Indigenous Tourism: The Possibilities into the Future

Jeremy Buultjens & Nadine White

Abstract

Indigenous tourism[1] has been identified as providing significant competitive market advantage for the Australian tourism industry as well as considerable economic opportunities for desert communities. However, at the present time many Indigenous businesses find it difficult to achieve sustainability. This paper examines some of the difficulties faced by the sector as well as some initiatives that could improve the sector's performance. A holistic approach needs to be taken to develop sustainable Indigenous tourism businesses. There is potential for the Desert Knowledge Cooperative Research Centre (DKCRC) to take a leading role in the sector by undertaking applied research as well as providing specific industry development programs. This paper presents a conceptual model of the DKCRC as well as a new 10-step program that the DKCRC could implement to improve the sector's performance.

Introduction

Remote Australia's settlements are changing quite rapidly with the rate of growth in the Indigenous population almost twice that of the non-indigenous population (remoteFOCUS Group, 2008). This demographic change has important implications for remote Australia because much of the Indigenous population is disengaged from the mainstream economy and has become increasingly welfare dependant (DIMIA, 2003; remoteFOCUS Group, 2008; Fuller, Caldicott, Cairncross and Wilde, 2007). Unless Indigenous welfare dependency is broken then remote regional economies will continue to struggle. One sector that provides remote regions and the Indigenous people living within them with "enormous and largely untapped economic and social potential" is tourism (remoteFOCUS Group, 2008: 3). Tourism in these settings would largely be cultural, eco and nature-based (Ryan & Huyton, 2000) but at the present time the Indigenous tourism sector is relatively immature.

The aim of this paper is to examine the possibilities for Indigenous tourism development in remote Australia and the contribution the DKCRC can make to its development. The paper begins by providing a description of the position of

[1] This paper uses the generic term Indigenous in reference to Aboriginal and Torres Strait Islanders.

Indigenous Australians in remote Australia. In the next sections Indigenous tourism and the supply and demand of Indigenous tourism are examined. The background to the DKCRC is described in the following section, and a model that illustrates the linkages between the DKCRC, the academic community, government and industry is suggested. A discussion of the potential for the DKCRC to improve the performance of the Indigenous tourism sector follows and a 10-step model is proposed that could be utilised by the DKCRC to develop Indigenous tourism in remote regions. This is then followed by a discussion of the potential for the DKCRC to meet the recent recommendations for changes to the Cooperative Research Centre (CRC) Program.

Remote Australia and Indigenous people

Remote Australia occupies approximately 85 per cent of the Australian continent but hosts only 5 per cent of the country's population (remoteFOCUS Group, 2008). This population has a substantial Aboriginal component. For example, in June 2006, the Indigenous population in Australia was estimated to be 517,200 or 2.5 per cent of the Australian population. The majority of Indigenous Australians live in regional (43 per cent) and remote (25 per cent) areas (Australian Bureau of Statistics, 2008).

As stated previously the remote population is predicted to change substantially into the near future because of large increases in the Indigenous population and a possible reduction in the non-Indigenous population. These changing demographics of remote regions will have important economic, social and environmental implications. The Indigenous population in Australia and especially in remote areas, like so many Indigenous peoples throughout the world, suffer considerable economic and social disadvantage (Norris, 2001; Uniting Care Australia, 2003). The disadvantage, a result of a history of colonisation, the dispossession of land and displacement of tribal groups, has left Indigenous peoples in a position of poverty and marginalisation (Alford & Muir, 2004). Poverty and marginalisation has also resulted in a substantial level of welfare dependency.

In order to overcome welfare dependency and for desert communities to cope with the predicted demographic changes outlined above it is imperative that Indigenous people become engaged with these economies in order for them to be sustainable.

Another concomitant issue is that Indigenous people, through land rights and land acquisition schemes, are increasing their land ownership. Currently, Indigenous Australians own, control, or have management arrangements over approximately 20 per cent of the Australian continent and the majority of this land is located in remote areas (remoteFOCUS Group, 2008). The land being returned to Indigenous people in regional or remote areas often has high conservation value. As such, these lands also have the potential to be used for the development of cultural and ecotourism experiences. There is also a perception that other aspects of the tourism industry could be favourable for Indigenous people (Miller, 2000).

Indigenous tourism

The 1991 *Royal Commission into Aboriginal Deaths in Custody* (Austlii, 1991) identified a limited number of industries that potentially provided sources of economic growth and employment for Indigenous people. One of these identified industries was tourism. In support of the Royal Commission views, the 2003 *Tourism White Paper: A Medium to Long Term Strategy for Tourism* (DITR, 2004) argued that it was very important for Australia to develop the Indigenous tourism sector and that Indigenous tourism provided a competitive advantage for Australian tourism industries.

Clearly there are perceived demand and supply side benefits for the development of Indigenous tourism, yet the sector is not generally seen as 'market ready' (Buultjens and Gale, 2008; DITR, 2004). In an attempt to facilitate the development of the sector, it was directed in the *Tourism White Paper* that the new national tourism marketing body, Tourism Australia (TA), had to take responsibility for leadership in this area. Another initiative from the *White Paper* was the establishment of Indigenous Tourism Australia (ITA) which was to provide a national approach to furthering the development of Indigenous tourism. Additionally, a $3.83 million *Business Ready* (Mentoring) *Program for Indigenous Tourism* was established in 2005 with the aim of increasing the number of 'business ready' Indigenous tourism businesses (DITR, 2004).

