

STREAM



Support to Regional Aquatic Resources Management



Investigating opportunities to support indigenous aquaculture in Australia

Visit to Kimberley, Western Australia

**In Association With
Kimberley Aquaculture Aboriginal Corporation (KAAC) and
Agriculture Fisheries and Forestry Australia (AFFA) National
Development Strategy for Indigenous Communities in Australia**

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May 2003

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Indigenous Communities in Australia

STREAM Initiative

Graham Haylor

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Acknowledgements

I am deeply grateful to our colleagues in KAAC and AFFA for our developing collaboration. In particular, we would like to thank:

- Jacynta Fong KAAC for helping to organize the itinerary and facilitating the visit.
- Richard Mason AFFA for jointly scheduling visits, sharing his thoughts and driving the 4-wheel drive up and down the Peninsular.
- Dennis Ahkee (AFFA) for sharing his views and thoughts from a social and economic perspective.
- Malene Felsing for joining with us to understand more about possible collaboration.
- Mark Manado (Aboriginal Development Officer, Kimberley College of TAFE) for showing us the Bobieding Barramundi pond and for arranging to stay at Middle Lagoon.
- Charla Clements (Chair KAAC) for meeting with us and sharing his thoughts and discussions about the Multi-species Hatchery.
- Participants from the community for discussions and Barry Sharp for showing us the Trochus hatchery, at One Arm Point.
- Jeff Cooper Aquaculture Lecturer of Kimberley College of TAFE for describing the work of TAFE.
- Mark Johnson the Aquaculture Development Officer for Kimberley and Pilbara from Broome Regional Office DoF and Andrew Bartleet Regional Manager North for the informative meeting at DOF Broome.

1 Background

The STREAM Initiative has been working with issues relating to livelihoods, policy and institutional development and communications throughout Asia-Pacific. Recently this has included work in India with indigenous communities supporting people to have a voice in policy making processes. There appear to be some parallels between this work and the objectives of Kimberley Aquaculture Aboriginal Corporation (KAAC) and also the Agriculture Fisheries and Forestry Australia (AFFA) Indigenous Aquaculture Unit (IAU), National Aquaculture Development Strategy for Indigenous Communities in Australia.

Following discussions in Bangkok with Jacynta Fong, Charla Clements and Neville Poelina of KAAC, Chan Lee formerly with Department of Fisheries Government of Western Australia and Richard Mason of AFFA, Graham Haylor of the STREAM Initiative visited Kimberley from 26-30.5.03. The objective was to meet with community members around Kimberley, visit the KAAC Multi-species hatchery in Broome and some examples of on-going aquaculture activities within communities. Richard Mason and Dennis Ahkee planned a visit to coincide with the STREAM visit in order to consider co-ordinated and possibly joint actions relating to indigenous aquaculture support in the Kimberley and elsewhere.

Graham Haylor requested Malene Felsing currently with DoF WA to join the visit and to discuss future linkages with the STREAM Initiative.

The itinerary is in appendix I.

2 Notes from the visit

2.1 Initial Meeting at KAAC

At a preliminary meeting at KAAC involving staff from KAAC, Technical and Further Education (TAFE), and AFFA, Graham Haylor gave an overview of the regional STREAM Initiative with discussions and clarifications and all visited the KAAC multi-species hatchery and the TAFE aquaculture hatchery and laboratory at the Tropical Aquaculture Park in Broome.

2.2 Manbana multi-species hatchery

A 3 million dollar multi-species hatchery (MSH) has been constructed as part of the Broome Tropical Aquaculture Park. The MSH is just beginning operation, as a tourist facility and as a source of seed for prospective aquaculture ventures. Tourism is being heavily promoted in and around Broome in support of the local economy and as an income generating activity for Aboriginal communities which might host, cultural tourism activities including the explanation of the role of aquaculture and fisheries in people's lives. The hatchery is working on the spawning of the gastropod mollusk *Trochus*, and working towards the development of hatchery operations for marine penaeids, tropical abalone and black pearl oysters.

