

## 10<sup>th</sup> SPC Heads of Fisheries Meeting

Noumea, New Caledonia, 14–17 March 2017

Working Paper 4a

Original: English

### **Curation and digital preservation of coastal fisheries data using SPC as the regional data depot**

*FAME Secretariat*

#### **Purpose**

1. The purpose of this paper is to:
  - highlight the different sources of coastal fisheries data that exist and explore options to obtain copies on behalf of PICTs;
  - outline the benefits for PICTs to use SPC as a repository for all coastal fisheries data as a back-up for each PICT; and
  - assure PICTs that SPC would be a repository for the data, and use of this data would be by consent of PICTs.

## Background

2. There is a great shortage of coastal fisheries data at the national level on which to base sound management, especially historical data. This was highlighted in the 2016 Benefish report<sup>1</sup>, where an assessment was made of the catch and value of PICT fisheries, covering coastal commercial, coastal subsistence, freshwater, and aquaculture; and for the tuna fishery, offshore locally based, and offshore foreign based vessels. While there was good data available for the industrial tuna fishery, the same could not be said for coastal, subsistence and freshwater fisheries, and aquaculture. The 2016 assessment which was based on 2014 data and information, valued the total coastal and subsistence catch in the region at around 163,000 tonnes, with an estimated value of over USD 450 million.
3. Both the New Song for coastal fisheries – pathways to change, and the Regional Roadmap for Sustainable Pacific Fisheries, identify the need for coastal fisheries data on which to based sound fisheries management, and the lack of this data for coastal fisheries at present. This is needed for both future and ongoing data collection, but also for the retrieval or recovery of historic data on which changes over time can be addressed. The issue of current data collection and harmonisation of this data for small-scale domestic fisheries has been covered under Working Paper 3, so therefore, this paper focuses on the recovery of historic coastal fisheries data in all their forms.
4. There have been many surveys carried out in PICTs in the past by a range of researchers, research institutions, and NGOs. In most cases, data are collected and taken out of PICTs for analysis, with very little if any of the actual data left behind with the government departments. These surveys include: underwater visual census for finfish and invertebrates including habitat; socio-economic surveys; creel and/or market surveys; surveys on spawning aggregations; fisher interviews; export data; data on the aquarium trade; data collected from or through community members etc. There is also data on aquaculture and freshwater fisheries collected, but again, very little if any remains within government departments, and this can be a result of data not being provided in the first place, data being lost through computer crashes, or data being in an unreadable format. In addition, storing raw data is necessary but not sufficient to ensure it can be used safely. Survey context, methodology, sampling design, and form descriptors constitute metadata which is essential for analysis but rarely provided. The end result is that the historic data in most cases is not available at the national level or it is not in a useable form.
5. SPC's Coastal Fisheries Programme (CFP) is proposing to look at ways or options to gather this historic data on behalf of PICTs, through identifying researchers and NGOs and approaching them to provide the data that they hold. This can only be done with the consent and support of each PICT, as the data would be gathered on their behalf. Assistance would also be sought from PICTs to identify who has undertaken research in their country in the past, so that SPC can approach the individual or organisation to retrieve a copy of the data on that PICT's behalf. Much of this data will be in different electronic formats, and some may still be on paper and not entered electronically at all. This will require SPC's CFP to look at options to convert any retrieved data into a useable form for PICTs to use in the future.

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<sup>1</sup> Gillett, R. 2016. Fisheries in the economies of Pacific Island countries and territories. Pacific Community, Noumea, New Caledonia 664 p.

6. SPC is also proposing for PICTs to use the CFP as a repository for coastal fisheries data, and associated metadata, in all its forms, including freshwater fisheries and aquaculture, the same as PICTs do with tuna fishery data with the Oceanic Fisheries Programme. This would include fisheries dependent and independent data (commercial and subsistence), community-collected data, socioeconomic data, export data, fisher survey and market data, aquarium trade data, biological sampling data etc. The aim of this is for PICTs to have a back-up of all their coastal fisheries related data that can be called on in the event the national holdings are lost or become corrupted. The data would only be used by SPC or given to others with the consent of the PICTs concerned.
7. SPC will be able to start work in this area in an ad hoc fashion, however, additional funding will be need to do this work properly and thoroughly, especially when it comes to converting old data into new formats, collecting metadata and survey context, or even entering data that is still on paper data sheets. It is expected this will take several years, and is contingent on researchers, research organisations and NGOs providing this information to SPC on behalf of PICTs. In the event some do not want to provide copies of their data, SPC will liaise with the PICT and support them to pursue this directly, as a copy of this data really should belong to the PICTs concerned.

## Recommendations

8. Heads of Fisheries are invited to:
  - discuss the issue of historic data that is no longer available to them and the importance of this data for future management of coastal fisheries;
  - authorise SPC to look for this historic data on their behalf and with their support, especially in identifying who has undertaken research in the past;
  - use SPC as a repository for all forms of coastal fisheries data as a back-up to national systems, with this data only being used with the consent of the PICTs concerned; and
  - support SPC to seek funding to undertake this activity in a full and thorough manner to recover as much historic data as possible and convert this into a useable format for PICTs in the future.