At the present time there appear to be over 300 Indigenous tourism experiences in Australia (Tourism Australia, 2007; Crawshaw and Purcell, 2007) however it is difficult to be definitive about the number due the fragility of the sector (Schmiechen and Boyle, 2007). Of the Indigenous tourism businesses in Australia, it appears that approximately 32 per cent are situated in very remote locations and 20 per cent are in remote areas - so over half are in remote or very remote locations. A further 21 per cent of businesses are situated in outer regional areas, 11 per cent are from inner regional locations and 16 per cent are from major cities (Buultjens and Gale, 2008). These figures indicate that an organisation like the DKCRC, which aims to "encourage sustainable remote desert settlements that support the presence of desert people, particularly remote Aboriginal communities" (DKCRC, 2008), can have an important role in the development of Indigenous tourism.

The demand for Indigenous tourism

Despite a positive view about the demand for Indigenous tourism amongst a number of stakeholders there is a still a great deal of uncertainty about the true level of demand. Tourism Research Australia (TRA) is attempting to resolve some of the uncertainty by including some focused questions on Indigenous Tourism in the International Visitor Survey (IVS) and National Visitor Survey (NVS) (Pers Comm. K. Gillies, TRA, 16th October, 2008).

Uncertainty also exists around the methods used by various studies to determine the level of demand for Indigenous tourism. Tremblay (2007) explores some of the methodological issues that arise around the determination of the level of demand. He argues that there are methodological problems with a number of studies and that "fresh methods to assess the cultural and commercial sustainability of negotiated cultural encounters between tourists and Indigenous communities [are needed], when the needs of tourists are ill-defined (by themselves) and the expectations of host communities evolving" (Tremblay, 2007: 104).

Despite the concerns of Tremblay and others, the conventional wisdom in Australia is that demand for Indigenous tourism is much higher amongst international visitors in comparison with domestic visitors. This is a substantial problem for the sector

because 70 per cent of tourism leisure expenditure in the Australian tourism industry is from the domestic market (Tourism Research Australia, 2008). A way to overcome this perceived lack of domestic interest is to 'mainstream' Indigenous tourism and encourage Indigenous people to take up broader tourism opportunities rather than focus just on the cultural dimensions of tourism (Miller, 2000; ITLG, 2004).

A further problem for the sector is a low tourism market profile. The Australian Tourist Commission (ATC) (2003) suggested one of the main reasons for a lack of participation in Indigenous tourism by people interested in it was a lack of promotional material required for planning activities. It was suggested that between 60 per cent and 80 per cent of international visitors who were either interested in experiencing or had experienced an Indigenous tourism product believed they had viewed very little advertising.

The supply of Indigenous tourism

In 2008, the Indigenous tourism sector remains extremely fragile and tenuous despite the efforts arising from the *Tourism White Paper* and other government and private sector initiatives.

Clearly the level of domestic demand is a problem the sector needs to address but there are also a number of supply side factors that impact on the sector. A number of studies have addressed the barriers to the sustainable development of Indigenous tourism business (for example, see Altman and Finlayson, 2003; Austli, 1991; Buultjens et al., 2005; DIMIA, 2003; Dyer et al., 2003; Fuller et al., 2003; Fuller et al., 2005; Ivory, 2003; Zeppel, 2001). Some of the barriers are outlined below.

Most Indigenous tourism businesses are small and therefore face the same pit-falls as small non-Indigenous businesses. For example, approximately two thirds of all small businesses fail within the first five years of operation (Zeppel, 2001). In addition to the problems faced by all businesses, Indigenous businesses also face problems that are particularly related to Indigenous people and their situation.

As stated previously, Indigenous people suffer from economic disadvantage. They are therefore unlikely to have accumulated substantial personal savings (Fuller et al., 2003; Ivory, 2003). A lack of personal savings combined with community ownership of land results in a reluctance of behalf of mainstream lending organisations to provide capital to Indigenous entrepreneurs (Ivory, 2003).

In order to help Indigenous businesses overcome a lack of finance and some of the other barriers they face, various governments have provided numerous programs and assistance schemes designed to promote the development of Indigenous enterprises. Despite the existence of these schemes most have failed to deliver reasonable outcomes for many Indigenous people. A number of factors including poorly designed programs, difficulty with accessing the programs, literacy-associated problems of Indigenous people and the complicated nature of application processes have all reduced the effectiveness of programs (Buultjens et al., 2005; Fuller et al., 2005; Ivory, 2003).

