

Indigenous Aquaculture

The Victorian Government's Indigenous Aquaculture Strategy 2005–2008

Vision Statement: "To promote the growth of sustainable Indigenous aquaculture enterprises."





Eel traps were traditionally used as a capture method, downstream in the rushes at the edges of swamps or lakes. The eel trap displayed above is beautifully woven by award-winning Aboriginal artist, Aunty Dot Peters.

Artist Aunty Dot Peters, Eel Trap, 2004.

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David 'Buzzy' Hewat, owner and operator of the Snowy River Native Fish Hatchery in Orbost, Victoria.

Minister's Foreword

Never before have there been such exciting economic prospects for Victoria's Indigenous community.

For Victoria's Indigenous community, economic independence, self determination and true reconciliation are inextricably linked.

Generating greater participation in the Victorian economy and improved business opportunities for Indigenous Victorians is crucial in overcoming social and economic disadvantage and increasing employment.

Building the Economic Base—The Victorian Government's Indigenous Business Development Strategy 2005–2007 is designed to assist Indigenous Victorians to achieve greater levels of self determination and to improve social outcomes such as unemployment.

The Victorian Government's Indigenous Aquaculture Strategy 2005–2008 is an integral component of the overarching *Building the Economic Base* strategy. It outlines an Indigenous industry development framework that is commercially sound, culturally appropriate and environmentally sustainable.

Australia's aquaculture sector is expected to make a major contribution to the future growth of Australia's food production and export industries, and Victoria's aquaculture industry has already experienced considerable growth in recent years.

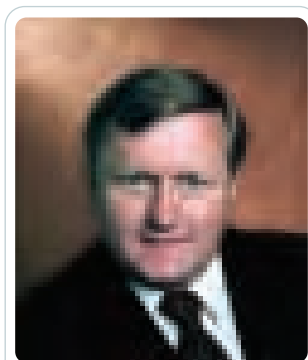
Aquaculture is regarded by Indigenous communities and the Victorian Government as an industry in which culturally appropriate and commercially sustainable business and employment opportunities can be created, especially in rural and remote areas. A strong level of interest and enthusiasm for Indigenous involvement in the aquaculture industry already exists within Victoria's Indigenous communities, but many communities are often unaware of the opportunities available and are unable to properly evaluate them.

The Indigenous Aquaculture strategy addresses the employment needs of the Indigenous community by encouraging Indigenous industry development in a long-term sustainable community enterprise.

The ecologically sustainable development of a commercially viable Indigenous Aquaculture industry is a challenge that will require active cooperation and partnerships between the Indigenous community, government and other stakeholders. It is a challenge that will require time to produce results.

But this is an opportunity for Indigenous communities—indeed all communities—to share in many rich social, economic and cultural benefits.

Given the potential benefits of achieving this aim, both for the Indigenous community and for the State of Victoria, it is a challenge that demands our wholehearted and ongoing commitment.



The Hon. André Haermeyer MP
Minister for Small Business

André Haermeyer
Minister for Small Business

Executive Summary

In its *Building the Economic Base* strategy, the Victorian Government recognised that increasing Indigenous participation in enterprise development activity would provide widespread economic and social benefits to Indigenous communities in Victoria. After much consultation across Government, the Indigenous community and other stakeholders, aquaculture was identified as one of several possible industries for Indigenous business development.

Aquaculture is regarded by Indigenous communities and the Victorian Government as an industry in which commercially sustainable and culturally appropriate business and employment opportunities can be created. The development of aquaculture enterprise is well suited to the Indigenous community because:

- aquaculture is a growing industry in Australia and around the world and is projected to continue demonstrating significant future industry growth in Victoria;
- Indigenous communities have a historical and cultural interest in aquaculture and this is advantageous for business development; and
- aquaculture businesses are suitable for remote areas of Victoria where Indigenous communities are often located, providing local employment opportunities.

A strong level of interest and enthusiasm for Indigenous involvement in the aquaculture industry already exists within Victoria's Indigenous communities, but many communities are often unaware of the opportunities available or are unable to adequately assess them. The *Indigenous Aquaculture* strategy provides a clearly defined, state-wide development plan to encourage, assist and support Indigenous 'start-up' aquaculture business from initial interest to business implementation to commercial independence.

This Strategy incorporates two key elements:

- the Hatchery-Business Incubator Model proposes using an initial Indigenous aquaculture business as a base on which to build a significant Indigenous Victorian aquaculture industry; and
- joint ventures between established aquaculture businesses and Indigenous communities are a way of addressing the financial and skill barriers that impede Indigenous participation in the industry.

Further, the *Indigenous Aquaculture* strategy includes assistance targeted at various stages of the business life cycle. During the initial phase, this assistance will focus on scoping the stages of the project, taking into account the aspirations and goals of the individual or community and type of aquaculture operation that is to be established. When the project plan is consistent with the strategic goals, pilot projects can be established to assist with business and technical training (this approach is dependant on the availability of resources). Pilot projects

would eventually develop into semi-independent businesses where the transition from a heavily subsidised project to one that is more financially independent would occur. This phase is expected to be the most difficult in the business life cycle. Upon completion of the semi-independence phase, businesses are expected to be fully commercial, self-sufficient operations with skilled management and staff. The entire project development life cycle is expected to occur over a minimum period of five years. This highlights the importance of clearly defined, realistic and achievable plans.

In the first phase of implementing the *Indigenous Aquaculture* strategy, the Koori Business Network (KBN) will:

- facilitate the establishment of a State-wide Indigenous Aquaculture Committee;
- on the request of Indigenous individuals and communities who express interest in operating a business within the industry, conduct an initial site visit to assess their potential capacity;
- facilitate the completion of feasibility studies, the delivery of introductory workshops and the initiation of pilot projects;
- identify and work with Registered Training Organisations (RTOs) to assist in the design and delivery of appropriate competency-based aquaculture training;
- support emerging Indigenous aquaculture businesses through the provision of business planning assistance;
- assist the participants in an Indigenous aquaculture pilot project through the provision of a small 'start-up' grant for infrastructure and help assess the possible sources of capital;
- assist Indigenous aquaculture businesses to contact a suitable business mentor; and
- assist Indigenous aquaculture businesses to assess the opportunities to diversify and access export markets.

