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SOUTH PACIFIC REGIONAL ENVIRONMENT PROGRAMME

Noumea, New Caledonia

COOK ISLANDS

COUNTRY REPORT

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THE COOK ISLANDS

COUNTRY REPORT

The Cook Islands Country Report (August 1980).

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INTRODUCTION .

The fifteen Cook Islands are distinguished by being vastly separated from each other and varying greatly in terms of their population numbers and resource endowments. The necessity therefore arises in this Country Report to make a distinction, geographically, between environmental concerns on the larger, more densely and more technologically developed Rarotonga; the other southern Cook high islands with their mixed volcanic and limestone soils, balanced populations and reasonably harmonious development; and the sparsely settled little changed far-flung northern Cook atolls.

PART A ENVIRONMENTAL POLICY AND IMPLEMENTATION (Findings)

POLICY

- 1 The Cook Islands Government (CIG) had, prior to 1978, elaborated an environmental policy which was activated by technical appointments under Australian aid. With the termination of that assistance the implementation of a clear environmental policy has lost ground, although conservation interests are overseen by the Ministry of Internal Affairs. Due to the upsurge in tourist, industrial and commercial activities, particularly on Rarotonga, it is desirable that environmental policy be re-assessed and re-expressed in the first (pending) national development plan.

- 2 The first national development plan for the Cooks is in preparation. The economic and social planning components of that plan present complications which are compounded by the varied human and natural resource allocations throughout the Islands. These are further compounded by environmental complications which are currently under discussion by a Planning Advisory Committee. This Committee is making an effort to clarify development goals applicable to the different forms of island environment according to their human and natural resource potentials. These deliberations are considered essential to the formulation of the first national development plan.
- 3 There is no approved and operational physical or regional plan. A tentative, broad-brush zoning proposal has been drafted and lodged in the Survey Department, but this has no legal standing.
- 4 Development projects are usually supported by aid monies and design expertise from outside. The design of most development project is good, but there has been a degree of design failure associated with the installation of water galleries and in the siting of the Rarotongan Hotel, which suggest the need for more thorough local scrutiny of designs originating from outside advisors unfamiliar with the Cook Islands' environment.
- 5 The major economic activities are government, services, commercial activities, tourism and agriculture. The main resource using activities are agriculture, fishing and tourism.
- 6 Government priorities for development policy are complicated both by the human and natural resource diversity within the Cooks and by the multiplicity of separate government ministries and departments, now being overcome by the operation of the Planning Advisory Committee. The intermediate priority, therefore, is the expression of national planning objectives wherein economic advance is balanced against social change and environmental disruption, in relation to the more and the less vulnerable island habitats.

LEGISLATION

- 7 Environmental legislation exists in the specific form of the Conservation Act 1975, which was devised to establish a Director of Conservation to conserve nature and natural resources and protect historic sites and the environment. This Act has not been used to any great extent, and there are no regulations deriving from it, but it is adequate, in principle, for Cook Island needs. Other enactments with environmental components include the Local Government Act 1966; a rather inadequate Land Use Act 1969; Building Controls and Standards Act 1968; The Public Health Acts and Ordinances; and the somewhat inadequate Harbour Control Act 1971. Specific pollution (for example, oil pollution in harbours) are not adequately catered for although the Regulations and Offences Ordinance 1917, which deals with "order and good Government" has been used to good effect.
- 8 Traditional legislation applies throughout the Cook Islands with increasing effectiveness in the outer islands. The Rau concept enables restricted access to be enforced on land and lagoon areas and effectively inhibited tree cutting to the seaward side of the road on Rarotonga for several years, and controlled the lighting of bushfires on other southern Islands.

- 9 It is not considered that further legislation is needed for environmental protection and resource conservation so much as more effective policing and enforcement from a recognised and strengthened administrative base.
- 10 The CIG has not been a signatory to environmental conventions or treaties although it has unilaterally declared Suvarrow as an international maritime park. The CIG would welcome information on other conventions relative to the Cook Islands were it so advised by the SPC, and would also welcome the supply of clearly expressed descriptions of other conventions for its consideration.

PLANNING

- 11 The Planning Advisory Committee is actively considering resource conservation and environmental protection components as part of a balanced first national planning endeavour as a consequence of recognition being accorded the vulnerability of all the Cook Island environments, particularly the northern atolls.
- 12 Land use maps exist for Rarotonga, Aitutaki, Atiu and Mangaia. There is a good aerial photographic coverage of all the islands, and publications of an ornithology and flora forthcoming.
- 13 Environmental maps and other environmental data has not featured prominently enough in development planning although the tourist report on Rarotonga and Aitutaki contains clear expressions of environmental concern. Environmental assessments were made for the two major development projects on Rarotonga - the international airport and the Rarotongan Hotel. Evaluation of the environmental implications of development proposals has, of practical necessity, to be an incorporated part of the aid package associated with the design and implementation of projects. The CIG is anxious to improve the resource conserving component in accepting project by more carefully assessing social and environmental changes in relation to economic benefits.