The cultural values and belief systems of Indigenous Australians can often contribute to problems associated with maintaining a business. These values and beliefs are quite often at odds with the Western notion of the work ethic and accumulation of capital (Fuller, Caldicott, Cairncross & Wilde, 2007). For example, Indigenous Australians may have cultural obligations that make it very hard, if not impossible, for them to attend work on a regular basis over an extended period of time (Buultjens & Fuller, 2007). Priorities such as these are at odds with the world of commerce, where much value is placed on regularity, reliability and punctuality. The concept of obligation may make it difficult for an Indigenous person to invest profits back into the business if there is a family member who requires assistance. In addition, welfare dependency over successive generations has decreased self-reliance and self confidence, as well as stifling ambition (DIMIA, 2003).

Business dealings can also be more time consuming to develop when they involve Indigenous people. In these negotiations there is an emphasis on building relations, consultation and negotiation. This process results in an increase in the length of time involved in completing business transactions (Altman and Finlayson, 2003; Dyer et al., 2003).

The remote location of many Indigenous tourism businesses also presents some barriers to success. There are problems accessing suppliers and tourism markets and this can result in increased costs and prices and a lack of competitiveness with less remote markets (Fuller et al., 2003). Another problem associated with remote locations is a lack of access to skilled labour and opportunities for informal and formal training (McLennan & Ruhanen, 2008). A range of other obstacles and challenges exist for tourism operators in remote areas including logistics, seasonality and infrastructure issues (Butler, 2000; Prideaux, 2002).

Clearly there are significant obstacles that Indigenous tourism businesses have to overcome in terms of supply however there are certain factors that can facilitate the development of the sector. For example, Foley (2004) suggests that there has been too much of a concentration on community-owned businesses at the expense of individually owned businesses. Foley and others believe that this is a major short coming, since individual entrepreneurs play a vital role in the development of any Indigenous tourism business (Bennett & Gordon, 2007). It is the passion, determination and vision of these entrepreneurs that usually underpins the success of any business (DEWR, 2005; Foley, 2004).

Most successful entrepreneurs are aware of the important role that networking and collaboration play within their industry (Foley, 2004; DEWR, 2005). They are also open to continual learning and self-improvement (DEWR, 2005). Finally, education and relevant employment experience are seen as important features of successful entrepreneurs. In order to enhance the abilities of entrepreneurs, mentoring, especially in the early stages of business lifecycle, has been particularly successful. Mentors who provide timely and professional advice have been shown to be critical to the success of a business (DIMIA, 2003; Bennett & Gordon, 2007; Foley, 2004; DEWR, 2005).

Another important factor that can help facilitate Indigenous tourism development is the provision of access to relatively small capital funds. Finally, research institutions, like the DKCRC, are very well-placed to have substantial impact on the development of a vibrant Indigenous tourism sector in remote regions of Australia.

Background to the DKCRC

Cooperative Research Centres (CRCs) have emerged from an Australian Government funded program that commenced in 1991. Since commencement of the program in 1991, 168 CRCs have been established, with 49 in operation in October 2008 (DIISR, 2008a). CRCs are companies formed via collaboration between researchers and businesses. The collaboration can include universities, government research agencies, industry associations and private sector organisations.

The current objective of the CRC program is:

> *to enhance Australia's industrial, commercial and economic growth through the development of sustained, user-driven, cooperative public-private research centres that achieve high level of outcomes in adoption and commercialisation*
>
> (Commonwealth of Australia, 2008, p. 11)

CRCs attempt to maximise the benefits of research through enhanced utility, commercialisation and technology transfer (DIISR, 2008a). They also deliver enhanced skill formation through the development of postgraduates with industry relevant skills. Whilst there is no restriction on research fields, each CRC must include some research in engineering or the natural sciences (Commonwealth of Australia, 2008).

The total investment in the CRC Program from the Commonwealth is approximately $3 billion, with an additional $9 billion leveraged from participants. Of this $9 billion, $2.9 billion is contributed by universities, $2.3 billion from industry and $1.1 billion from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) (Commonwealth of Australia, 2008). The CSIRO has been the single largest contributor, with $1,080 million of in-kind and $17 million in-cash contributions, however universities have typically contributed a higher cash percentage than the CSIRO. Combined funding from participants must at least match the funding sought from the CRC Program. CRCs are funded for up to seven years with nearly all CRCs

to date having been funded for the full seven years (Commonwealth of Australia, 2008).

The DKCRC was established within the environment sector of the federal government's CRC Program in July 2003. Its founding objective was to "make significant progress towards a vibrant desert knowledge economy in inland Australia" (DIISR, 2008b, p. 11). The DKCRC aims to improve the livelihoods of Australians living in remote desert regions, to increase the viability of desert communities and improve desert economies. As noted earlier, Indigenous tourism has substantial potential to make major contributions to the viability of desert communities and improvement of desert economies.

The DKCRC is a sister organisation of Desert Knowledge Australia (DKA), an organisation which builds networks and partnerships across every state and territory that has a remote or desert region (Desert Knowledge Australia, 2008). The DKCRC has a national research network of partners who undertake research, product development and marketing, drawing on informal and formal knowledge bases to create useful outcomes with commercial application for desert people. The core partners of the DKCRC include 13 university partners, various Commonwealth and State Governments and Departments, the Central Land Council, various Indigenous Local Governments and various private companies.

