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Progress Report for ACA/CRC projects; July 2012

This is an updated progress summary (as of July 2012) of the major projects currently within the ACA/CRC Abalone Project Portfolio.

1. Progress Report: Australian Seafood Diagnostic Capability Map

The availability of diagnostic services for marine bio-toxin analyses is limited in Australia and various government and industry stakeholders have identified this as a critical gap in national capability. The lack of these services in Australia means that shellfish have to be tested at offshore facilities (in New Zealand) to ensure the compliance of shellfish with marine toxin regulatory limits. Sending samples to New Zealand for testing imposes unnecessary costs on the industry and government through heightened transportation and customs charges. There are also unacceptable delays in receiving analytical results due to the additional transportation times associated with sending samples to New Zealand – this exposes the industry to longer closures and heightens public health risk. Given the foregoing, the establishment of a diagnostic service in Australia for marine bio-toxins is essential to meet increasing trade access and food safety requirements for shellfish, including abalone.

In 2011, the project team, through ASCRC support, facilitated a business review and implementation plan for marine bio-toxin diagnostic services in Australia. A key recommendation of this review is that a single-site market pathway is commercially realistic and attractive. Further to this, several Australian agencies (industry and regulatory) have joined together in an informal partnership to ‘offer’ (tender) their combined samples for marine bio-toxin analysis to a laboratory based in Australia (to secure a lower cost for testing per sample). The tender was issued by the ASCRC on behalf of the ‘Australian Marine Bio-toxin Partnership’. Four tenders were received from Australian based laboratories that have indicated that they are able to undertake marine bio-toxin testing for the Australian seafood industry. The tender assessment panel have now completed their review of the tenders and a preferred Australian based provider has been approached.

The preferred provider (Advanced Analytical Ltd.) has developed and validated most of the required tests for various shellfish matrices including abalone. Several of the methods implemented (including methods for the detection of paralytic shellfish toxins) have been assessed and accredited by NATA. It is anticipated that the Australian based provider will commence analysis on project samples by 1 July 2012 and shortly thereafter will start undertaking routine analytical work for the Australian shellfish sector to support on-going market access needs (domestic and international).

This project is of particular relevance to the Australian abalone industry at the moment as testing of abalone foot tissue and viscera for Paralytic Shellfish Toxins in the wake of the recent algal bloom event in SE Tasmania has necessitated the “export” of abalone tissue samples for analysis to the Cawthron Institute in Nelson, New Zealand – it is great news that there will soon be a laboratory facility within Australia with the appropriate level of infrastructure and accredited technical expertise to conduct this type of analytical research.

2. Progress Report: Compositional profiles for seafood products sold by CRC participants

Whilst most abalone exporters already have nutritional information/panels included on their product packaging/labeling, this project will provide a scientifically robust and independent assessment of the compositional profile of abalone that will withstand scrutiny from any source – commercial or government.

The compositional profiles will include information re fatty acids, vitamins, carbohydrates, protein, cholesterol and minerals (macro & trace elements) – the abalone profile will be used to develop an “internationally verified nutritional information panel” for Australian “wild caught” abalone.

A Nutritional expert from Flinders University has been engaged by the SCRC to develop the nutritional panels as well as come up with some “good news” messages for consumers regarding the health benefits of consuming abalone. This will be available to the abalone industry prior to the end of July 2012.

3. Progress Report; CRC project 2009/723: “Analysis of Product Differentiation Opportunities for Australian Wild Caught Abalone in China—Stage 2”; Principal Investigator; Dean Lisson

This project was established following industry concerns regarding:

1. Declining returns to industry during the last decade
2. The massive proliferation of farmed abalone product now available in the market place and
3. The lack of any coordinated, industry-wide strategic focus in the marketplace

This project can be divided into two distinct phases – the first phase is now complete and the second phase has recently commenced.

The **first phase** involved *direct recruitment* of restaurants via an activation strategy delivered by the China based market partner Grey Group Asia Pacific (G2 Shanghai). A considerable amount of marketing collateral was designed and tested during this phase of the project to see if it was possible to introduce abalone based dishes into non-Chinese cuisine restaurants. The collateral was designed to generate interest in Australian wild abalone and to specifically support and underpin the creation of a new industry “brand/mark” entitled “Australian Wild Abalone”. This project phase focused on a small number of premium “top end” restaurants in Shanghai and utilized product provided by three Australian exporters and imported/distributed via two local Shanghai seafood distribution companies.