In the early stages of its development, the hatchery is developing its capability as a tourist attraction and coming to terms with issues related to water supply and quality, lighting, mass spawning, business management and partnerships and linkages with a range of stakeholders.

The hatchery has been constructed with funds from Commonwealth and Western Australia State Government. According to Lee and Nel (2001) a co-operative approach allowed the collective resources of the region to be pooled: an agreement made by KAAC that individual communities would not lodge funding applications for a period, but rather lodge a single application for the sum required to fund a MSH. This included substantial funds from the Aboriginal and Torres Straits Islander Commission (ATSIC) (at a level no longer available to projects from this source - see further). Again according to Lee and Nel (2001), KAAC which owns the multi-species hatchery has no control over its daily business, which is the role of a separate board of management. Currently the key source of funds for the hatchery is the 3-year trochus stock enhancement project funded by ATSIC, involving 19 west Kimberley communities, which commenced in March 2002. In addition, a commercial organization called Tiger International has embarked on a semi-commercial trial in the production of post-larvae at the MSH. The objective is to establish a *Penaeus monodon* hatchery to produce 80 – 100 million post-larvae to supply specific-pathogen free (SPF) black tiger prawns to Australia and eventually international prawn farms. (KAAC has just received a \$725k Kimberley Sustainable Regions Programme grant to undertake a 3 year prawn commercialization project, with PL production to occur at the MSH)

2.3 Kimberly college of Technical and Further Education (TAFE) hatchery and classroom

Next to the MSH is an aquaculture training facility operated by Kimberly college of Technical and Further Education. Students can obtain nationally recognized qualification in aquaculture (in order of increasing complexity) from Certificate 1-4. Jeff Cooper, the Aquaculture Lecturer, who is a member of the recently formed Working Group (see further) hosted a visit to the facility and described the practical courses on offer. Mark Manado the Aboriginal Development Officer for Kimberley College of TAFE highlighted that aquaculture 'graduates' from TAFE are well qualified practically but that employment prospects are still limited for such persons in Kimberley. He raised the prospect of TAFE graduates taking on a community development role similar to the Community Organizer's positions in the indigenous aquaculture project in which STREAM staff had played a role in Eastern India. Jacyntha Fong of KAAC requested more information about 'Community Development' approaches. This will be provided to KAAC and TAFE by the STREAM Initiative.

2.4 Aboriginal and Torres Straits Islander Commission (ATSIC)

The Aboriginal and Torres Straits Islander Commission's (ATSIC's) largest programme nationally is the Community Development Employment Scheme (CDEP) which allows people to be employed by a firm or organization that tops up their welfare payments (a 'work-for-benefits' scheme) up to a ceiling of 22,500Aus\$/year after which benefit is no longer paid. This is designed to support indigenous people to move from a livelihood supported by welfare payments to a regular salaried position or an income from a small-business. As it currently operates however, it appears that an unintentional negative incentive is constraining the scale of development of job and small business opportunities to annual incomes at or below this ceiling, as people fear losing the stable income stream from CDEP payments in exchange for an often more lucrative but sometimes more risk-prone private sector opportunity.

In Broome it was possible to meet with a local representative from ATSIC, Kim McIlveen, the Senior Commercial Officer, Customer Lending and Support Services. ATSIC are co-

funding the MSH (see above) but their subsequent funding portfolio has declined and large grant aid is no longer available from ATSIC. In Kimberley they administer an annual budget of approximately 35-40 million Aus\$ with 1 million Aus\$ in support of a Business Development Programme. This involves 'mentoring' in support of developing a business using business management consultants, and a small loan programme with loans typically ranging from 6-25 thousand Aus\$ at an interest rate of 6.42%. As a support to Indigenous aquaculture, the business development support offered by ATSIC is complemented by training from TAFE and licensing at preferential rates from the Department of Fisheries.