The results of the *Indigenous Aquaculture* strategy will be monitored against several pragmatic Key Performance Indicators (KPIs) measuring participation of Indigenous individuals and communities in Victoria's aquaculture industry.

Part 1: Introduction

Indigenous communities have been hunting and farming aquatic species for tens of thousands of years. In recent times, Indigenous communities in Victoria have expressed a renewed interest in aquaculture and fishing as a source of employment and also as a means through which Indigenous cultural ties with land and waterways can be maintained.

Aquaculture and fishing ventures are often well suited to remote and isolated coastal and inland areas where many Indigenous communities are located. Moreover, cultivation of native species would allow Indigenous communities to utilise and preserve traditional skills and knowledge and in some cases to become reacquainted with the ecology of their traditional lands.

Importantly, aquaculture is a growing industry which, if exploited effectively, could provide sustainable business and employment opportunities within Indigenous communities. At the Aquaculture Beyond 2000 workshop held in Canberra in August 1999 it was forecast that the Australian aquaculture industry would be worth AUS \$2.5 billion to the nation's economy by 2010. The industry is still in its infancy and thus "Indigenous Australians can become significant stakeholders in the aquaculture industry and contribute to the industry's growth in its early developmental stage" (AFFA 2002, 14).

An opportunity therefore exists within the aquaculture sector for Indigenous communities and individuals to run business enterprises and seek employment that is culturally appropriate and commercially viable.

Nevertheless, as was recognised in the Victorian State Government's *Doing Business—A Policy for Building Up the Koori Business Sector* (1999), the Victorian Indigenous business sector is in the early stages of its development, with significant resource gaps in terms of direct business experience, technical training, access to finance and development of entrepreneurial skills. As a result, it will be some time before Victoria's Indigenous

community as a whole can develop the depth of experience and financial resources necessary to initiate and self-fund business enterprises without external assistance.

True reconciliation will only be achieved in the Victorian community when there is equality of opportunity and experience between Indigenous and non-Indigenous Victorians (VAJAC 2000). As a result, if existing disadvantage is to be relieved through the involvement of Indigenous people in business, specifically in the aquaculture and seafood industry, the special needs of Indigenous people in the context of business development, capital acquisition and training must be recognised and addressed.

Part 2: Background

2.1 Indigenous Disadvantage

Indigenous communities in Victoria possess a range of socio-economic and cultural characteristics which differ from the general population. For example, health, education and employment rates are significantly lower in the Indigenous community, and Indigenous people are over-represented in the criminal justice system. In its election policy, *Our Path to Reconciliation* (2002), the Victorian Government acknowledged that this profile is the legacy of past injustice and expressed a commitment to take the symbolic and material actions necessary to ensure a just future for all Victorians.

Existing economic and social marginalisation is transmitted to future generations where children "grow up in circumstances that limit the development of their potential, compromise their health, impair their sense of self and generally restrict their opportunities for future economic success and social participation" (Daly and Smith 2003, 5). It is possible to identify communities at risk of intergenerational economic and social marginalisation by analysing statistical variables (see Table 1). Indigenous communities unfortunately rate poorly with regard to these indicators.

Indicator	Indigenous Profile
Absence of a parent	Lone parent families are twice as common among Indigenous families as other Australian families (Ross 1999).
Parental and other adult employment status	Indigenous people are three times more likely to be unemployed than other Australians (ABS 2004). Indigenous women are the least likely of all groups to be in the labour force, with a participation rate of 43% (ABS 1998).
Income level	The mean equivalised gross household income for Aboriginal and Torres Strait Islander people was \$364 per week; this is 62% of the amount (\$585 per week) for non-Indigenous people (ABS 2001).
Welfare reliance	In 1991 the Community Development Employment Program (CDEP) accounted for 14% of all Indigenous employment; this proportion rose to 20.6% in 1996 and is projected to reach 27% by 2006 (Taylor and Hunter 1998).
Parental and other adult educational status	2.3% of Indigenous people have a Bachelors Degree compared with 10.2% of non-Indigenous people (ABS 2001). Less than a third of Indigenous children complete high school, compared with the national average of 70% (ATSIC 1999).
Health status	Life expectancy for Indigenous Australians is 20 years less than it is for other Australians (AMA 2002). Indigenous children are three times more likely than non-Indigenous children to die before the age of one (Healthinfonet, 2004).

Table 1. Statistical indicators of intergenerational transmission of economic disadvantage.

2.2 Economic Development

In order to arrest the cycle of intergenerational Indigenous economic exclusion and its associated social impacts, the issues of family stability, welfare reliance, wealth and education must be dealt with in a coordinated and holistic manner. Indigenous people in Victoria have argued that economic development is required in Indigenous communities if persistent social problems are to be alleviated. Specifically, the creation of business and employment opportunities for Indigenous people has been identified as a mechanism through which the material and psychological wellbeing of the State's Indigenous people can be improved.

In 1999, the Victoria Government aligned itself with this view when it launched the State's first targeted policy aimed at supporting Indigenous economic development, *Doing Business—A Policy for Building Up the Koori Business Sector*. In this document, the Government recognised that Koori communities and individuals do not participate in the State's economy to the same extent as other Victorians. This policy implicitly recognised that continued economic exclusion would render attempts to ameliorate social problems ineffective and ultimately futile. Accordingly, the goal of the policy was to facilitate real gains in autonomy, independence and self determination for Koori communities through the development of Koori owned and operated business enterprises.

It is nevertheless imperative that the kind of economic inclusion and participation that Indigenous people pursue be appropriate, viable and sustainable. Indigenous communities and the State Government of Victoria see aquaculture as an industry in which culturally appropriate and commercially sustainable business and employment opportunities can be created in rural and remote areas. This document outlines a strategy through which such gains can be realised.

