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## RESOURCE SURVEY IN KIRIBATI

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The following paper briefly describes the methods employed by the Kiribati Fisheries Division during a resource survey of the Northern Line Islands. Although populated the stocks are relatively 'virgin' and the intention of the survey was to document the fishery resources; identify species with potential export or subsistence value; assess relative abundance of commercially important species; examine potential catch rates with different gears; make recommendations towards the development of Fisheries in the Line Islands. No assesment of stock size was possible from the data collected. The Islands surveyed were Fanning and Washington. The former was visited four times each for a period five days and the latter only once for a period of three days (due to bad weather). The survey was conducted from the Fisheries Extension Vessel, Nei Tewenei, which acted as a mothership to two fibreglass Yamaha skiffs. A total of 22 people were involved in the survey at one time or another. The survey was conducted by carrying out a variety of different fishing methods aimed to catch a wide variety of species. The methods were :

- trolling around the perimeter of the island
- gillnetting (using a variety of mesh sizes) in the lagoon (and at Washington which has a fresh water lagoon, trapping for the giant long finned eel Anguilla marmorata)
- bouy lining
- lagoon long lining
- deep bottom fishing
- shallow drop lining
- lobster collection
- general observations by diving

None of the method were aimed at the oceanic resources. It was considered that data relating to the climatic conditions, the fishing details, catch details and biological details was required. To achieve this a system of three log sheets was devised following an FAO model (note that the present system used by the Fisheries Division collects all the relevant data on one log sheet except that relating to biological parameters and is considerably easier to keep track of). The log sheets were:

- deck sheets, which recorded details of the climate and fishing activity. Different deck sheets specific to each fishing method.
- catch records, which recorded catch details by species, number and weight in relation to the fishing method.
- biological record sheets, which recorded by species (all data grouped per species but note was made of its origin) length, weight, sex, and maturity stage.

Fish were identified by a combination of local knowlege and using the Kiribati fish name translations, and by making use of the FAO species identification sheets. It was always possible to identify the fish to at least family level. Almost 10 tonnes of fish were landed during the five survey periods and 66 species were identified from Fanning, and 19 from Washington.

Generally all fishing methods indicated that large fisheries resources were available at the two locations. In commercial terms trolling appeared to offer the best potential. High catch rates were achieved and $89 \%$ of the catch were commercially viable species. Gill net caught species were potentially of commercial value also but were especially valuable as a subsistence resource or for sale on local markets - clupeoids predominated, especially bone fish and milkfish. Deep bottom fishing which might have been hoped to provide commercially valuable species infact had few of the valuable etelids and Lutjanus bohar, famous for being poisonous (although it does not appear to be so in Fanning Island), was common.

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The exercise provided some valuable data but it is important to stress that this kind of survey is costly in terms of manpower, resources, time, and money, and at the end does not give the answer which our political masters want: "How much fish can we take?"