2.5 Pearl Coast Tropical Fish and Garden Centre

Approximately 4 km from Broome is an Indigenous owned small business related to aquaculture and fisheries with Community Development Employment Scheme (CDEP) support for staff trained by TAFE. This successful small-business outlet supplies the local aquarium industry with freshwater ornamental fish.

2.6 Western Australia Department of Fisheries, Broome

Mark Johnston is one of five Aquaculture Development Officers (ADO's) employed by WA DoF. 70-80% of the ADO time that is dedicated to extension is spent with Indigenous people. A key problem for indigenous aquaculture according to Mark Johnston is ensuring a good stream of product into the market (involve catching or culturing, storing and transport) often from remote locations (see further). Likely species include Trochus, Mud crabs and Beche de Mer, but social considerations within some indigenous Australian communities are not always compatible with operating a business. For example, in some aboriginal settlements the whole community is compelled to pack up and go camping for several weeks, leaving everything behind.

The ADO is a member of a Working Group (see further) that is addressing the issue of how best the multiple stakeholders supporting aquaculture/business opportunities can integrate their activities.

2.7 Communities fisheries and aquaculture development

There is currently a healthy debate about the degree of success of various aquaculture and fisheries ventures within Aboriginal communities. The debate essentially revolves around indicators of success and whether these relate to technical capability (being able to successfully culture or harvest a species) or the successful operation of a small-scale aquaculture or fishery business (being able to make a living from an aquaculture or fishing business). In most cases, technically the ventures succeed, but at this stage non-technical issues such as the development of markets appear limited within some remote communities.

One highly successful example is a Trochus hatchery at One Arm Point's Bardi Community, managed by a largely self taught ex-barramundi fisherman with a small team of TAFE trainees who are expected to move to Certificate level 2 shortly under the guidance of TAFE (see above). The hatchery is very successful at spawning Trochus in conditions which are close to the natural environment around the north end of the peninsular, as well as recently having successfully spawned the tropical abalone for the first time. Another potential aquaculture species, the giant clam is held at the hatchery which runs on solar power with a back-up generator, with sea water pumped onshore to a locally constructed low-head gravity-

fed round tank system. Importantly, the hatchery is successfully selling small *Trochus* to the aquarium trade which are air freighted by light aircraft from a local airstrip. *Trochus* from the hatchery may also be used for restocking local reefs. The collection of larger *Trochus* for sale by the local Bardi community license holders are however currently much less successful in gaining profit from adult *Trochus* collected from its remote location due to poor current market prices (there is currently a market for the *Trochus* but as a result of decreased MOP prices the prices offered by this market are very low at ~\$4/kg).

Another example of aquaculture by indigenous communities is a static freshwater barramundi pond at Bobieding near Beagle Bay where the community has successfully cultured Barramundi which have so far been eaten mainly within the community. No market development has as yet been explored, although tourism, a put-and-take-fishery and other market options are being considered. Both the Bardi and Bobieding communities currently lack strength and support in market development as well as other aspects of business operation and management. Importantly the scale of people's involvement in aquaculture and fisheries business appears to be limited by their desire not to lose their entitlement to welfare payments (see ATSIIC above).

2.8 Institutional linkages in aquaculture development in the Kimberley

There is a range of support agencies and service providers in the Kimberley and co-ordination between these groups is improving through the establishment of a Working Group comprising key stakeholders (currently: KAAC, WA DoF, TAFE, the Area Consultation Committee and representatives from the Indigenous Land Development). ATSIIC has elected not to take a central role within the Working Group but is kept informed on key issues by the group (and is to be re-invited to join the WG). An Indigenous Aquaculture Development Pathway Model is being discussed and developed by the Working Group to guide communities and organization in the development of support from a range of stakeholders and an inventory of suitable species for aquaculture in the Kimberley has been prepared. A package including these resources and other background is being prepared by the Working Group, including an awareness-raising video of 10-12 minutes.