The DKCRC is well-placed not only to undertake applied research of great importance to the Indigenous tourism sector, it also well-placed to provide important input into policy determination as well as enhancing product development and training for the sector. A model has been constructed that illustrates the potential of the DKCRC for Indigenous tourism indicating the relationship between the DKCRC, the academic community, government and industry as shown in Figure 1.

The model indicates the core elements of research and extension that exist within the DKCRC and the feedback loop between these elements. The model indicates that the DKCRC has to meet the needs of its academic, industry and government partners. University partners and their staff need to obtain grants and produce academic papers that are published in recognised academic journals from their research activities for

DKCRC. In achieving these outcomes, universities increase the academic standing of the DKCRC and continue to build the brand of the organisation.

The multi-directional feedback loops, as illustrated in the model, tackle the criticisms made of the broader CRC Program in the 2003 Howard Partners report, *Evaluation of the Cooperative Research Centres Programme*. Specifically it found that the extent of the existing match between technology-push from the research base and demand-pull from potential research users influenced the activities of CRCs. When the match was strong, CRCs performed well. When the match was poor, that is when there was little or no pre-existing capacity to match these push and pull factors, then the performance of CRCs was more mixed. The recent review of the CRC program, *Collaborating to a Purpose*, agreed with this finding (Commonwealth of Australia, 2008). The multi-directional feedback loops of the DKCRC model ensure that the CRC increases its capacity to meet the demand of end-users, rather than imposing existing capacity on end-users or simply not providing any outcomes at all.

Industry partners benefit from the applied research outcomes that can result in the development of industry programs. Carefully targeted product development and training and mentoring programs should emerge from the applied research undertaken. The DKCRC is also in a position to monitor and evaluate the outcomes of these product development and training programs, as part of their on-going research program. This should result in a continual improvement of these packages ensuring significant benefits for industry and desert communities. Like the successful research outcomes, successful extension activities will also enhance the brand of the DKCRC.

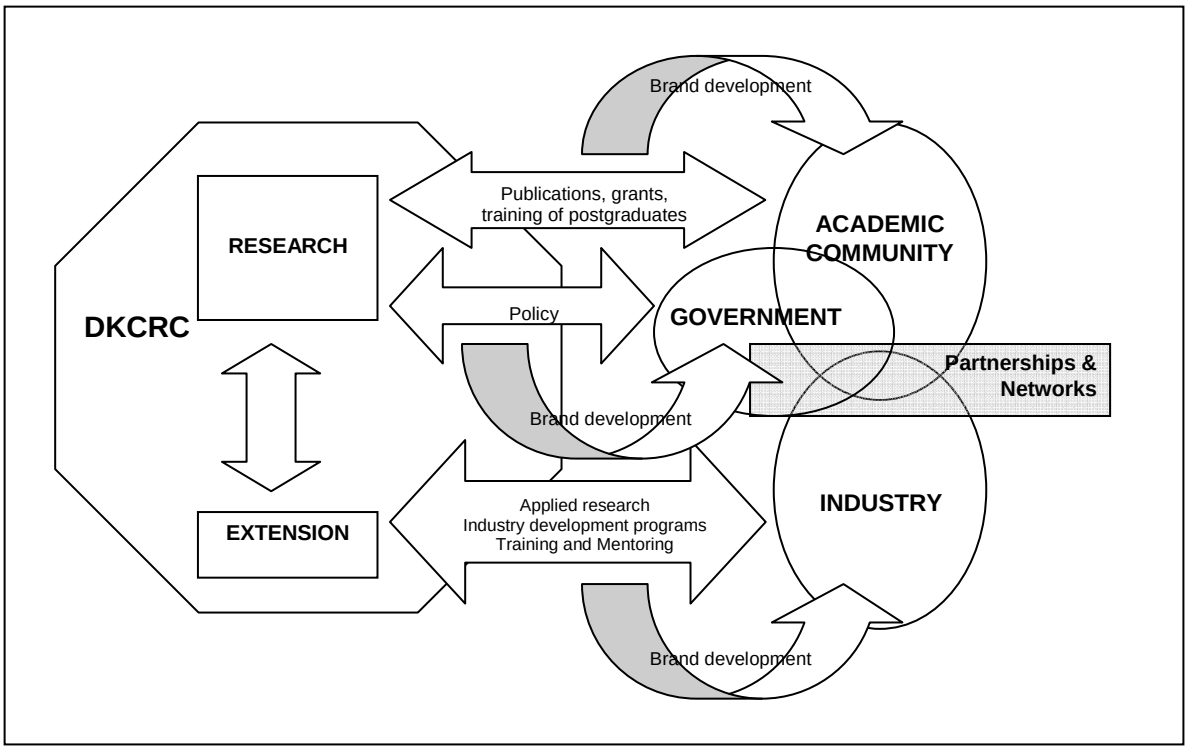

Figure 1 DKCRC conceptual model (adapted from unpublished model developed by Oelrichs, I. and Dredge, D.)