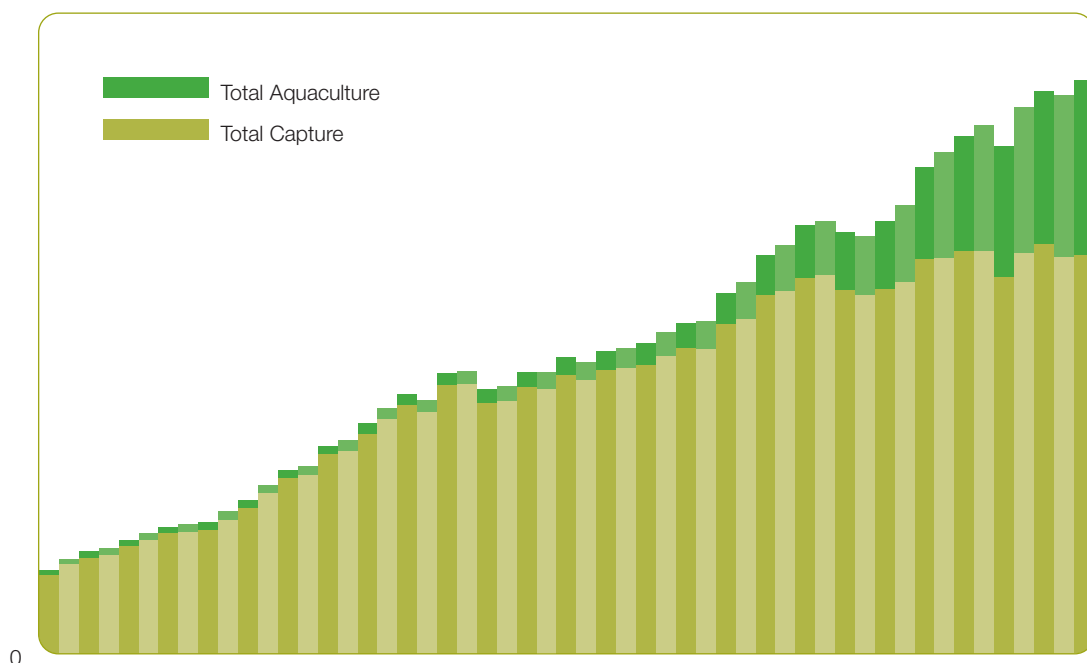
Part 3: Aquaculture

3.1 Global Trends

Aquaculture has been defined by the Food and Agriculture Organisation (FAO) of the United Nations as the farming of aquatic organisms including molluscs, crustaceans and aquatic plants, where farming implies some form of intervention in the rearing process to enhance production (2004). Simply put, aquaculture is the managed production of aquatic species.

Global demand for fisheries products is increasing due to rises in global population and living standards. At the same time, overfishing of traditional-capture fisheries and environmental pollution have degraded wild stocks across the globe, so product volumes appropriated from these sources are unlikely to increase substantially into the future. As a result, a commercial opportunity exists for aquaculture producers to meet the increasing global demand for fisheries products.

The contribution of aquaculture production to global supplies of fish, crustaceans, molluscs and aquatic plants has increased from 0.6 per cent of total production by weight in 1950 to 29.9 per cent in 2003 (see Figure 1). In addition, aquaculture is growing more rapidly than all other animal food producing sectors. Worldwide, the sector has increased at an average compound rate of 9.2 per cent per year since 1970, compared with only 1.4 per cent for capture fisheries and 2.8 per cent for terrestrial farmed meat production systems. In 2000, total reported aquaculture production (including aquatic plants) was 45.7 million tonnes by weight and US \$56.5 billion by value (FAO 2002).



Industry Sector	Fiscal Year	Weight (in tonnes)	Value (in AUS \$'000)
Eels	1998–1999	107	874
	2001–2002	43	433
Salmonoids	1998–1999	1,294	8,821
	2001–2002	1,587	10,666
Warm water Finfish (Inland)	1998–1999	2	30
	2001–2002	105	1,931
Yabbies	1998–1999	13	125
	2001–2002	31	338
Abalone	1998–1999	-	n/a
	2001–2002	13	631
Mussels and Other Shell Fish (Bivalves)	1998–1999	888	2,536
	2001–2002	1,582	3,734
Ornamental Fish	1998–1999	n/a ^a	2,673
	2001–2002	n/a	3,006
Total	1998–1999	2,306	15,059
	2001–2002	3,361	20,738

Table 2. Grow-out Production in Victoria by Industry Sector.

(a) Weight not available for ornamentals (e.g., goldfish), however the number of fish produced was 3,543,000 and 3,871,000 during 1998–1999 and 2001–2002 respectively (DPI 2002).

3.2 Australia

Similar proportional growth has been recorded in Australia's aquaculture sector, which appears likely to make a major contribution to the future growth of Australia's food production and export industries. Since 1995 Australian aquaculture production has grown in value by an average of 9.1 per cent annually and in 2001–2002 was worth over AUS \$730 million, 30 per cent of the total gross value of Australian fisheries production (Love and Langenkamp 2003). Furthermore, at the Aquaculture and Beyond Workshop 2000 it was estimated that yearly aquaculture sales could increase to AUS \$2.5 billion by 2010, assuming that the industry could successfully exploit the domestic and global demand for aquaculture products.

3.3 Victoria

Victoria's aquaculture industry has also grown considerably in recent years. Grow-out production rose for most industry sectors in Victoria during the four year period 1998–99 to 2001–2002 (see Table 2). During this time overall production rose from 2,306 to 3,361 tonnes (live weight) while the value of grow-out production rose from AUS \$15.1 million to \$20.7 million. In addition, the value of hatchery production for restocking public and private waters ranged between AUS \$0.5 million to \$0.7 million during this period (DPI 2002).