3 Wrapping up meeting

3.1 Notes from wrapping up meeting

A wrapping up meeting was held on 29th May before everyone departed from Broome. Richard Mason of AFFA began by summarizing that in order to move to a bottom-to-top approach to working with communities, greater opportunities were required for community members to voice their views. Greater community involvement was required. This would be an early step towards his goal of supporting the establishment of viable aquaculture ventures, which is being taken as an indicator of success by AFFA. He cited the example of the community at One Arm Point and the issues raised in our meeting there including their relationship with outside researchers, the need to co-ordinate development related in particular to tourism and aquaculture and their frustration with their limited capacity to market a product which they have demonstrated they can effectively produce within the community. He made reference to a potential "project", the idea for which had evolved during discussions throughout the visit, which would trial conducting 3 case studies during which communities would be empowered to consider and share their expectations and objectives. This would involve STREAM, KAAC and AFFA working together, initially with interested communities.

Jacynta Fong agreed that her goal was also based around the need to get tangible projects up and running, which was also an indicator of success for KAAC. She highlighted the need for community development and increasing community involvement, that aquaculture should not be conducted in isolation from other types of (business development) support and that in particular management capacity development was needed. She referred to KAAC's approach involving two "model Projects" being developed at Mud Springs, Kununurra, where technical capacity is being built with support from Phil Evens (of TAFE) but where management capacity is so far limited, and Pandanus Park –Derby, where developments are occurring but that some key positions are held by outsiders and there is a concern that opportunities to build local capacity may not be fully recognized. She reiterated that there are nineteen project license holders for aquaculture amongst local Aboriginal communities with some capacity to do extensive work but where skills for marketing and community development issues require attention. Licensing communities, or groups within communities, to raise Trochus, Giant clam and Tropical abalone by the DoF was seen as a way to bring Aboriginal people into aquaculture. From her experience she supposed 6-12 communities of the nineteen had the greatest prospects for successful aquaculture. She discussed 'CoastWest project funding' and reminded us that the primary applicant should be a "coastal manager" in this case not KAAC but the DoF. Jacynta relayed that Dr Chan Lee (consultant on the Indigenous Aquaculture Strategy) who was unavailable at the time of the visit, has urged support for working together with STREAM and other organizations that could bring support and resources. She highlighted that the role for KAAC would be facilitating bringing resources (in some cases consultants) into communities, networking and other ways of furthering communications and links. The 'Working Group' which saw regular meetings between Jacynta Fong, Mark Johnston and Jeff Cooper was beginning to address the lack of a process for development in the multi-stakeholder environment and that this would soon become part of a developing 'aquaculture package'.

Dennis Ahkee highlighted how useful it had been to combine the visits of STREAM and AFFA and referred to the useful community development approaches that had been discussed including his work on triple bottom-line accounting and assessing properly the costs and benefits of aquaculture ventures.

All agreed that STREAM, AFFA and KAAC working together in a community consultation pilot, initially with a small number of Aboriginal communities interested in aquaculture could help to increase dialogue and mutual understanding. This in turn would be likely to benefit the desire of AFFA and KAAC to support the growth of viable aquaculture ventures and would better support the understanding of objectives, strengths and shortcoming within communities which are keen to undertake aquaculture activities.

3.2 Action points

- Dennis Akhee agreed to share his work on triple bottom line accounting.
- Jacynta Fong agreed to discuss a potential community consultation pilot building on the approach that STREAM had used with tribal communities in India within the working group and sound out colleagues including Chan Lee, Mark Johnston and Geff Cooper.
- Richard Mason agreed to discuss a potential community consultation pilot building on the approach that STREAM had used with tribal communities in India with Glen Hurrey at AFFA and consider if this was an approach (limited to under 100,000 Aus\$) which AFFA itself should support financially.

