- changes to food and biosecurity governance may challenge the narrow mandate of authorities whose current role is simply to protect public health and safety
- while it may not be overtly expressed, there could be resistance to increasing the power of Aboriginal and Torres Strait Islander peoples to 'interfere' with established government and commercial arrangements.

Furthermore, the number and range of authorities who should exercise codes of governance is very large – in addition to industry stakeholders and their representative bodies, pertinent statutory bodies at state and federal levels include agencies in environmental regulation, biosecurity, exporting, food safety, IP management, research providers and research funding. The specific concerns of each will differ (Lingard 2015b).

4.5 Policy implications and law reform

Inherent in much of the preceding discourse is the implication that reviews of government and industry policies are warranted and that law reform is required to redress many of the problems and issues described. Lingard and Martin (2016) set out a systems-mapping approach aimed at identifying strategies to support Aboriginal and Torres Strait Islander interests where bush food commercialisation activities are undertaken. These encompass four broad categories: (i) control of plants and knowledge in accordance

with customary law, (ii) fair sharing of benefits from plant and knowledge use, (iii) development of enterprises and partnerships, and (iv) transfer and maintenance of knowledge in cultural practices.

While the domain of required law reform to better serve the interests of Aboriginal and Torres Strait Islander stakeholders is complex, the policy review and improvement arena is even more so. Whereas law reform is largely the province of legislators, numerous agencies are involved in policy. These include Aboriginal Land Councils; federal, state and local governments; industry bodies and individual business enterprises; government departments and statutory authorities; research organisations; and community service agencies. Moreover, the issues that policies embrace are many, including ethical practices, management of and access to biological resources, IP management, capacity-building for Aboriginal and Torres Strait Islander enterprise, economic development, benefit sharing, food safety and much more (Cunningham et al. 2009a, Lingard 2015a, Lingard & Martin 2016, Smith 2006).

Cunningham et al. (2009b) propose nine specific steps that should be taken to frame policy improvement in bush food commercialisation, in particular to benefit Aboriginal and Torres Strait Islander people. These steps:

... address a range of issues including effective implementation of existing international and national standards for protection of genetic resources; development of cultural branding and certification as marketing tools; building business expertise and producer associations amongst remote Aboriginal people; and increasing the reliability of supply of bush harvested species. (Cunningham et al. 2009b, p. 434)

Even this brief statement reveals the breadth of policy issues that impact Aboriginal and Torres Strait Islander stakeholders' interests in equitable commercialisation of bush foods.

5. Product development

5.1 Production methodology and development

Useful information on optimal production methodology to underpin the enterprise can be gleaned from existing knowledge (refer section 3.2 Biology, above). However, as for any new rural industry, there will be knowledge gaps in a fledgling bush food production business. While it seems logical to base production methodology on related mainstream crops (see Vincent 2010), Australian native bush food plants, having evolved in isolation for millions of years, will have many distinct requirements for optimal productivity. Thus, it may be necessary to conduct specific trials to answer many questions. Examples of such investigative trials, in relation to bush tomato production, are provided by de Sousa Majer et al. (2009), Ryder et al. (2009), Ellis et al. (2010) and Vincent (2010) covering aspects ranging from selection of genetic material and propagation, through various considerations of agronomy and pest management to post-harvest handling. Such issues must be addressed to ensure successful supply of bush food produce to the market.

5.2 Ethical marketing approaches

This discourse shows that the issue of Aboriginal and Torres Strait Islanders' cultural interests within the context of commercialisation of culture-based products such as bush foods is fraught with challenges. However, there are also potential advantages. Clearly, opportunities for business engagement and financial gain are presented, and there are also potential unique marketing benefits.

Traditional custodians are exclusively positioned to capitalise on their linkage to culture, place, language and symbology. Such links establish authenticity, to which others may not make legitimate claim, and authenticity of a culture-based product or of its producer can be utilised to significant advantage (Lingard & Martin 2016). The use of Aboriginal and Torres Strait Islander words and symbols to market bush food products is relevant in this commercial context as it allows the marketer to claim cultural associations that may help to sell the product, particularly to the socially responsible consumer. One instance where advantage can be taken of this marketing approach is wild harvest, particularly for marketing of bush tomato and Kakadu plum (Spencer & Hardie 2011) for which a significant proportion of supply to processors is derived from Aboriginal and Torres Strait Islander women harvesting fruit from the bush. However, to date there appears to be limited use of claims about authentic wild harvesting by Aboriginal and Torres Strait Islander people as an effective marketing tool.