Part 4: Indigenous Involvement in Aquaculture

In its Aquaculture Policy Statement the Commonwealth Government recognised that aquaculture was an 'industry of the future' and that Indigenous involvement in the industry could contribute significantly to the economic independence and development of Indigenous communities (2000). In line with this position, the Commonwealth Government prepared the *National Indigenous Aquaculture Strategy*.

4.1 The National Strategy

Indigenous communities throughout Australia have expressed a strong interest in aquaculture. In 2001, the Commonwealth Government responded by conducting an assessment of the potential for Indigenous communities to become involved in the aquaculture industry. The findings of this study were released in the *National Indigenous Aquaculture Strategy for Indigenous Communities in Australia* (2001).

The *National Strategy* stated that Indigenous communities could benefit substantially from involvement in the aquaculture industry. Specifically, it argued that Indigenous involvement in aquaculture could:

- provide employment opportunities in remote areas;
- increase the economic and financial independence of Indigenous communities;
- arrest and reverse the trend for individuals to move away from their community in search of work;
- increase the level of self-sufficiency and food security in Indigenous communities; and
- supplement and replace capture fishery production.

However, in addition to the potential benefits of Indigenous involvement in aquaculture the *National Strategy* lists several key factors which commonly lead to the failure of aquaculture projects including:

- initial business plans that project unrealistic growth rates and returns on investment;
- under-capitalisation;
- poor species selection;
- poor site selection;
- inadequate culture technologies and inappropriate selection of production systems;
- poor financial management; and
- inadequate market research and unforeseen decreases in market prices.

For a multitude of reasons, aquaculture and general business management skills are often lacking in Indigenous communities, as is the capacity to finance aquaculture ventures. As a result, the factors listed above have contributed to the failure of Indigenous aquaculture projects in the past. Consultation with Indigenous communities around Australia undertaken as part of the *National Strategy* development process revealed that inadequate training and a failure to consider the implications of the management and operation of aquaculture projects on cultural practices of respective communities had also contributed to aquaculture project failures.

While Indigenous individuals and communities wishing to initiate aquaculture businesses will need to work in collaboration with Government and existing industry stakeholders to ensure the factors listed above are addressed, it is also important that the needs and capacities of each community are considered when planning an aquaculture business development project.

4.2 Victorian Consultation

In June 2001 a feasibility study on Indigenous aquaculture was undertaken in Victoria (Walsh 2001). Consistent with the *National Strategy*, this study revealed a strong level of interest and enthusiasm for involvement in the aquaculture industry within Victoria's Indigenous communities. It was concluded that Indigenous communities in Victoria are generally well placed to become involved in the industry, with adequate land, water and labour readily available.

However, the study acknowledged that many communities are not aware of all aquaculture opportunities available to them or do not assess the capacity of their particular situation. In addition, issues associated with Native Title and fishing rights, the lack of technical and business management expertise and a shortage of capital for investment in infrastructure were also identified as barriers to Indigenous involvement in the industry.

For these reasons, this consultation proposed that cooperation between Indigenous groups, Governments and existing industry stakeholders would be vital to the development of an Indigenous interest in the aquaculture industry.

Part 5: State-wide Approach

Several sites across Victoria have the potential to accommodate a successful aquaculture enterprise owned and operated primarily by Indigenous people. However, the start-up costs and skill requirements associated with a commercially viable aquaculture business can be significant.

As a result, the Koori Business Network (KBN) has developed a strategy through which Indigenous communities and entrepreneurs can overcome the specific barriers impeding Indigenous participation in the aquaculture industry. A state-wide development model is proposed, through which the collective resources of Indigenous communities, Governments and existing industry stakeholders can be utilised in a coordinated and effective manner.

In many cases Indigenous communities and entrepreneurs will require government assistance to initiate an aquaculture venture. It is important that this assistance be:

- **Appropriate.** Running an aquaculture business can be a rewarding and profitable undertaking. Nevertheless, like all animal husbandry activities, aquaculture ventures require a significant commitment from the operator. Therefore, Indigenous communities and entrepreneurs considering involvement in an aquaculture project should be made aware of the nature of the industry. Where a significant level of interest and enthusiasm is evident, project planning must consider the specific aspirations and capacities of each group;
- **Sufficient.** Projects must receive adequate assistance when planning and constructing an aquaculture facility/business to ensure the success or failure of the operation is contingent only on the commitment, hard work, skill and business sense of the operators. Where assistance with planning, training and infrastructure cannot be provided to a sufficient level, it is better to wait or to modify project parameters, rather than pursue unrealistic goals; and
- **Strategic.** Assistance provided to individual projects should also facilitate the development of the industry as a whole. It is possible for an Indigenous aquaculture project initiated in partnership with Governments and/or existing industry stakeholders to provide an ongoing legacy, both within a region and across the entire state. As a result, the capacity of a project to generate flow-on benefits to the industry should also be considered in the assessment of any claim for government assistance.

5.1 Strategic Development Model

Indigenous involvement in aquaculture can be expedited through the development of partnerships between Indigenous communities, Governments and existing industry stakeholders. It is important that individual projects occur within the framework provided by the state-wide development model, to ensure that limited resources are used efficiently and that the benefits associated with market intervention are maximised.

5.1.1 The Hatchery–Business Incubator Model

In the majority of cases, aquaculture projects require hatchery-produced seed stock for grow-out. However, hatcheries can be expensive to establish and, if a range of species is cultured, are technology-intensive and require highly skilled staff. A single hatchery with the ability to produce mass quantities of seed stock for several target species could service the seed requirements of numerous aquaculture projects throughout a large region.

Therefore, one or more strategically located hatchery facilities could act as focal points and stimuli for Indigenous aquaculture development. A hatchery facility would serve several purposes:

- a hatchery would produce seed stock for several target species and thus could service the seed requirements of numerous aquaculture projects throughout a region. Less capital-intensive, low technology satellite projects could then be developed that 'grow-out' stock cultured at the hatchery;
- a hatchery would provide a venue for competency-based training and work experience. Through training delivered at the facility, students would be prepared for employment in the hatchery itself, satellite projects or the broader job market; and

- satellite projects could be developed under the supervision of an existing hatchery operation. A mentoring role could be offered to emerging businesses that utilise the seed stock and training functions of the hatchery. Transfer of information concerning aquaculture techniques, industry networks, markets and marketing could occur between the hatchery and satellite businesses.