ADMINISTRATION

- 14 At present time the authority available under the Conservation Act 1975 rests lightly within the Ministry of Internal Affairs; other senior Ministries, particularly Public Works and Agriculture devise departmental guidelines internally. Village Councils also play a role in environmental protection with good aesthetic effect on Rarotonga, and, even more important, with ecologically balanced effect for soil and reef conservation on outer islands.
- 15 Adequate expertise is available for comprehensive physical planning, but the process has been complicated to the point of ineffectiveness by tenural complexities in land management. These make it difficult to impose land use controls. It is now recognised that modern processes, alien to the Cook Islands environment, introduce land uses which are incompatible with traditional residential and agricultural practices, and this further establishes the recognition of need for land use planning, particularly for Rarotonga, as a concomitant to commercial and industrial expansion. There is a multiplicity of departments involved in development planning, and they greatly differ in their aesthetic regard (tourism), resource conservation (agriculture), and protection (health), postures.

PART B ASSESSMENT (Findings)

MAJOR ENVIRONMENTAL PROBLEMS

- 16 All major development projects have taken place on Rarotonga; more particularly, airport construction, hotel construction and port improvement. All three have contributed to coastal degradation.
- 17 In urban areas the main environmental problem, again on Rarotonga, arises from the disposal of waste from the juice cannery at Avarua which has led to a reduction in fish and biotic diversity in the harbour; and potentially from the disposal of sewage waste. Secondary problems include the juxtapositioning of incompatible land uses and the servicing costs and dangers inherent in ribbon development.
- 18 In rural areas, the main problems arise on Rarotonga, where increased runoff from coastal developments and poor agricultural practices on steeper slopes have both affected the fertility of soils and introduced silt to the fringing reef. Deafforestation on higher slopes and chemical runoffs from market gardening areas contributes further to the terrestrial and coastal degradation. Coastal zones elsewhere than Rarotonga are generally healthy, but soil erosion is also occurring on Mangaia and Atiu.

RESEARCH AND MONITORING

- 19 Climatology, seismic and ionospheric recordings are made on Rarotonga, supplemented by some meteorological reports from other islands.
- 20 Suspected problems which require further study on Rarotonga include the surveillance of silting on the fringing reef, indiscriminate removal of beachsand, soil erosion, forest degradation, the use of chemicals in agriculture, impairment of tap water purity, reef fishing malpractices and problems associated with the accommodation of discharges of all kinds from new industries. On Aitutaki, the discharge into the lagoon of the chemical dip used in banana packaging is potentially serious. Personnel are available for making policy judgements in relation to the containment of these problems, but there are difficulties in the technical and scientific measurement and enforcement of standards. Some help is available through the New Zealand DSIR and the SPC.

PART C MANAGEMENT (Findings)

STATUS OF RESOURCES

- 21 a) Soils : Soil erosion and degradation problems arise on several of the Southern Islands, particularly Rarotonga and Mangaia, but all the affected islands have land use surveys available as a basis for corrective planning. It can be noted that the CIG hopes to secure the services of an expert on soil erosion through UNDP.

- b) Water: there have been some technical problems with the design and construction of water galleries under aid for Rarotonga, but in general water purity is good, despite the need for the better conservation of replenishment from catchment areas. On the other southern high islands ground water supplies are adequate if sometimes brackish. On the coral atolls the rate of abstraction of brackish water directly determine the number of subsistence dwellers and, of course, inhibits any water using industries or projects.
- c) Crops : The main crop is citrus (particularly on Rarotonga) followed by banana production (for the present, mainly on Aitutaki), followed by copra production on all islands. On the atolls, copra production is the sole agricultural activity. Pineapple production with attendant erosion and marketing problems, takes place on Mangaia and Atiu. Root crops are grown for local consumption on the southern Islands. Special fruit and vegetables are grown for export on Rarotonga.
- d) Animal husbandry : probably one pig is reared per household throughout the Cooks. There are three commercial piggeries on Rarotonga, all relying on imported foodstuffs. Chickens are widely kept on a free range basis; there are a few cattle and some considerable increase in goats on the southern Islands. Previously effective dog control on Rarotonga has lapsed. There is a need to closely monitor and generally prohibit the introduction of new breeds of livestock, such as rabbits.
- e) Reefs and lagoons : Environmentally, the reefs on Rarotonga are in an advanced stage of degradation which has seriously downgraded their productivity. A crown-of-thorns infestation has been blamed as the main cause; but swifter runoff from cleared land has created silting, and this, together with fish poisoning, dynamiting and chemical runoff has resulted in coral death and irreversible damage. Reefs and lagoons, elsewhere, may be in danger of over fishing, but their environmental health is good. Traditional controls appear to be effective in areas, away from the thrust for modernity, where local government is still effective. Fishing potential outside the reefs has, as yet, shown low productivity but there is only limited understanding of the passage of migratory species through the Cook Islands' Exclusive Economic Zone.
- f) Conservation, parks and reserves : the most spectacular achievement in this field has been the dedication of Suvarrow as an international maritime park. Unfortunately, it has not been possible to appoint and locate a caretaker on Suvarrow although it is known that constant illegal visits are made by small crafts. Manuae was once also offered as an international maritime park, but this initiative has not been concluded. On Rarotonga, there is a foreshore reserve from Avatiu harbour to the airport and there is a recognition that the Black Rocks locality will eventually be declared a reserve. Water catchment areas on Rarotonga are recognised but not yet dedicated.
- g) Endangered species : it is believed that the Mynah bird (introduced under statutory protection which has never been repealed) has reduced the original bird population for most islands. This means that the limited bird life (identified in a forthcoming ornithology) are all endangered, but there is no listing. There is a shooting season for bats.