- Graham Haylor agreed to send a Back-to-the-Office report to all for comment and discussion, including an outline concept for such a project and through STREAM's virtual library and media monitoring service to build a small body of literature about community development processes and circulate this.

4 A Concept Note for moving things forward

Understanding the objectives, strengths and constraints of Aboriginal communities where there is interest in aquaculture, in order to support the holistic development needs of these communities

4.1 Background

A number of Aboriginal communities in Kimberley have already demonstrated technical success with fisheries and aquaculture production techniques; examples include Trochus collection and a Trochus hatchery at One Arm Point and a Barramundi pond at Bobieding. However, opportunities to articulate and discuss the community objectives for building on these successes and the holistic and varied support that these require have not yet been fully realized. It is increasingly recognized that principled professional facilitation within communities to support them to identify and agree objectives, recognize strengths and address needs is a valuable early component of development support. This builds ownership and shared commitment within communities and helps service providers to plan appropriate support in relation to technical, managerial and administrative capacity building, communication and networking and the evolution of sustainable approaches to small business development that is consistent with the culture, resources and vision within communities.

It is proposed that STREAM, KAAC and AFFA work in partnership with a small number of community groups (initially) to support them to articulate a vision for their development based on their desire and scope to establish sustainable aquaculture and fisheries ventures. Facilitating people to have a voice in the processes and policies that direct their development and building and supporting effective networking and knowledge-sharing are key strengths of the Regional STREAM Initiative of the intergovernmental Network of aquaculture Centres for Asia-Pacific (NACA), of which Australia is a member. Local knowledge, administrative capacity, networking and community representation are key strengths of the KAAC. Whilst AFFA, which has a more strategic supporting and co-ordinating role would realize the opportunity to trial several important potential components of the National Development Strategy for Indigenous Communities in Australia. In particular from Lee and Nel (2002):

- Recommendation #13 'Establish a means of translating the outcomes of research and development from national and regional institutions into *practices that can be transferred to and realistically applied by Indigenous people to aquaculture projects*',
- Recommendation # 14 '*Establish a business network to develop and maintain links between Indigenous people or communities involved in aquaculture and the commercial aquaculture industry*', and may contribute substantially to
- Recommendation #17 'Encourage the *formation of organizations that represent Indigenous communities with common interests in aquaculture development*. Establish a Working Group within each organization to expedite the identification of suitable aquaculture land that could be developed'. This would also be a likely entry-point for

- Recommendation # 22 Document and *review the decision-making and legislative process* currently in use by Commonwealth, state and territory governments in respect of Indigenous aquaculture and suggest solutions where they might be needed

4.2 Approach

Three community consultation events would be planned, with advanced on-the-ground awareness raising and planning supported by KAAC with strong engagement with STREAM facilitators. It is envisaged that this process would take about 3 months to set up. The facilitation team from STREAM would aim to then run consultations within communities, with community members including aquaculture license holders and Working Group members. Details of communities within Kimberley, key contact persons, notes and potential groupings of communities for the consultation events are summarized in table 1.

Table 1: Notes on communities with aquaculture license holders and interest and capacity to undertake aquaculture ventures (based on discussion with Jacynta Fong)