A mentoring and training role could still be provided for satellite businesses not directly dependent on the seed stock produced at the hatchery. In this case, the hatchery would act as a demonstration farm and role model for the emerging business.

For the Hatchery–Business Incubator Model to be effective, at least one fully operational Indigenous hatchery facility is required in Victoria. The hatchery facility, and the business which operates within it, would become a base upon which to build an industry.

However, it is unlikely that any one Indigenous community or entrepreneur would have the financial and/or technical capacity to initiate such a venture without government assistance. Nevertheless, it would be premature to invest significant public resources in more than one capital-intensive project before the model's efficacy had been verified in the field. Thus, Indigenous communities interested in aquaculture and dependent on government funds to initiate their project would be required to accept a staged industry development process. It would therefore be necessary for Indigenous communities to negotiate the optimal priorities and sequences of development projects, and in some cases, to place the interests of the Indigenous aquaculture industry as a whole above those of their individual project.

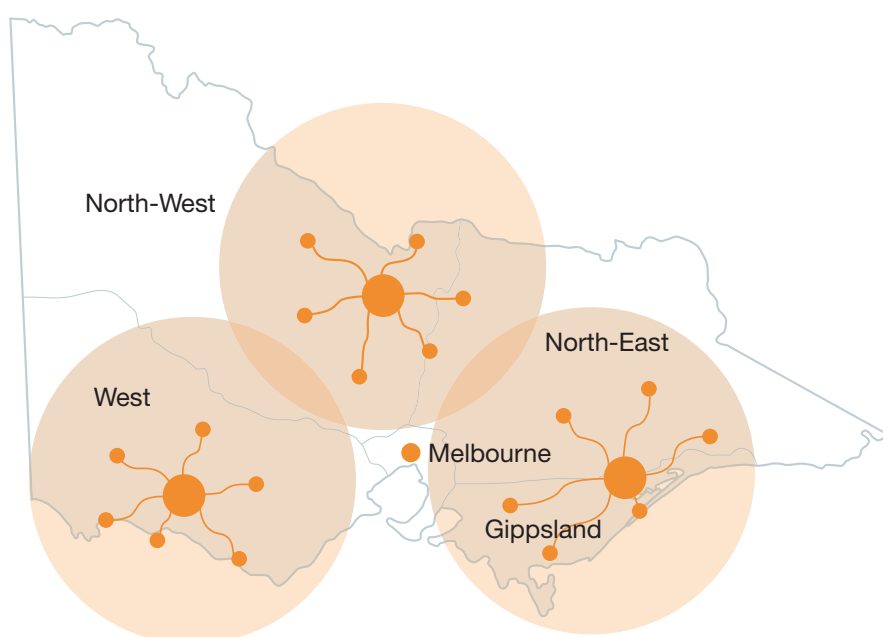


Figure 2. Key target areas for Hatchery-Business Incubator Model.



KBN business development officers meeting with Fly Atkinson at his fish farm in Shepparton. KBN officers regularly consult with Indigenous businesses throughout Victoria.

5.1.2 Joint Ventures

The financial and skill barriers that impede Indigenous participation in the aquaculture industry could also be overcome through the development of partnerships between Indigenous communities and established aquaculture businesses. Communities that are able to negotiate directly with existing industry stakeholders may avoid delays associated with obtaining government funding. Nevertheless, it is still possible that these projects make use of government assistance programs at some point in the project lifecycle and participate in industry development activities. Joint project funding arrangements which involve an Indigenous community, industry and government funding mix are also possible.

Entry into the aquaculture industry by way of joint venture or other equity arrangement requires consideration of what each party brings to the venture. Indigenous groups may be able to contribute land and water resources to a commercial venture, which should be seen as significant assets. In return, Indigenous communities could negotiate joint ownership or other suitable arrangements.

5.2 A State-wide Working Group

Whatever method Indigenous communities use to raise capital and improve their skill base it is certain that Indigenous communities will be required to collaborate with each other, Governments and mainstream industry stakeholders if commercially viable aquaculture businesses are to be established.

If Indigenous communities are to negotiate effectively with Governments and the private sector, a unified and informed voice must emanate from the Indigenous community. Accordingly, a state-wide working group with the capacity to guide Indigenous aquaculture producers and the development of the industry as a whole should be established. This body would act as a conduit between Indigenous communities and entrepreneurs, the aquaculture industry and Governments. The working group would:

- ensure that all Indigenous parties interested in the aquaculture industry have access to appropriate information, thereby facilitating informed decision making;
- assist Indigenous individuals and communities to plan their projects and, where appropriate, to facilitate the submission of funding proposals to State and Commonwealth Government agencies; and
- represent the interests of the Indigenous aquaculture industry in Victoria in appropriate forums.

ACTION 1. The Koori Business Network (KBN) will facilitate the establishment of a state-wide working group for Indigenous aquaculture.

In addition, consensus regarding the optimal use of government funds would be derived through negotiation at the group's meetings, circumventing inter-group competition for resources. In this way, the working group would become an advocate for the interests of the Indigenous aquaculture sector whilst also providing support for individual producers and emerging projects.

Part 6: Indigenous Aquaculture Business Development Projects

In most cases, an Indigenous aquaculture business development project will progress through five phases and will require differing types and levels of support during this progression. The progression constitutes a transition from community supported enterprise to independent and sustainable business (see Figure 3).

6.1 Projects Phases

6.1.1 Scoping

During the scoping stage of a project the aspirations and goals of an individual or community are ascertained and the type of facility/business the participants wish to operate is established (e.g., a technology-intensive hatchery or a 'satellite' grow-out system). In addition, any cultural factors that may determine the appropriateness of different project types at the proposed site are identified.