As indicated in the model, the elements of the academic community and industry overlap, as they do not exist in isolation from each other. There are elements of industry that are directly informed by the academic community and vice versa. There are also resources that overlap between these two spheres including human resources and technical and institutional resources. As mentioned earlier, each CRC must include some research in engineering or the natural sciences (Commonwealth of Australia, 2008) and the DKCRC fulfill this function predominantly in the area of the natural sciences with a strong interaction between industry, government and scientists from the academic community.

This model can be usefully applied to the field of Indigenous tourism. For example, there are a number of areas that have been highlighted as areas that require research. At a Tri- CRC Indigenous Tourism Workshop in September, 2003 involving the DKCRC, Sustainable Tourism CRC (STCRC), the Tropical Savannas CRC and the Northern Territory Tourist Commission, the following research areas were identified:

- Determining what the market wants
- Valuing non-market elements of Indigenous tourism
- Valuing regional and community outcomes
- Appropriate governance systems and the impacts of land tenure
- Examining the issue of authenticity/integrity
- Determining the environmental impacts
- Capacity building
- Networking issues
- Technology and its applications for remote tourism

(source: Tri- CRC Indigenous Group, 2003)

The research needs outlined by the Tri-CRC Indigenous Group have been supported elsewhere (see Schmiechen, 2007) and appear to cover most research areas. However the DKCRC, by taking leadership in this area and by building effective networks with government and industry, can continue to gain an insight into the research needs for the sector. For example DKCRC could gain considerable intellectual output by working closely with Tourism Australia's Government and Industry Indigenous Tourism Forum (GIITF).

The GIITF was established by Tourism Australia in 2005 to oversee a coordinated approach to the development of Indigenous Tourism and to provide advice to the Federal Minister for Small Business and Tourism. The Forum consists of the Chair of Indigenous Tourism Australia, Tourism Australia representatives, The Department of Resources, Energy and Tourism (RET) (previously DITR) and Department of Education, Employment and Workplace Relations (DEEWR) representatives, State and Territory Tourism Organisation representatives responsible for Indigenous tourism, Indigenous Business Australia, the Indigenous Land Council and two academics.

The development of a strong link between the DKCRC and the GIITF would enable the CRC to have direct connections with Federal, State and Territory government representatives who are dealing directly with the sector and who would be able to determine research needs. In addition, this group are also responsible for determining

policy in this area. The research agenda identified would result in an improved understanding of the sector and will allow for better planning to be undertaken especially in regards to product development and destination strategies.

Carefully targeted research can be used to inform the development of effective extension toolkits. The toolkits could range from local training programs for both mentors and Indigenous entrepreneurs, through to product development advice through to governance workshops. This could be achieved through a step-by-step extension plan, as applied in the Farm and Nature Tourism (FANT) extension program (STCRC, 2004). Steps in the FANT model that could be applied to a new 10-step DKCRC model for the development of Indigenous tourism follow:

Possible DKCRC Indigenous Business Development Model

1. Informing potential operators of what tourism is
2. Joint assessment of regional characteristics
    - *Natural features*
    - *Cultural characteristics*
    - *Facilities and infrastructure available*
    - *Accessibility*
3. Joint assessment of features unique to the potential operator
4. Assist potential operators in visioning their potential tourism operation
5. Assess tourism potential (tourism potential grid, see Figure 2)
6. Setting goals (personal and business)
7. Business proposal
8. Identification of target market(s)
9. Develop business plan
10. Make a decision

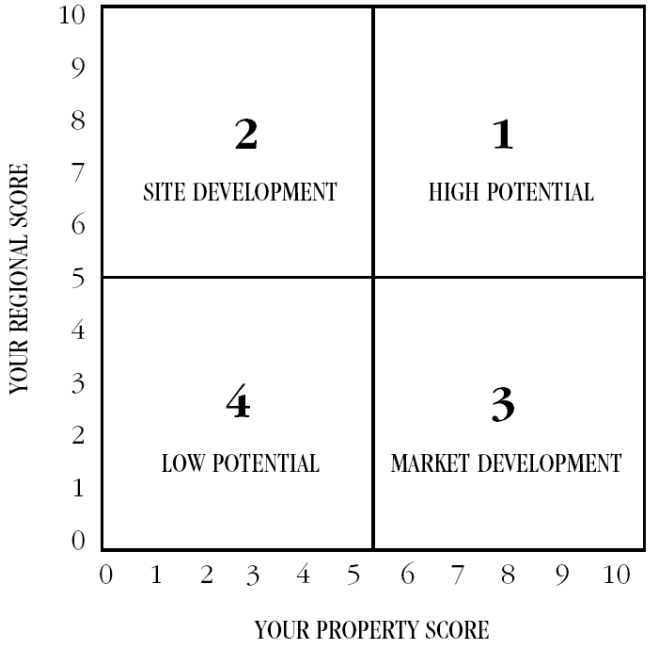

Figure 2 Tourism Potential Grid (Source: STCRC, 2004)

To ensure the effectiveness of the extension programs, and as part of the research agenda, the programs would be monitored and evaluated. The DKCRC, through its network, would ensure the extension programs were delivered to appropriate communities ensuring that there was increasing capacity within these communities. The funding of such programs would occur through the development of a highly regarded brand that would allow the DKCRC to have influence on policy directions.

