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THE VANUATU VILLAGE FISHERIES DEVELOPMENT PROGRAMME (VFDP)

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1.0 Small-scale commercial fishing in Vanuatu.

Virtually non-existent at Independence in 1980, the fishery consists mainly of sturdy, small outboard-powered vessels harvesting deep bottom fishes on the outer slopes of the reefs (between 100 and 400m) and pelagic fishes (e.g., skipjack and mahi mahi) around fish aggregating devices (FAD'S)

The fishery has developed largely as the result of the EDF-supported VFDP involving training of fishermen and provision of boats and equipment (including that required for fish preservation), through grants and loans. The programme has been supported by other departmental activities such as boat-building and the construction of marketing centres in Port Vila and Luganville.

Before the VFDP, there was virtually no small-scale commercial subsector. By mid 1986 the industry consisted of about 100 individual village fishing enterprises involving approximately 300 fishermen. Four times more enterprises have been formed than had been anticipated when the VFDP was launched. On the other hand, the tonnage of fish caught is less than expected, reflecting in part, difficult weather conditions during 1985, but also the fact that many enterprises, though fully meeting their loan payments, obviously prefer to fish only part-time. This has the effect of spreading incomes derived from fishing more broadly, not necessarily a negative result.

Ownership of the enterprises is variable; of One hundred now in operation, 70 are owned by individual fishermen, 10 by families, 12 by organisations within villages, 7 by entire villages or groups of villages; and in one case (Paama), by an entire island. With passage of the cooperative law it is expected that a number of the enterprises, both those in existence and those being planned, will be structured as cooperatives.

Through the VFDP, fish preservation facilities (freezers, icemakers and cool rooms) are available for most enterprises requiring such equipment. In 1984, about half of the production (in terms of value) from the enterprises was sold to villages in the vicinity of the operations with the remaining half being transported to urban marketing centres in Port Vila and Luganville (usually by the local commercial airline). Use of expensive air transport is possible because the fishery concentrates on deep-bottom fishes which bring premium market prices (VT 300/kg retail in Port Vila). The local airline also gives a flat rate of 30 VT/kg for fish, regardless of distance. With respect to total catches, a 1983 survey carried out in conjunction with an extensive agricultural census concluded that the total annual catch of marine organisms in the Republic was 2,400t of which about 1,000t consisted of fish (the remainder was estimated to have consisted of crustaceans, shellfish and cephalopods). Of the fish caught, it was estimated that about 250t was sold on cash markets (mainly in Malekula). Data on total quantities of fish caught and marketed in other years are not available. However, data are available on quantities marketed in conjunction with the VFDP and with the operation of government-sponsored markets in Port Vila and Luganville.

There has been very satisfying build-up of marine products marketed through government-supported activities, but also a persistent high level of imports, particularly canned mackerel and sardines. When fishing is good, supplies of high quality fish now exceed demand in the urban centres of Port Vila and Luganville. Efforts are being made to establish export markets and prospects are good for selling moderate quantities of surplus fish overseas. Although occasional gluts have occurred, a consistently high proportion (75%) of the commercialised product is being sold in the villages. It is apparent that an unsatisfied cash market demand exists there, particularly in villages not located adjacent to areas where fishing enterprises operate; a common complaint among villagers is that the projects do not catch enough fish to supply all the villages - "only those who live near the projects get to eat fresh fish". The magnitude of this unsatisfied demand is not known; but it would appear to be substantial.

The total consumption of marine products in Vanuatu would approximate 2,500t per annum, or about 21 kg. per capita.

According to the 1983 agricultural census survey, about half (around 8,600) of the rural households in the Republic are involved in fishing at some time or other. On the basis of the survey, there were approximately 3,400 canoes in use and about 500 boats with motors. Almost all of these were very small. In the past three years, approximately 75 larger motorised boats (mainly 5.5m and longer) have been constructed in the Government's Luganville boatyard and are now used by the VFDP enterprises throughout the archipelago.

2 Description of the area

2.1 General description

The Vanuatu archipelago consists of a chain of some 80 islands, 12 of which contain substantial populations. Lying between latitudes of 13°S and 23°S and longitudes of 166°E and 172°E, the land area comprises about 12,200 sq. km, water covers about 430,000 sq.km, lying within the limits of Vanuatu's 200-mile zone declared in accordance with the Maritime Zone Act of 1981.

There are only two urban centres, Port Vila on Efate and Luganville on Espiritu Santo. Some 800 villages scattered throughout the archipelago accommodate the remainder of the population.