Individuals and communities wishing to participate in a commercially oriented aquaculture development project will be advised by KBN officers during the scoping stage to attend a State-wide Indigenous Aquaculture Committee meeting to become informed about the activities of other communities and businesses and put forward their ideas to the group. Where the group is satisfied that the project contributes toward the strategic development of the Indigenous aquaculture industry, work will begin to establish a pilot project at the proposed site.

6.1.2 Pilot Projects

Where Indigenous communities and/or entrepreneurs are committed to the development of an aquaculture business and their project is consistent with the strategic goals of the State-wide Indigenous Aquaculture Committee, a pilot training and skills development project will be initiated. The project will be designed to suit the objectives, direction and developmental stage of the community or interested party and to utilise their strategic position and competitive advantages.

Projects will consist of a training component and a pilot project involving the grow-out of a selected species. Product produced during the project will be sold and the income generated used to subsidise operating costs. However, it is not expected that pilot projects will be commercially self-sufficient. As a result, a partnership with government agencies will be required to ensure participants are remunerated for their labour. The Community Development Employment Program (CDEP) is the most likely source of support for labour in the pilot phase of a project.

6.1.3 Semi-Independence

At the completion of the aquaculture business development project, participants would have developed business and technical skills, researched markets and become familiar with technologies used in their particular field. However, the primary purpose of aquaculture business development projects is the generation of skilled private sector employment opportunities for Indigenous people that are not contingent on the continuous injection of government support. To achieve this goal, commercialisation of the project—the process of taking the knowledge, research and technology developed to the market place and generating a profitable return—must occur.

However, the transition from heavily subsidised project to a self-funded independent business is likely to be a difficult one for a community-based business development project requiring a staged transition process. As the skill level of participants improves and production levels increase, formal registration of the business would accordingly occur. At this stage a strategy or business plan would be developed that would outline the steps the business must take to become fully commercialised. Where the production level and income of a pilot aquaculture business becomes sufficient in magnitude and reliability, employees would be removed

from the CDEP or other similar income support programs. However, wage supports should not be removed overnight. Traineeships, where employees combine their work with formalised training, should be used to subsidise wages while the business establishes itself within the industry and becomes accustomed to the competitive nature of the market place.

6.1.4 Independent Business

Once the business is producing commercial quantities and staff has completed its formal aquaculture training, the business would be expected to cover all operating costs including wages with income generated through product sales. New CDEP or funded traineeship positions may be established after the business reaches this stage of development, thereby allowing the facility to act as a location for training and work experience. However, fully productive permanent employees would be paid employees.

At this stage the business would be self-sufficient and could continue to operate in its existing form. However, the business could choose to expand operations, diversify its products or utilise new technologies. Importantly, at this stage the business management and technical skills developed by the business and its history of success in the industry would make the business investor ready and thus able to attract existing sources of venture capital if desired. Independent businesses may still benefit from the provision of mentoring support and business counselling.

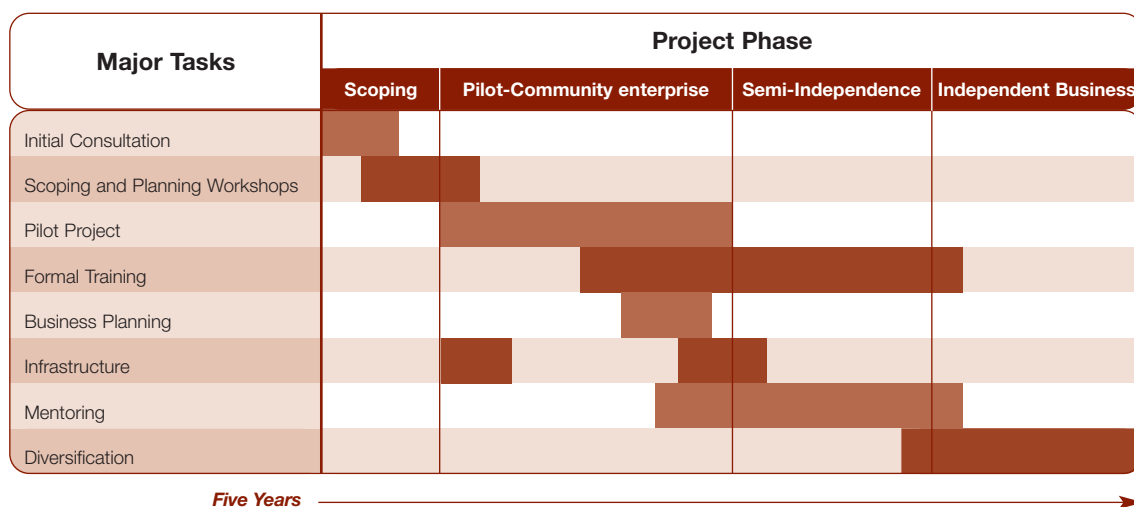


Figure 3. Timeline for an Indigenous Aquaculture Development Project.

6.2 Support

In order to assist Indigenous communities to initiate aquaculture business development projects and ensure that the transition from community supported pilot projects to commercially viable businesses occurs, the Victorian State Government through the KBN will take action in the following areas. The success of aquaculture business development projects is contingent on the support of multiple project partners throughout all these areas.

6.2.1 Initial Consultation

Where an Indigenous individual or community interested in initiating an aquaculture business development project is identified, a KBN officer will make an initial site visit. The level of interest and aspirations of the potential participants, existing skill levels and available infrastructure will be discussed and documented, together with possible project parameters such as species to be produced and the preferred site and production system.

Individuals and communities will be informed about the State-wide Indigenous Aquaculture Committee and encouraged to become members of the group. The KBN will only provide further assistance to State-wide Indigenous Aquaculture Committee members.

ACTION 2. The KBN will identify Indigenous individuals and communities that have an interest in undertaking an aquaculture business development project and conduct an initial site visit.

6.2.2 Feasibility Study and Introductory Workshop

When planning the development of a commercial aquaculture enterprise, Indigenous communities and entrepreneurs are faced with three principal selection processes—the selection of a site, species and production system (Makaria 2002).