Clearly there are three important areas that the DKCRC could play an influential role in the development of the Indigenous tourism industry: research, extension and policy. In order for the DKCRC to be able to deliver in these three areas, it needs to achieve renewed support from the CRC Program. Therefore it would be strategic for the DKCRC to position itself to meet the recommendations of recent federal reviews of the CRC Program. The most recent of these reviews are the Productivity Commission report on the CRC program *Public Support for Science and Innovation: 9 March 2007,* and the *Collaborating to a Purpose* report (Commonwealth of Australia, 2008) which was a review of CRCs undertaken as part of the Australian National Innovation System (NIS) Review.

The most salient point to emerge from these two reviews was that CRCs need to return to the delivery of research that focuses on the 'public good', rather than on commercialisation and private benefit. The Productivity Commission noted that the main objective of the program (which is the current objective, quoted above) had changed significantly from its earlier objectives which had been balanced across the aims of research excellence, effective collaboration, education and economic, social and environmental benefit. The emphasis on commercialisation, it argued, was less economically efficient and more likely to produce research that firms or industry collaborations would have undertaken anyway. The Commission also expressed concern that environmental and social research activity received reduced public support. The Commission report therefore recommended increased emphasis on translating research outcomes into economic, social and environmental benefits.

This redefinition of outcomes for the public good is reflected in recommendation 6 of the 2008 *Collaborating to a Purpose* report. It recommended that CRCs be funded in accordance with the "likely induced social benefits" (Recommendation 6i., p. viii). Due to the considerable economic and social disadvantage experienced by Indigenous Australians, it would seem that CRCs which potentially induce social benefits for Indigenous people would meet this funding recommendation. Furthermore, the identification of tourism as an area of opportunity for potential economic development for Indigenous Australians places the DKCRC in a strong position to develop research ventures in Indigenous tourism that would meet the Review's recommendations.

These two reviews support the findings of the 1997 Mortimer report. David Mortimer reviewed the CRC program within a review of all Commonwealth business programs and found that the CRC program was flawed mainly due to the funding of institutions rather than of research activities and that in the majority of cases it conferred a private benefit to participants. The Mortimer report recommended that CRCs focus on predominantly 'public good' collaborative scientific programs (Commonwealth of Australia, 2008).

A further recommendation of the 2008 *Collaborating to a Purpose* report was that CRCs support research ventures that tackle a "clearly articulated, major challenge" for the end users addressing, for example, a "significant challenge in an existing industry

sector where the risk involved in solving the challenge is too great for a single firm to tackle alone" (Commonwealth of Australia, 2008, p. vii Recommendation 2i). Arguably research into the development of sustainable Indigenous tourism businesses fits within this category of research venture.

Additionally, the review recommended that involvement in CRCs be promoted to the right participants. Within this premise it recommended that "SME and service industry involvement in CRCs be specifically encouraged" (Recommendation 5i, p. viii). The Productivity Commission also found that the complex structures of CRCs deterred small to medium enterprises (SMEs) from becoming involved. As a result, larger enterprises tended to receive the majority of commercial benefit. The Commission proposed mechanisms to encourage SMEs to participate through reduced complexity and administrative costs, including tax concessions, a grant program, and a competitive program where proposals are ranked against each other for merit. As practically all Indigenous tourism ventures are SMEs or micro businesses, this recommendation also aligns with the development of sustainable Indigenous tourism businesses. The CRC review further recommended that "CRCs addressing challenges across several service industries be encouraged" (Recommendation 5ii., p. viii). Again, this recommendation is aligned with tourism industries as tourism is a sector comprised of a variety of industries (ABS, 2008), most of which are 'tertiary' or service industries (Leiper, 2004, p. 145).

Another recommendation that has strategic import for the DKCRC, was that "there be no upper limit on postgraduate stipends offered within CRCs" (Recommendation 6vii, p. viii). Due to the competitive nature of attracting the most talented graduates to commence postgraduate studies, particularly PhDs, this new recommendation could allow the DKCRC to attract the best candidates. The DKCRC can have significant input into training new researchers. This is clearly linked to Recommendation 7.2, which involves CRC selection criteria including "the quality of the education program" and the "quality of the leadership and the research and management teams" (p. ix).

One of the final recommendations of the 2008 review is that the CRC Program build links with other NIS collaborative research programs and that it "articulate well with the CSIRO National Research Flagships Program, ARC Linkage Program and the

NHMRC Partnerships for Better Health Program" (Recommendation 8.1, p. x). In light of these recommendations, research ventures that link into the CSIRO Climate Adaptation Flagship, Water for a Healthy Country Flagship, Food Futures Flagship, ARC Linkage grants or Indigenous health would augur well for the DKCRC. For example, DKCRC research ventures could link aspects of Indigenous tourism development to climate change adaptation, water management, health impacts (including mental health) or the bush produce and Indigenous food industries.

Drawing on the above findings from the Productivity Commission's report, it can be argued that the DKCRC would benefit from creating environmental and social research opportunities, and research opportunities that deliberately seek SME involvement. Additionally, in drawing on the findings from the Howard Partners report, the DKCRC must match push and pull factors in non-traditional research environments, with non-traditional partners, by improving and broadening its pre-existing capacity.