The Fisheries Department within the Ministry of Agriculture, Forestry and Fisheries is responsible for the administration of fisheries programmes within the Republic. The Department is headquartered in Port Vila with a staff of 18 but operates a satellite office and a boatyard in Luganville, Espiritu Santo with a total staff of 14. Eight expatriate advisors are posted in rural communities spread throughout the archipelago to support the operations of enterprises formed under the VFDP.

Inter-island vessels link the islands of the archipelago but service is not suitable for transport of most perishable fisheries products. Regular air service by the local airline Air Melanesie between the 12 major islands and Port Vila is used for transport of high value fish products. There are over 1,000 kilometers of roads on the islands, but over 80% of the nation's vehicles are on Efate and Espiritu Santo. Much of the transport between coastal communities is by small boat. A good telecommunications system exists between the major islands but coverage within each island is very limited. The Fisheries Department maintains its own radio network connecting the Port Vila headquarters, Luganville and field projects at other locations. Operations of this network facilitate the movement of fish to markets.

2.2 Physical description

Over 40% (5,500sq.km.) of the Republic's land mass is potentially arable. Most islands are well endowed with small water courses. Coral reefs around most of the islands are relatively narrow and lagoon and mangroves fairly limited (about 3,000 ha. of the latter throughout the archipelago).

As is typical in many zones of South Pacific States, most of the waters lying within Vanuatu's 200-mile zone are very deep. However, particularly around the central islands, there is a substantial slope area with depths favourable (100-400 m) for the harvest of high quality "deep-bottom" snappers. Throughout the archipelago, there are about 735,805 ha. of suitable bottom for snapper fishing.

Sea conditions are generally moderate but the prevailing southeast trade winds limit the open coastal area in which small vessels can operate consistently. The climate varies from tropical in the north to subtropical in the south. Rainfall throughout the archipelago (with marked local variations) averages 2,360 mm per annum. The year is roughly split into two seasons, the dry season characterised by southeast trades from May to November and the warmer, wetter "cyclone season" accompanied by generally variable high winds and occasional tropical depressions.

2.3 Population

Over 80% of Vanuatu's more than 120,000 people (estimated at 112,700 during the 1979 census, growth rate 34% per year) live in rural villages, two-thirds of the latter bordering the sea. Because the nation is blessed with fertile soil; agriculture, for both subsistence and market purposes, is the main activity.

In 1979, the "economically active" labour force was estimated to be 45,488 (25,631 men and 19,857 women). Although perhaps half of all rural households engage in some kind of fisheries activity, and marine products form an important part of the subsistence diet in seashore villages, (see section 2.1) the number of ni-Vanuatu actively associated with fishing enterprises using larger vessels is only about 300. About 150 other ni-Vanuatu have gained oceanic fishing experience by serving aboard Taiwanese tuna longline vessels operating out of Palekula, Espiritu Santo. In both the VFDP and in the tuna operations, ni-Vanuatu have shown themselves to be quick learners. Some (particularly those who have made several trips aboard tuna boats which are absent from port for several months), are obviously prepared to adopt fishing as a full-time economic activity. Most, however, seem to favour fishing as a part-time vocation, fitting in with other aspects of village life, particularly those related to crop growing cycles. As long as investment in vessels and equipment remains at modest levels, part-time fishing can be an economically viable activity: with the quantity of easily accessible marine resources being limited, part-time fishing spreads cash-earning opportunities amongst a larger group of participants.

2.4 Situation of fisheries in the region

Most subsistence fishing involves harvesting of fish and shellfish within the reefs. A recent report summarising information collected during the 1983 agricultural census provides detailed data on artisanal fishing activities and may be consulted if more information is required.

The development of the small-scale commercial fishery was initiated by the Government in 1981. The present VFDP, due to continue through 1987, involves:

- receipt of applications from individuals or groups to form fishign enterprises.
- selection of applicants on the basis of criteria including:
 - availability of marine resources in the proposed area of operation.
 - the numbers of people available locally to purchase fish.
 - the availability of safe anchorage or haul-out facilities.
 - the proximity to an airstrip or, in some cases, to coastal shipping if surpluses beyond local needs are anticipated.
 - willingness and demonstrated ability of the applicants to put time and effort into the project.
- Concensus; demonstration of support by the community as a whole for the proposed enterprise, accessibility of the area to the services of a volunteer expatriate advisor (or, where appropriate, the ability of the applicant to provided housing).
- depending on circumstances, provision of a boat to the enterprise (initially 8.6m alias, but more recently 5.5 outboard powered V-bottom monohulls).
- as required, provision of freezers, ice-making eapiment or chill rooms to facilitate holding and shipment of catches.
- on-the-job training in fishing, fish-handling and business management by an expatriate fisheries advisor.
- facilitation of marketing of surpluses in government markets in Port Vila and Luganville.