As of June 2012, total accumulated sales of AWA product via the 48 restaurant premises has reached the AUD \$200,000 milestone. Despite the suspension of new restaurant recruitment in August 2011, there are ongoing sales of approximately \$14 000 per month of dried and frozen black-lip and green-lip. These sales are to restaurants that did not have abalone on their menus prior to being recruited to the AWA program. Aside from the sales themselves, there has been a very substantial PR Exposure value of AUD \$370,000 generated (G2 Shanghai figure) via the various AWA PR activities that have occurred since the project commenced – i.e. print and electronic media combined. These PR activities were not paid for by the project but rather were generated by media interest in the project itself.

The decision in August 2011 to suspend further restaurant recruitment was based on a number of factors:

1. Declining support (temporarily!) from the Market Partner Grey Group (G2 China – Shanghai) due to a dwindling project team (resignations and sickness of key players)
2. Ongoing difficulty in recruiting a suitable AWA Sales Representative to work with G2 Shanghai in the restaurant recruitment and servicing role.
3. The need to engage a larger number of exporters, importers and distributors to enable any further up-scaling of restaurant recruitment

In an attempt to address point 3 above, the project team approached a broader group of Australian abalone exporters in late August 2011 for assistance in supplying product for the project. This request was met by a group of abalone exporters calling themselves the “Primary Exporter Group” or PEG. This group consists of the following companies: Ralph’s Tasmanian Seafoods P/L, Tasmanian Seafoods P/L, Dover Fisheries P/L, Western Abalone P/L and Lonimar P/L.

The PEG met with AWA project team leaders in Melbourne on the 21st of September 2011 to discuss how the PEG could become involved in the project. Following this meeting, it was agreed to organise a trip to Hong Kong and mainland China to meet with key seafood importers – the primary purpose being to discuss the AWA project with the importers with a view to directly engaging some of them in phase 2 of the AWA project.

This research trip took place during mid November 2011 and delegation members visited key abalone importers in Hong Kong, Shenzhen and Shanghai.

A report has been written summarizing the outcomes of the trip.

The PEG has also proposed the introduction of “Nanotag” labelling of AWA products. Nanotags can be used to prevent counterfeiting and product theft and “in effect” will provide a product provenance verification tool that purchasers of AWA product can utilise to satisfy their desire to source genuine Australian wild caught abalone products for their restaurants. Please refer to www.nanotag.com.au

The **second phase** of the project will involve an increased number of Australian exporters and an increased number of China based Importers/Wholesalers/Distributors and will focus mainly on restaurants currently being supplied with abalone products. The focus of this phase will be on “activating” the China based section of the supply chain – i.e. seeing if it is possible to increase/enhance the marketing/promotional “activities” of the existing abalone importer/distributor. This phase will be underpinned by generic promotional material/activities/events and the introduction of a unique product provenance technology (nanotag).

The project team will now work with the PEG group (plus the three initial project suppliers Tas Live Abalone, Esperance Abalone and Eyrewoolf Enterprises) to facilitate the provision of AWA product (legally compliant product with Nanotag verification) via the established China import supply and distribution chain provided the selected importers/distributors are supportive.

The EX numbers of each export entity have been “printed” onto the proprietary nanotags which contain the words “Australian Wild Abalone” and a stylised map of Australia. Each processor will have their own proprietary tag with their own unique EX number. Product buyers in the importing country will be able to examine the tags with a special “magnifier” to verify product provenance. The customised tags have been incorporated into “wands” which will be used to place the nanotags onto the selected products. Additionally, labels, packaging tape and stickers containing nanotags and the AWA logo will be available for processors to place on their product packaging to identify it as AWA product “protected” by nanotag. It is anticipated there will be some targeted promotional activities to roll out the nano-tagged product in Hong Kong and China.

A dedicated B2B website will be established as an educational tool for purchasers (and potential) purchasers of AWA products.

This website will be a source of relevant information regarding Australian Wild Abalone, the products and the companies that export abalone under the AWA industry standard. It will be designed primarily to provide relevant information to any business interested in sourcing and utilising AWA product – focusing initially on the Hong Kong and China market and expanding later to include other markets.