It is important for the DKCRC to consider these review recommendations when considering any future research ventures. The concerns raised by the *Collaborating to a Purpose* Review are also important to take into consideration. These concerns include that some important participant groups find the CRC Program less than attractive, including the CSIRO, research-intensive universities and some significant end-users. The issues appear to focus on what is and is not allowed and encouraged through the collaboration vehicle itself. There was an expressed need for greater flexibility and reduced cost and complexity of CRC governance arrangements. Intellectual Property (IP) was also found to be a problematic element of CRC negotiations, and that the process would benefit from acceptance that end-users are generally the logical developers of the IP. Additionally, the Review agreed that returns to the research providers and their institutions should be a matter for negotiation at the commencement of the CRC. The DKCRC would do well to avoid delays and impediments arising from the "formalisation of agreements for collaborative research" (Fitzgerald and Austin as cited in Commonwealth of Australia, 2008, p. xiii).

Conclusion

The DKCRC has potential to play an influential role in the development and sustainability of the Indigenous tourism sector in desert communities. Through research, extension and policy, the DKCRC could take the lead in ensuring that the potential significant competitive market advantage for the Australian tourism industry is realised. The 10-step extension model proposed in this paper represents a pragmatic approach to achieving this goal. Additionally, the DKCRC conceptual model presented in this paper provides an overview of the interactions between the DKCRC, the academic community and government which demonstrates that a holistic approach to operations is required. Furthermore, it is important that the DKCRC position itself to meet the recommendations of the recent federal reviews, in order to continue to receive support from the CRC Program. This paper has argued that through the development of sustainable Indigenous tourism, the DKCRC would be well-placed to meet the recommended CRC outcomes of social and economic 'public good'.

References

ABS. (2008). Australian Bureau of Statistics: 5249.0 - Australian National Accounts: Tourism Satellite Account, 2006-07 Retrieved 15/09/2008, from http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/5249.0Explanatory%20Notes12006-07?OpenDocument.

Alford, K., & Muir, J. (2004). Dealing with unfinished Indigenous business: The need for historical reflection. *Australian Journal of Public Administration, 63*(4), 101.

Altman, J. & Finlayson, J. (2003). Aborigines, Tourism and Sustainable Development. *The Journal of Tourism Studies, 14*(1), 78-91.

ATC. (2003). *SEGMENT INSIGHTS PACK: Market Research Intelligence on Aboriginal Tourism*, Market Insights Unit, Australian Tourist Commission. Retrieved 01/09/2004, from http://www.atc.net.au/stage/content/Research/Aboriginal_research_0303.pdf.

Austlii. (1991). *Royal Commission into Aboriginal Deaths in Custody National Report Volume 4*, Reconciliation and Social Justice Library.

Australian Bureau of Statistics (2008). *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples*. Canberra: ABS, Australian Institute of Health and Welfare.

Bennett, J. & Gordon, W. (2007). Social Capital and the Indigenous Tourism Entrepreneur. In J. Buultjens & D. Fuller (Eds.), *Striving for Sustainability: Case Studies in Indigenous Tourism* (pp. 333-370). Lismore, Australia: Southern Cross University Press.

Butler, R. (2000). Seasonality. In J. Jafari (Ed.), (pp. 521- *Encyclopedia of Tourism* 522). London: Routledge.

Buultjens, J., & Fuller, D. (2007). Preface. In J. Buultjens & D. Fuller (Eds.), *Striving for Sustainability: Case Studies in Indigenous Tourism* (pp. vii-ix). Lismore, Australia: Southern Cross University Press.

Buultjens, J., Waller, I., Graham, S. & Carson, D. (2005). Public Sector Initiatives for Aboriginal Small Business Development in Tourism. In C. Ryan & M. Aicken (Eds.), *Indigenous Tourism: The Commodification and Management of Culture* (pp. 127-147). Oxford, UK: Elsevier.

Buultjens, J. & Gale, D. (2008). *An Evaluation of the Business Ready Program for Indigenous Tourism*, Southern Cross University, Lismore, NSW (unpublished report for DITR).

Commonwealth of Australia. (2008). *Collaborating to a Purpose: Review of the Cooperative Research Centres Program, July 2008*. Canberra: Commonwealth of Australia.

Crawshaw, I. & Purcell, C. (2007). *Australia Walkabout*, 3rd edition. Sydney: Cactus media Publishing Pty Ltd.

Department of Industry Tourism and Resources (DITR). (2004). *Tourism White Paper Implementation Plan 2004 – Achieving Platinum Australia.* Canberra: Department of Industry Tourism & Resources.

Desert Knowledge Australia. (2008). Desert Knowledge Cooperative Research Centre. Retrieved 17/10/2008, from http://www.desertknowledge.com.au/dka/index.cfm?fuseaction=dkcrc

DKCRC. (2008). Desert Knowledge CRC Home: About the DKCRC. Retrieved 17/10/2008, from http://www.desertknowledgecrc.com.au/

DEWR. (2005). *Building The Future Through Enterprise – Stories of Successful Enterprises and Entrepreneurs*. Department of Employment and Workplace Relations, Commonwealth of Australia.