Indigenous individuals and communities may require assistance when considering the opportunities available to them and when developing a strategy through which they can achieve their goals. However, it is important that this advice be practical and relate to specific challenges that exist at each project site. Therefore, the KBN will facilitate the completion of a feasibility study, undertaken in partnership with the community or entrepreneur, for projects which are aligned with the strategic development model described above. The completion of a feasibility study would enable prospective Indigenous aquaculture producers to make principal selection decisions using accurate information about their own circumstances.

Selection decisions would be made with reference to the self-defined economic and social goals of a business and/or community. However, whatever site, species and production system is chosen, each aquaculture venture is subject to the demands of the market. Any business, even one initiated primarily for reasons other than generating profit, must remain commercially viable within the market place if it is to deliver its primary function over an extended period.

Following the completion of the feasibility study, the KBN would facilitate the delivery of an introductory aquaculture workshop designed in accordance with the project specific information gathered during the feasibility study.

Introductory workshops would have two outcomes:

- project participants will be provided with general information about aquaculture business management including production methods, licensing and permits, markets and marketing together with specific information about the project; and
- a 'hands on' pilot project would be established to help consolidate information learnt during the workshop and give the community or individuals an opportunity to experiment and learn about the species that they intend to produce on a commercial scale. The workshop facilitators would return to the site to monitor progress at regular intervals.

Ideally, introductory workshops would be delivered by Indigenous people who have been trained and who work in other successful aquaculture development projects. In this way, the established business would be encouraged to diversify its business activities, and the emerging project would be guided by individuals who understand the specific difficulties associated with establishing an Indigenous aquaculture project.

ACTION 3. The KBN will facilitate the completion of feasibility studies, the delivery of introductory workshops and the initiation of pilot projects for aquaculture business development proposals that are aligned with the KBN's strategic development model.

6.2.3 Formal Aquaculture Training and Skills Development

Formal aquaculture qualifications and work experience are now pre-requisites for those seeking employment in the industry. As a result, Indigenous people interested in starting an aquaculture business or seeking employment in an aquaculture facility will require some form of vocational training.



Classified as ornamentals, gold fish and other fish suitable for aquariums are a growing sub-market of the aquaculture industry in Victoria.

However, the rate of success of Indigenous participants in mainstream Vocational Education and Training (VET) programs is currently lower than that seen in the non-Indigenous community. In addition, as of May 1997, only 52 per cent of Indigenous VET graduates in 1996 had found jobs, compared with 71 per cent of non-Indigenous graduates (ANTA 2000). Thus, it is clear that Indigenous students are not performing as well as their mainstream counterparts in existing VET courses and moreover, those Indigenous students who do successfully complete their course find it more difficult to enter the workforce.

A variety of factors contribute to this situation. Employment opportunities for Indigenous learners located in remote areas are limited, and considerations such as family and community responsibilities and connection to the land prevent individuals from relocating to urban areas in order to access employment opportunities. Many Indigenous learners are also apprehensive about undertaking mainstream courses due a lack of confidence in their potential for success; this in turns leads to poor attendance and high drop out rates (Gelade and Stehlik 2004).

Thus, aquaculture training must be related to the conditions and opportunities present in each community and/or region. Specifically, training should be linked to existing private sector work opportunities in a region and/or a community enterprise project. Competency-based training programs which link work and study are most likely to be completed by Indigenous students. Furthermore, such programs allow participants to practice their skills in a workplace environment. In this way, participants are equipped with practical as well as theoretical knowledge and skills and as a result would be more qualified for job placements in their region's job market.

ACTION 4. The KBN will identify and work with Registered Training Organisations to assist in the design and delivery of appropriate competency-based aquaculture training to meet the needs of Indigenous individuals and communities.

6.2.4 Business Planning

The development of a detailed Business Development Plan is an essential task for an emerging business. When developing a business plan it is necessary for business owners and operators to pinpoint where they want to go and how they are going to get there. In the context of an Indigenous aquaculture pilot project, the business plan would outline what is required to transform the business from a community run project into a sustainable commercial venture. Involving all project participants in the business planning stage is a very effective way to generate enthusiasm and secure ownership of the project.

The business plan would outline preferred production methods, training and infrastructure required to ensure commercial success, potential markets, expected cash flows and marketing.¹

ACTION 5. The KBN will assist emerging Indigenous aquaculture businesses through the provision of business planning assistance.

6.2.5 Infrastructure

Initiating an aquaculture venture in many cases requires a significant injection of capital. In general, Indigenous communities cannot finance large infrastructure developments and thus would be required to leverage assistance from Governments and the private sector.

Capital for infrastructure would be required at two stages in the project development cycle. Initially, a small outlay would be required to launch a pilot project. At a later stage, when the pilot project has been successful and a detailed business planning study has taken place, a more substantial level of capital would be required to ensure the business develops fully. The KBN will assist the participants in an Indigenous aquaculture project to assess possible sources of capital to support their project.

It should be recognised that potential project supporters, whether mainstream financial institutions, existing industry stakeholders or government agencies, will consider aquaculture to be a high-risk industry. As a result, Indigenous communities and entrepreneurs would be required to demonstrate an ongoing commitment to their project and complete detailed business planning research in order to leverage support. Ultimately, commercial viability and community benefit would need to be demonstrated.

ACTION 6.

(i) Where appropriate, the KBN will assist Indigenous aquaculture pilot projects through the provision of a small 'start-up' grant for infrastructure.

(ii) The KBN will assist Indigenous aquaculture projects to identify and secure sources of capital to support the full commercialisation of their project.

¹The Victorian Government's guide to preparing a business plan, entitled *Plan to Succeed* can be downloaded from <http://www.business.vic.gov.au>



Staff testing the salt content of a water sample.

6.2.6 Mentoring

Business owners and managers are often too busy with operational details to take stock of the direction their business is taking. As a result, in many cases the performance of the business is not assessed in an objective manner, and original goals and plans are overlooked.