Product sold under the AWA banner will be premium quality wild harvest Australian abalone and suppliers will maintain their own proprietary brand but will also utilise the AWA© industry mark on their packaging. The presence of the logo on product packaging will indicate the following:

1. That the product is wild harvest Australian Abalone
2. That the supplier has conformed with the AWA QA Code of Practise and
3. That product provenance is genuine due to the presence of Nano-Tag© labelling technology

It is anticipated that the new AWA website will be fully operational by mid August. In addition to the establishment of the website, print media files for AWA brochures and banners will be developed.

Following a successful trial of the various Nanotag products and the establishment of the AWA website and development of associated promotional materials, it is anticipated that several “in market” AWA promotional events will be planned for Hong Kong and China in the latter half of 2012.

The challenge for this next phase of the project will be for the exporters (and the project team) to successfully energise and activate selected Chinese importers to engage in new promotional activities centred around the nanotag rollout and a fresh round of AWA promotional activities.

4. Progress Report; CRC project 2009/708 “An Abalone Quality Assurance program for the Australian Wild Caught Abalone Industry”;

In January this year the QA Master Manual (developed by the Tasmanian Abalone industry in 2009) was made available to a Nationally Accredited RTO, Seafood Training Tasmania (STT) based in Hobart. The manual along with other documents relating to bio-security and “shucking at sea” (SA and WA) have been provided to the principals of STT for the purpose of them developing a training package suitable for industry roll-out.

The target audience will be Divers, Deckhands, Mother-boat Skippers, Processors and Transporters across all abalone producing states within Australia.

All of the course material will be developed around the core requirements of the Australian Abalone industry with elective delivery options tailored to meet the needs of the Audience and the unique handling practices of the State that they operate in. (shuck @ sea etc. in SA and WA).

Training will be non-accredited allowing for maximum customisation and to minimise course length and (therefore) the cost to deliver. In its initial iteration, the Training Package is to be contained within a 3-4 hour format (half day).

A Statement of Attendance will be issued to attendees of course. The course is to be developed in a format that allows for further expansion into accredited training as Industry/market demand for more rigorous QA/food safety/quarantine compliance increases in the future.

Seafood Training Tasmania (STT) has been asked to do the following: Map out the QA Code of Practice (CoP) and supporting documentation into a course format: develop course curriculum

/learning outcomes: develop trainers material (power points and learning resources): develop student handout (learners guides and notes): develop questionnaires/exams and develop completion documentation (statements of Attendance) in-line with QA CoP.

After the final versions of the QA CoP Master Manual and QA CoP Learners Guide have been completed, they will be made available to peak state abalone organisations in each of the abalone producing states – it will then be up to each state body to provide these documents to a Registered Training provider to rollout the Code and conduct the training.

There will be strong linkages between the *Abalone Master CoP Manual* and associated *Abalone Training Package* — and the CRC project 2010/704 “*Maximising the value by minimising stressing abalone – Optimising harvesting strategies*”: by Dr Craig Mundy and Dr Natalie Moltschaniwskyj. The stress minimization strategies developed as an outcome of this CRC project will be progressively adopted within the Abalone QA Master Manual and associated Training materials. This CRC project is expected to deliver outcomes in the months ahead which will provide research based advice regarding improvements in fish handling, transport and live storage practices within the Australian wild harvest abalone industry.

5. Progress Report; CRC project 2010/737: Marine Bio-toxins and Market Access for abalone; Principal Investigator - Dr Cath McLeod et al

This project aims to produce comprehensive risk assessments for marine bio-toxins in abalone to assist the Australian and New Zealand abalone industries meet market requirements. Within this broad objective there are several components of work, including: (a) adverse event sampling; (b) baseline testing in Australia; (c) depuration and canning experiments; and (d) risk assessments.