Additionally, a clear potential benefit has been identified from initiating such fair-trade certification schemes in Australia (Spencer & Hardie 2011). In addition to the marketing advantages, it provides an element of legal protection by utilising instruments such as trademarks, geographical indications and copyright.

6. Conclusion

This report presents information, critical discussion and practical suggestions for the ethical commercialisation of Australian bush foods where both the technical and moral issues facing this fledgling industry are addressed. There are numerous and varied aspects to developing a new food production business, and these are much greater where the cultural, social and spiritual interests of Aboriginal and Torres Strait Islander people who are the hereditary custodians of the lore and traditional knowledge surrounding the target item are to be accommodated through a deliberate process of ethical commercialisation.

In the course of commercialisation of native plant products, many provisions already exist to support the interests of Aboriginal and Torres Strait Islander hereditary custodians of plants and the traditional knowledge and culture encompassed by them. This is particularly the case for ethical practice guidelines. Nonetheless, there are significant shortcomings, such as lack of enforceability and ignorance among stakeholders of their moral obligations. For example, sound provisions are in place regarding ethical practices in the related research and development activities, and these can easily extend to being adopted in commercialisation. On the other hand, protection of related IP where traditional interests are held collectively and in perpetuity and conveyed by oral culture (the ‘common property regime’; Rose 2013) is not served well by the prevailing mainstream legal system in which IP protection must be documented, applies to prescribed individuals and lasts only for defined periods (Lee 2015).

At the research and development phase, the project focused on the following best practice research principles that encapsulate the nine guideline principles of Merne Altyerre-ipenhe Reference Group et al. (2011) (refer to 2.2. Ethics compliance, above):

- obtaining and complying with ethics approval procedures required for working with Aboriginal and Torres Strait Islander people
- obtaining prior informed consent to work with Aboriginal and Torres Strait Islander people and for access to their native plant knowledge

- ensuring that benefit-sharing provisions were integrated into the project at its outset and that Aboriginal and Torres Strait Islander stakeholders were aware of these provisions and agree with their fairness
- planning for the activities and outputs of the project to be useful to Aboriginal and Torres Strait Islander participants and communities in terms of providing employment, capacity-building, training, local application and ensuring protection of related Aboriginal IP
- providing documentation of traditional knowledge gathered by the project, ensuring its accuracy and that consent for its being recorded has been given by those providing information, that its confidentiality be strictly observed if required, and that it is accessible to those providers (Holcombe 2009).

In virtually all Australian institutional research organisations, such practices are mandatory requirements. They are also relatively consistent in their design and application, being invariably founded on the provisions of the *National Statement on Ethical Conduct in Human Research* (Australian Government 2014).

Application of best practice in regard to accommodating the interests of Aboriginal and Torres Strait Islander stakeholders becomes less adequate closer to the commercialisation stage. This is reflected in the deficient and fragmentary nature of relevant governance provisions of policy and laws. The milieu of complex factors that the research of this project encompassed led to identification of a broad range of recommendations that would promote equitable commercialisation of bush foods (Lingard 2015b). Improvements are proposed in the areas of (i) governance of the bush food commercialisation process (Lingard 2015c), (ii) laws to serve the interests of Aboriginal and Torres Strait Islander stakeholders (Lingard 2015d), (iii) strategies to support their interests in regard to development of new plant varieties (Lingard 2015e), and (iv) in regard to trade in value-added bush food products (Lingard 2015f).

In general terms, governance changes are proposed for authorities across the gamut of biosecurity and export, environmental regulation, food safety, IP protection, research, genetic resource collection repositories, and industry. To support the interests of Aboriginal and Torres Strait Islander hereditary custodians of traditional knowledge, proposed changes are presented in regard to regulating the collection and utilisation of plants, protection of traditional knowledge and its intergenerational transfer and maintenance, benefit sharing from exploitation of these things, assistance for Aboriginal and Torres Strait Islander stakeholders in creating business partnerships, and engendering their participation in development of relevant policy and law. Recommendations to improve equity in commercialisation include better ways to monitor and manage supply of bush food plants and plant products; empowering traditional custodians to take a role in product research and development; and developing schemes to help Aboriginal and Torres Strait Islander people become involved in bush food business development, manufacturing and marketing, including the provision of financing and the power to impose product licensing (Lingard 2015b).

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