Community	Contact Person	Notes	Potential groupings
Udialla	Neville Poelina	Cultural need to fish	All the same nation possible to hold joint meetings/workshop
Jarlmadangah	Anthony Watson	Small training facility	
Pandanus Park	Ms Pat Watson	Fresh water prawn KAAC 'model project' at feasibility study stage (mostly women)	
Bardi, One Arm Point	Andrew Carter	Trochus hatchery	Possible to hold joint meetings/workshop
Mudnunn	Vincent Angus	Aquaculture licence (potential giant clam site)	
Bobieding	Fred Murphy	Barramundi pond	Possible to hold joint meetings/workshop
Beagle Bay	Philip Matsumoto	Aquaculture licence (trochus etc)	
La Djardarr	Laurie Cox	Red claw pilot ponds no longer in use	
Chilli Creek	Kevin Puertolano	Aquaculture licence (trochus etc)	Possible to hold joint meetings/workshop in Broome
Carnot Springs	Charla Clements	Aquaculture licence (trochus etc)	
Maddarr	Mark Manado	Aquaculture licence (potential giant clam site)	
Middle Lagoon	Peter Howard	Aquaculture licence (potential giant clam site)	
Gudumul	Loretta Bin Omar	Aquaculture licence (trochus etc)	
Lombadina/Djarindjin	?/Brian Lee	2 communities	Possible to group in somewhere – to advise (possibly Beagle Bay)
Mud Springs (and Bell Springs), Kununurra	Niel McGinty	Red Claw KAAC 'model project'	Hold meeting at Mud Springs

The selection of participants, combinations of communities and locations must be agreed.

4.3 Draft Aim and Objectives

The aim of the consultation events is “to support people in communities to articulate a vision for their development based on their desire and scope to establish sustainable aquaculture and fisheries ventures”.

The objectives of the consultation events are:

- Through facilitated discussion, stakeholder statements and brainstorming with services providers to understand from the perspectives of representative recipient communities and service providers the current issues related to support for Indigenous aquaculture and fisheries development.
- To consider how life can be given to recommendations for the development of the National Aquaculture Development Strategy focusing on examples from Kimberley and what “indicators of progress” could be used to monitor changes in economic independence and food production capabilities of Indigenous communities through involvement in aquaculture and fisheries.
- Consider how the Working Group, involving KAAC, DoF WA and TAFE as well as AFFA, NACA-STREAM and ATSIC can follow up the outcomes of the consultation.

Appendix I: Itinerary

Date	Travel	Visit	Personnel
Monday 26/5/03	KAAC to collect RM and DA MF and GH arrive 12.45	Visit to Multi Species Hatchery/KAAC. Meet with key personnel for discussions re MSH development Meet with KAAC and Indigenous license holders - discuss KAAC activities, linkages, support Visit TAFE Aquaculture Hatchery and discuss aquaculture courses and linkages Meet with IAU, KAAC – discuss KAAC and possible linkages with STREAM	Charla Clements (KAAC/MSH Chair), Jacynta Fong (KAAC CAPO), Jamie Whitford (MSH Manager), KAAC Executives, Peter Dougan (ILC) KAAC Executives, license holders, CC, JF CC, JF, KAAC Execs, Richard Mason, Dennis Ahkee Jeff Cooper (Kimberley College of TAFE), JF, RM, DA
Tuesday 27/5/03	GH and MF, RM and DA	Meet representative from ATSIC, Broome. Visit Dept. Fisheries – discuss Indigenous aquaculture development issues with DoF, KAAC (working group). Visit aquarium trade small business, Broome - to discuss fisheries and cultural issues	Kim McIlveen Senior Commercial Officer ATSIC Mark Johnson the ADO for Kimberley and Pilbara and Andrew Bartleet Regional Manager North Tammy Howard , Pearl Coast Tropical Fish and Garden Centre
Wednesday 28/5/03	Depart for One Arm Point 8.00am – KAAC vehicle Broome by 5.30pm – overnight at Middle Lagoon	Meet license holders – discuss aquaculture development issues Visit One-arm Point Hatchery – meet with Hatchery Manager and trainees	Barry Sharp (Hatchery Manager) Philip McCarthy (Dennis Ahkee), Andrew Carter, Dennis Davey, Frank Davey, Irene Davey
Thursday 29/5/03	Depart Middle Lagoon return to Broome GH and MF to airport 4.20pm	Visit Beagle Bay and Bobieding Community Barramundi project. Visit KAAC, round up meeting Return to Perth	Meeting with Mark Manado TAFE KAAC, STREAM, IAU
Friday 30/5/03	GH to BKK		