DIISR. (2008a). Australian Government, Department of Innovation, Industry, Science and Research: Cooperative Research Centres. Retrieved 17/10/2008, from https://www.crc.gov.au/Information/default.aspx

DIISR. (2008b). Australian Government, Department of Innovation, Industry, Science and Research: Cooperative Research Centres, Environment Sector History. Retrieved 17/10/2008, from https://www.crc.gov.au/HTMLDocuments/Documents/PDF/Environ_Sector_HIST_color.pdf

DIMIA. (2003). *Indigenous Business Review – Report on Support for Indigenous Business*. Department of Immigration and Multicultural Affairs, Commonwealth of Australia.

Dyer, P., Aberdeen, L. & Schuler, S. (2002). Tourism Impacts on an Australian Indigenous Community: a Djabugay Case Study. *Tourism Management*, 24, 83-95.

Fuller, D., Buultjens, J. & Cummings, E. (2005). Ecotourism and Indigenous Micro-Enterprise Formation in Northern Australia: Opportunities and Constraints. *Journal of Tourism Management*; *26*(6), 891-904.

Fuller, D., Howard, M. and Cummings, E. (2003). Indigenous Micro-enterprise Development in Northern Australia – Implications for Economic and Social Policy. *Journal of Economic and Social Policy*, *2*(2), 15-34.

Fuller, D., Caldicott, J., Cairncross, G., & Wilde, S. (2007). Poverty, Indigenous Culture and Ecotourism in Remote Australia. *Development, 50*(2), 141-148.

Indigenous Tourism Leadership Group (ITLG). (2003). *Response to "The 10 Year Plan for Tourism – A Discussion Paper"*. Canberra: Department of Industry Tourism & Resources.

Ivory, B. (2003). Poverty and Enterprise. In S.C. Carr & T.S. Sloane (Eds.) *Poverty and Psychology: Emergent Critical Practice* (pp. 251-266). New York, USA: Kluwer Academic/Plenum Publishers.

Leiper, N. (2004). *Tourism management* (3rd ed.). Sydney: Pearson Hospitality Press.

Miller, G. (2000). "Is it Culture or is it Business?", *National Indigenous Tourism Forum Proceedings Report: Tourism - The Indigenous Opportunity*. Canberra: Commonwealth Department of Industry, Science and Resources.

McLennan, C., & Ruhanen, L. (2008). *Analysis of national, state, regional and local tourism strategies and plans: identification of strategic issues*. Gold Coast, Australia: CRC for Sustainable Tourism Pty Ltd.

Norris, R. (2001). Australian Indigenous employment disadvantage: What, why, and where to from here? *Journal of Economic and Social Policy, 5*(2), 13-42.

Prideaux, B. (2002). Building visitor attractions in peripheral areas-Can uniqueness overcome isolation to produce viability? *The International Journal of Tourism Research, 4*(5), 379-389.

remoteFOCUS Group. (2008). *remoteFOCUS: Revitalising Remote Australia*, Desert Knowledge Australia, Alice Springs, Australia.

Ryan, C., & Huyton, J. (2000). Aboriginal Tourism - A Linear Structural Relations Analysis of Domestic and International Tourist Demand. *International Journal of Tourism Research, 2*(1), 15-29.

Schmiechen, J. (2006). *Indigenous Tourism Research Agenda: Key Directions for the Future 2005-2008.* retrieved 01/05/2008, from http://Crctourism.com.au/Crcbookshop/Page.Aspx?Page_Id+2&Productid+497.

Schmiechen, J. & Boyle, A. (2007). Aboriginal tourism research in Australia. In R. Butler & T. Hinch (Eds) *Tourism and Indigenous Peoples; issues and implications*, Oxford, UK: Elsevier Ltd.

STCRC. (2004). *Farm & Country Tourism on Your Property*. Gold Coast, Queensland: Sustainable Tourism Cooperative Research Centre.

Tourism Australia. (2007). *National Indigenous Tourism Product Manual*, Commonwealth of Australia, Canberra.

Tourism Research Australia. (2008). Domestic. Retrieved 30/10/2008, from http://www.tra.australia.com/domestic.asp

Tremblay, P. (2007).International Comparison of Demand for Indigenous Tourism: An Assessment of Interpretations and Methodology. In J. Buultjens & D. Fuller (Eds.), *Striving for Sustainability: Case Studies in Indigenous Tourism* (pp. 67-106). Lismore, Australia: Southern Cross University Press.

Tri- CRC Indigenous Group. (2003). Unpublished draft minutes from the Tri- CRC Indigenous Tourism Workshop, 19th September, 2003, Northern Territory University, Darwin.

Uniting Care Australia. (2003). *Poverty Amongst Indigenous Australians: Poverty Briefing paper No 3*. Sydney: Uniting Care Australia.

Zeppel, H. (2001). Aboriginal cultures and Indigenous Tourism. In R. Derrett, N. Douglas and N. Douglas (Eds.), *Special Interest Tourism*, Australia: John Wiley & Sons.