The project has been sponsored by the following agencies:

- - The Australian Seafood Cooperative Research Centre (ASCRC);
- - The SA Department of Further Education, Employment, Science and Technology (DFEEST);
- - The Abalone Council of Australia;
- - The Abalone Association of Australasia; and
- - The NZ Paua Industry Council and the New Zealand Food Safety Authority.
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The project is scheduled to run through to mid-2014. The first 12 months of the project have seen an extraordinary amount of work undertaken due to several significant environmental events (algal blooms). These environmental events resulted in an acceleration of the experimental design and approach for all major project components, and initial laboratory contracts were developed and in place by May 2011. From late April 2011 through to the current time the project team has undertaken significant scientific investigations into three major algal blooms events, which has facilitated the completion of two of the five project components (adverse event and depuration sampling). This rapid initial progress has meant

that the project is more advanced at this stage than planned and significant focus is now being given to undertaking the baseline survey component of the work.

The results from this project are now being used by industry and regulatory groups for informing risk management strategies for abalone. The active users of project information include DAFF, the Tasmanian Department of Health (TSQAP), the Tasmanian Abalone Council, the NZ Food Safety Authority and the Paua Industry Council. The Project Team has been involved in numerous teleconferences and face-to-face meetings with these end users to discuss the interpretation of results from the project, and to assist risk managers to develop well informed sampling and management plans.

6. Progress Report; CRC Project 2010/704 — Maximising the value by minimising stressing abalone – Optimising harvesting strategies: Dr Craig Mundy and Dr Natalie Moltschaniwskyj

Harvesting, handling and transportation of abalone are stressful events and influence the capacity of the animals to recover from harvesting and their post-harvest survival. Having a better understanding of the stress profile during these phases will enable divers, transport drivers and processors to better manage the supply chain and will maximise the condition and survival rates of abalone and ensure that the maximum value of the harvest quota is retained.

The stress profiles are to be developed for a range of harvesting and transport scenarios including day fishing from runabouts and extended stay fishing from abalone mother-boats.

Based on the understanding gained from the stress profiles, the project will make a series of recommendations regarding improved harvesting, handling and transportation methods as well as how to minimise stress (and spawning) of abalone whilst in the tank holding phase prior to export and/or processing.

The PI for this project, Natalie Moltschaniwskyj gave a comprehensive project update at the International Abalone Symposium held in Hobart in early May 2012. The “summer” series of testing was conducted near Southport in SE Tasmania in early 2012. A series of tests were conducted on abalone immediately following harvest to measure the stress response under various “on deck” storage and cooling scenarios.

The next series of “stress” testing will occur late September/early October 2012 and will be focussed on recovery of live abalones after receipt and tanking at a processing facility.

7. Progress Report; CRC project 2009/714: “Decision Support Tools for economic optimisation of invertebrate fisheries”; Principal Investigator; Dr Caleb Gardner

The first phase of this project involves collection of economic data from processors and from fishers. This provides the essential economic basis for the bio-economic modeling and other analyses to be conducted in this project. A time series of export prices has been collected from several Tasmanian processors. Additional export data has been obtained from ABARES. The

survey form for fishers has been finalised for Tasmania and South Australia and drafted for Victoria and New South Wales. Econsearch will be able to carry out the Abalone surveys in the next few months (the South Australian survey is currently underway). A database has been built which will store the economic data at IMAS and ensure that it continues to be available in future. A workshop involving all states will be held in July (date to be confirmed) to discuss the surveys and analyses appropriate for each state.

8. *Progress Report; CRC project 2009/715: "Optimising business structures and fisheries management systems for key fisheries"*

There has been progress with commencing an economic performance evaluation for the South Australian prawn fisheries and discussing options for improving profitability of the fisheries. These fisheries were selected as pilot case study fisheries to measure economic performance of key CRC fisheries using the wealth-based fishery performance indicators (EPI) developed by Anderson and Anderson (2010). Two stakeholder workshops were held during 27-28th of February 2012 at Port Lincoln and Adelaide, which entailed 1) presentation of the current economic status of the SA prawn fisheries; 2) presentation of the assessment results using EPI system; 3) a series of presentations about fisheries that have established improved management systems; and 4) discussion of suitability of various options. The workshops provided an opportunity to address the issues that are of concern to the industry, and a basis for further discussion. The next step is to carry out similar economic assessment for the selected CRC fisheries (e.g. southern rock lobster, abalone fisheries) and following each workshop the project team would work with industry, managers and scientists for each fishery to develop an options paper that assessed the pros and cons of various systems for each fishery.

Dean Lisson; July 2012