At the end of June 1986 over 100 enterprises had been established, with over 100 boats, 13 freezers, 5 ice-making machines and two cool rooms installed. Active retail and wholesale markets have been established in Port Vila and Luganville. Efficient procedures have been developed by advisors for transport to urban markets of fish surplus to local demand. Prices are set by the VFDP in the villages and by the marketing company in the urban centres, taking into account shipping costs. The market has successfully maintained a policy of buying all good quality fish offered by fishermen and has provided stable prices to the fishermen (cushioning them from short-term fluctuations in supply and demand).

As outlined in section 2.1 above, the VFDP has been very successful and in three years has essentially brought into existence a locally-based commercial fishery where none existed before.

3 Problems arising, needs

The principal objective now is to consolidate and build upon the excellent progress that has been made to date under the VFDP. Creation of interest in fishing is no longer a problem; the main challenge in the next few years will be to assist the fledgeling enterprises to make the transformation from closely supervised operations breaking new ground to enterprises capable of running independently and efficiently in the long term.

The Department's programmes supporting the VFDP, including the design, construction and testing of new vessels and fishing techniques, is proceeding satisfactorily. Trials of a new 10m vessel capable of fishing in more exposed areas and staying at sea for longer periods will begin soon and could lead to the adoption of larger vessel technology by the more advanced enterprises. Given present markets (that concentrate on "top of the market" products such as snapper), existing methods of collecting and transporting products (assuming that fish storage equipment will continue to be supplied to new enterprises) would appear to be adequate, at least in the near term.

The real problem facing the Department is how to spread its existing technical resources, the skills of a few expatriate experts and a handful of experienced ni-Vanuatu officers, among an ever increasing number of enterprises. As fully outlined and documented in the 1983 project proposal to EDF for the VFDP, the assistance of properly equipped expatriate fisheries advisors makes all the difference to the success or failure of many local enterprises. Many enterprises begin in a burst of enthusiasm (usually exploiting virgin stocks of fish) and set unrealistic objectives. Often they flounder when the day to day drudgery of fishing and frequently making disappointing catches, and the monotony of maintaining fishing boats and gear, lead to discouragement. It has been found that the presence of experienced advisors under such circumstances can assist the enterprises to "weather the storm" by establishing operating procedures suitable for the long haul. Thus, the provision of advisors, often one to an enterprise, has worked well in the past. With the dramatic increase in the number of enterprises and with further expansion ahead, the rather informal methods used in the past (assigning advisors where they seemed to be needed most) must be replaced by a more structured approach. There are simply not enough advisors and facilities available to serve all the enterprises requiring help. Means must be found to use more readily the skills of available advisors and the equipment and facilities they employ.

Dependence on expatriate specialists is considered to be but a short-term measure. There is an important need to train more ni-Vanuatu so that in the medium term, local experts can replace expatriates.

The solution to the problems outlined above lies in the development of a decentralised Extension Service wherein well-equipped centres would serve all the enterprises within designated parts of the country. Each centre would be the headquarters of a small extension operation and would possess the necessary training facilities, demonstration equipment and fishing stores to support the activities of the enterprises throughout the area.

Support for the establishment of such centres is now being sought from the EEC. Anticipating a need to train extension staff and advanced fishermen on a continuing basis, particularly as new technological approaches are developed, the Government is also seeking EEC aid for a supplementary project in support of the extension work, namely establishment of a major training centre in Luganville to serve staff in the northern Local Council Areas and to upgrade the Port Vila headquarters facilities to serve the Southern Areas.

The general aim of the department is to establish an Extension Service to serve the developing small-scale fishing industry throughout the archipelago of Vanuatu. Eleven centres will be established, one for each Local Council Area.

At each centre, an expatriate extension advisor and a ni-Vanuatu counterpart would conduct training and provide advice as needed to all fishing enterprises in the area. The Extension Project would essentially supercede the VFDR. It would be administered by VFDP officers now on staff at Fisheries Department headquarters in Port Vila who would be reassigned. The formation of an Extension Service to follow the VFDP was envisaged in the VFDP project document when it was prepared in 1983.

Alternatives to establishment of an Extension Service would be to continue with the present system of placement of advisors in "hot spot". With the increasing number of enterprises being formed, the programme would require a major increase in the number of advisors deployed. Such a system would not take into account the critical need to train ni-Vanuatu extension workers who would eventually be able to take over from expatriate experts.

The Government is anxious to make the best use of its staff and does not wish to see a haphazard expansion of technical support activities. The decision to establish 11 centres (9 with EDF support), each to be staffed eventually by a single ni-Vanuatu extension officer, represents a structured and efficient approach to providing consolidated technical services for the widespread small-scale commercial fishing subsector.
