

TORRES STRAIT PRAWN MANAGEMENT ADVISORY COMMITTEE	Meeting No. 4 14-15 June 2007
Torres Strait Prawn Research Program – Progress Report	Agenda Item No. 5

RECOMMENDATION

The TSPMAC **NOTES** that:

1. the progress made by DAFF and DPI&F in setting up and commencing the Torres Strait Prawn Research Program funded under the special research funding for the TSPF provided by the Commonwealth Government for 2007-2009.
2. DAFF advises the MAC that approximately \$29,000 in funding for the 2006-07 financial year remains uncommitted. If this funding is not committed by the end of June 2007 it will no longer be available.

BACKGROUND

In the 2006-07 federal budget, the Australian Government announced \$1 million of special research funding to conduct research into the TSPF that would assess and further develop the spatial management arrangements proposed at the July 2005 Alternative Management Workshop. DAFF was assigned responsibility for administration of the funding and the tendering of research agencies to conduct the research. In late January the tender submitted by DPI&F to conduct the research was chosen as the successful tender. A final contract between DAFF and DPI&F was developed and signed in late March. A detailed project plan was developed by DPI&F and submitted to the Research Steering Committee for discussion and approval on 11 April 2007.

During the 2006 Bilateral meeting with Papua New Guinea (PNG) the National Fisheries Agency (NFA) made a commitment of \$50,000 for DPI&F to conduct trawl surveys of the PNG area of the TSPZ. The Research Steering Committee agreed that the option of extending the DAFF surveys into the PNG jurisdiction should be pursued using this PNG funding, and to increase overall efficiency. This was strongly supported by the industry members who were keen to enhance the data provided by the surveys and to ensure more complete coverage of the straddling prawn stocks. Authorisation for the Gwendoline May to operate within the PNG area during the 2007 season had already been approved as part of the LTMP surveys and because DPI&F had flagged the potential extension of the DAFF surveys using the NFA funding. DPI&F liaised with NFA on the development of a contract to fund the extension of the DAFF surveys into the PNG jurisdiction of the TSPZ.

DISCUSSION

The first survey combined DAFF/NFA funded survey was successfully conducted during 17th May to 1st June. A total of 116 sites (Figure 1) were identified and sampled. A presentation based on preliminary results from the survey data will be provided at the TSPMAC meeting.

The main objective of the trawl surveys are to provide spatial and temporal (seasonal) information on the distribution of tiger and endeavour prawn stocks that can be used to assess and refine the proposals from the Alternative Management Workshop. The distribution of the stocks in terms of species, gender, size and spawning condition at different times of the fishing season are in particular, required to achieve this objective.

