

FISHERIES DIVISIONPROGRAMME OF BASIC COASTAL WATERS FISHERIES
SURVEYS 1973 TO 19751. Background:-

In order to evaluate fisheries potentials within an area it is necessary that the following basic data be available:-

- (a) Physical characteristics of the water within that area; including temperature variations, basic chemical composition, nutrient content and vertical and horizontal water motion.
- (b) Physical characteristics of the seabed underlying the area; including composition, contours, slopes and fixed living organisms attached to it.
- (c) Identification, individual population assessments and replenishment rates of all species of mobile marine life distributed throughout the vertical limits of the water overlying the seabed.

With regard to Western Samoa none of these factors have been established. This results in:-

- (a) Complete ignorance of currents, seiches, upwellings and other vital water movement factors.
- (b) Totally inaccurate marine charts of the area.
- (c) Total ignorance of the marine resources available.
- (d) Total ignorance of fish-population seasonal movements and migrations.

Under such conditions no logical fisheries development can take place other than on a hit-and-miss basis.

2. The Programme:-

With the introduction into service of its' own Fisheries Evaluation Vessel, (the 38ft Ferro-Cement ship FD2), it has become possible for Fisheries Division to plan a basic coastal-waters fisheries survey.

This will involve a series of some twenty-five exploratory one-week voyages, interspaced by a similar number of one-week work data correlation periods. Each voyage will cover a rectangle of coastal waters of 10 nautical miles side, base-line measured along the coast.

In order to establish the fisheries potential in each area the following varied methods of sampling will be employed:-

- (a) Hand lines and deep water reels.
- (b) Bottom long-line.
- (c) Surface long-line.
- (d) Crayfish pots and traps
- (e) Beam trawl
- (f) Mid-water try-net
- (g) Shark nets and shark set-lines.
- (h) Bottom-set gill nets.
- (i) Crayfish tangle nets.
- (j) Dip-net.

All these activities will go on both by day and by night. Voyages will be continuous work-efforts with two crews working shifts. Initial voyages will be under the direct command of the Chief Fisheries Officer

who will utilise this period for training-up of the Senior Fisheries Assistants as Cruise Leaders. Separate reports will be issued after each voyage.

A final report (utilising the computer facilities of the University of Hawaii) will be issued at the end of the series. This is expected to yield valuable (mainly quadratic) equations whereby correct future fisheries policies may be determined.

Each area surveyed will be identified by a grid reference letter and number. This grid will be published as an Appendix to each and every Voyage Report.

Voyage Number One is scheduled to commence on Monday 20 January 1973 and will cover a portion of the north coast of Savaii.

William Travis

(W. Travis)

CHIEF FISHERIES OFFICER