An experienced business mentor can be used to help refocus a business or offer specific advice. In the case of an Indigenous aquaculture business development project, mentoring would ideally be provided by an owner or employee of another successful Indigenous aquaculture business. Mentoring support would be invaluable to an Indigenous aquaculture business as it moves from reliance on public assistance to independence as a viable operation that competes in the open market.

ACTION 7. The KBN will assist Indigenous aquaculture businesses to contact a suitable business mentor.

6.2.7 Diversification

Indigenous aquaculture businesses that have negotiated the previous business development phases will be encouraged to diversify their business activities and consider opportunities provided by export markets. As well, businesses that have progressed through the project development cycle will be encouraged to provide mentoring and consulting services to emerging Indigenous aquaculture projects.

ACTION 8. The KBN will assist Indigenous aquaculture businesses to assess the opportunities to diversify their activities and access export markets.

Part 7: Reporting and Evaluating

7.1 KBN Evaluation and Monitoring

The KBN's *Indigenous Aquaculture* strategy, a component of the over-arching *Building the Economic Base* strategy, has been developed to respond to Indigenous business needs, and in particular, has focused on providing intensive upfront support for new and developing aquaculture ventures.

To achieve better coordination of outcomes in the Indigenous aquaculture industry, the State-wide Indigenous Aquaculture Committee will provide input into the ongoing development of opportunities in aquaculture. It in turn will report to the Indigenous Economic Development Working Group (IEDWG), comprised of Victorian Indigenous business leaders and government representatives that review progress and identify opportunities for collaboration to support Indigenous business development. The primary aim of the IEDWG is to coordinate comprehensive and inclusive approaches to Indigenous economic development across industries, provide support to the KBN and advise Ministers on the implementation of the relevant strategies.

KBN Action	Partner Agencies
1. The KBN will facilitate the establishment of a State-wide Indigenous Aquaculture Committee.	Fisheries Victoria
2. The KBN will identify Indigenous individuals and communities that have an interest in undertaking an aquaculture business development project and conduct an initial site visit.	Fisheries Victoria
3. The KBN will facilitate the completion of feasibility studies, the delivery of introductory workshops and the initiation of pilot projects for aquaculture business development proposals that are aligned with the KBN's strategic development model.	Fisheries Victoria, Dept of Employment Workplace Relations (DEWR)
4. The KBN will identify and work with RTOs to assist in the design and delivery of appropriate competency-based aquaculture training to meet the needs of Indigenous individuals and communities.	DEWR, FarmBIS, VET Providers
5. The KBN will assist emerging Indigenous aquaculture businesses through the provision of business planning assistance.	DIIRD, DEWR, Indigenous Business Australia (IBA)
6. (i) The KBN will assist the participants in an Indigenous aquaculture pilot project through the provision of a small 'start-up' grant for infrastructure. (ii) The KBN will assist the participants in an Indigenous aquaculture project to assess the possible sources of capital to support their project.	(i) IBA (ii) DIIRD, Agriculture, Fisheries & Forests Australia, DoTaRs, Indigenous Land Council
7. The KBN will assist Indigenous aquaculture businesses to contact a suitable business mentor.	DIIRD, DEWR
8. The KBN will assist Indigenous aquaculture businesses to assess the opportunities to diversify their activities and access export markets.	DIIRD, Austrade

Table 3. Koori Business Network (KBN) actions and Partner Agencies.



Inspecting yabbies at the Gol Gol Fisheries near Mildura.
Yabby farming in Victoria is still in its infancy.

7.2 Outcome Monitoring

Key Performance Indicators (KPIs) against which to monitor outcomes of the Strategy include:

- the number of new Indigenous aquaculture businesses;
- the number of Indigenous individuals employed in the Indigenous aquaculture industry, both proprietors and employees;
- the proportion of the Indigenous populations earning income from the aquaculture industry; and
- the number of Indigenous aquaculture business intenders and firms assisted through KBN programs and services.

These KPIs will be complimented with case studies of Indigenous aquaculture firms at different stages of the business life cycle.

Part 8: Summary

For Victoria's Indigenous community, economic independence, self determination and true reconciliation are inextricably linked.

Indigenous aquaculture business development projects would generate skilled private sector employment opportunities for Indigenous people that are not contingent on the continuous injection of government support, and thus assist Indigenous communities in Victoria to achieve economic independence and self determination.

Nevertheless, if existing barriers to Indigenous participation in aquaculture are to be overcome, the Indigenous aquaculture industry must develop in a strategic manner and receive government and private sector support at the appropriate stages of development (see Figure 3). The KBN will facilitate this process through the actions itemised in Table 3. As emphasised throughout the *Indigenous Aquaculture* strategy the success of an aquaculture business development project is contingent on the support of multiple project partners.

Glossary of Terms

Aboriginal The term 'Aboriginal' is used in this document when referring to cultural heritage issues and Aboriginal organisations.

Indigenous The word 'Indigenous' is these days increasingly used as a term that embraces both Aboriginal and Torres Strait Islanders.

Koori Generally used to describe Indigenous people of south-east Australia.

Our Path to Reconciliation The Victorian Government's Indigenous Affairs Election Policy 2002.

Acronyms

ABS	Australian Bureau of Statistics
AFFA	(Department of) Agriculture, Fisheries and Forestry Australia
ATSIC	Aboriginal and Torres Strait Islander Commission
Austrade	Australian Trade Commission
CDEP	Community Development Employment Program
DEWR	Department of Employment and Workplace Relations
DIIRD	Department of Innovation, Industry and Regional Development
DoTaRs	Department of Transport and Regional Services
DPI	Department of Primary Industries
DSE	Department of Sustainability and Environment
FAO	Food and Agriculture Organisation of the United Nations
FV	Fisheries Victoria
IBA	Indigenous Business Australia
IEDWG	Indigenous Economic Development Working Group
ILC	Indigenous Land Council
KBN	Koori Business Network
PV	Parks Victoria
RDV	Regional Development Victoria
RTO	Registered Training Organisation
VET	Vocational Education and Training

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