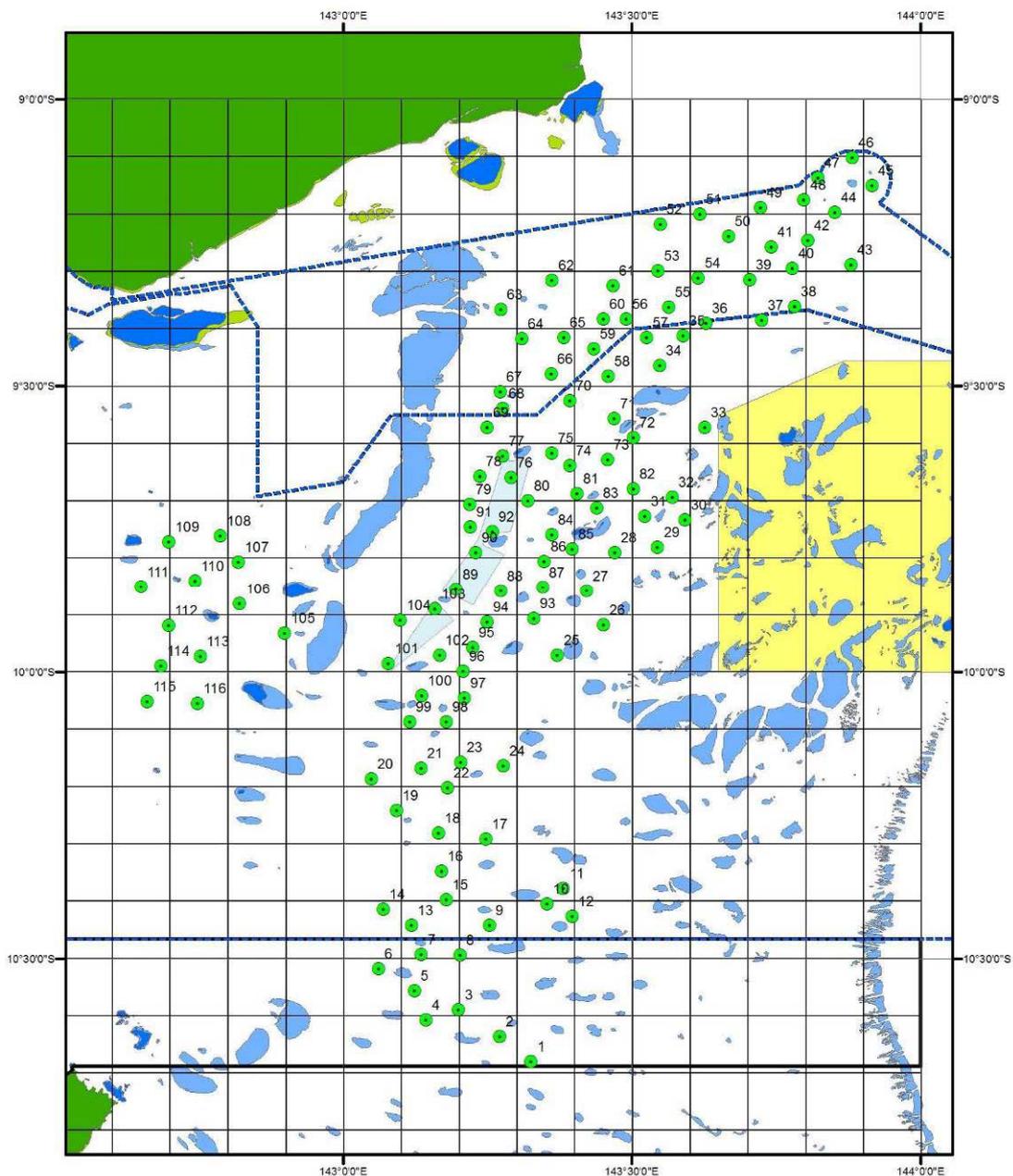


Figure 1 Location of survey sites

This will be achieved by using a survey design where the sampling stations are selected randomly for the first survey then revisited in the subsequent surveys and many low effort samples are collected rather than fewer larger effort samples. This is the strategy recommended by Van de Meer (1997) for monitoring programmes that focus on the abundance of marine benthic species where the primary objective is detection of change. In the case of the proposed surveys the changes we are seeking to demonstrate are spatial variations in the species composition, size and fecundity (egg production) at different times of the fishing season.

The survey sites are 0.5 nautical mile long trawl sampling sites and were randomly spread throughout the following strata;

1. The area currently fished by Australian trawlers in the TSPF. The data from this stratum is essential to assessing the effect the closures proposed at the alternative management workshop.
2. The adjacent closure areas that are designed to optimise the size at first harvest of the prawn stocks. The earlier research conducted by QDPI indicate that these

closures harbour the juvenile prawn stocks that eventually recruit into the area open to fishing and may be protecting some of the spawning stock from fishing pressure.

3. Adjacent areas open to fishing that have low fishing effort but that may harbour some of the stock biomass and potentially some of the spawning stock. There is currently little information available for these areas.
4. The adjacent areas in PNG waters (north of the Fisheries Jurisdictions Line but within the TSPZ). The survey of this area, which would utilise PNG funding, would provide a more complete biomass survey of the straddling prawn stocks that are harvested in Torres Strait.

The location of the current DPI&F Long Term Monitoring Program trawl sites and the sites used by QDPI during 1986-1991 were also utilised where possible in this survey. These sites were randomly allocated throughout the main fishing area and adjacent closure areas. This will enable a degree of comparison of the current survey results with the historical survey data. Additional sites were randomly located throughout the four strata listed above to maximise the power of the surveys to measure the spatial and temporal distribution of the prawn stocks. The power of a survey design is largely dependent on the variance of the sample data and the number of samples. The maximum number of sites (samples) that are logistically possible with the available resources were implemented thereby maximising the power of the design.

The final site allocation was checked against the closure proposals from the Alternative Management Workshop to ensure there are sufficient sites within the area of the proposed closures to provide the data needed to assess and refine the workshop proposals.