- h) Local energy sources : electricity is supplied on a subsidised basis ranging from a high subsidy on Rarotonga to an unrealistically high subsidy on outer Islands. Local energy sources include (mainly for Rarotonga) the generation of power from wood burning facilities supplied from existing forests and replanted grassland areas on the foothills, for which locally grown species could be selected. (This indicates the need for the appointment of a forestry consultant as a priority because of escalating energy costs). Away from Rarotonga, solar energy and wind powered energy potentials have to be investigated. The energy supply situation throughout the Cooks, currently undesirable, is rapidly becoming untenable on account of extortionate fossil fuel costs and a heavy dependence for supplies from outside.
- i) Human resources : skilled workers tend to drift to New Zealand and from the outer islands to Rarotonga. But insofar as the unskilled workforce is concerned, there is a degree of under-employment. Human health is generally satisfactory. Housing in rural areas is also generally good although there is some sub-standard dwelling on Rarotonga and the other southern Islands.
- j) Infrastructure : transport facilities are adequate. Water supply potential is good, but the infrastructure is outdated and some supply points are inadequate. Electricity reticulation is good, particularly on Rarotonga. The disposal of sewage is an urgent need on Rarotonga and here potential exists for biogass generation. The ribbon form of development on Rarotonga ensures some efficiencies (for example, ringmains for water and electricity supply), but is generally cost inefficient and dangerous in terms of public road safety.

MAJOR DEVELOPMENT TRENDS

- 22 Human settlements expand without control. On Rarotonga, the presence of a panel beater next to a motel, and on Aitutaki the presence of a restaurant and bar in a residential area, are examples of incursions incompatible with domestic settlement which could have been separated out and controlled.
- 23 Industrial development takes place on an ad hoc basis. Existing plants include two clothing factories, a welding fabrication plant, handicraft workshops, fruit cannery, carpentry workshops and motor repair garages.
- 24 Agriculture is trending towards the increased production of basic food crops on Rarotonga; and the production of bananas on Aitutaki. Potential exists for improved banana production on Rarotonga and for increased copra production overall.
- 25 There is no organised forestry on Rarotonga or the other high southern Islands where potential exists (see paragraph 21 - h) above).
- 26 Reef fishing production is probably static with some increased production of trochus shell in the lagoon waters of Aitutaki and the northern atolls. There is no aquaculture at present although there is a history of limited, unrewarding, endeavours.

MANAGEMENT APPROACHES

- 27 The coastal zone, which is generally reckoned to include all the fringing inhabited areas, is not planned and managed in an intergrated way. The fault lies with inadequate legislation coupled to an entrenched belief in the sanctity of land ownership and usage - a connection already observed to be incompatible with the introduction of industrial and commercial enterprises. On the less developed islands, traditional procedures control the coastal zone effectively enough, and it is mainly on Rarotonga that a Land Use Plan and Development Controls are required. Because of the usual immunity of Government from land use planning, it would also be advantageous for the relatively massive Government planning activities to be administered through a Government Site Planning Committee.
- 28 The CIG is served by the usual police, ambulance and fire services. There is a Hurricane Safety Act 1973.
- 29 The CIG recognises the need to promote arrangements for coping with oil spill disasters by establishing good harbour and on-shore handling practices, and by the promulgation of ship routing systems. The Government would wish to be advised about pollution, dumping and international conventions relating to oil spill control.
- 30 There is no express population policy. The fortuitous absorption of overspill population to New Zealand has served to maintain a reasonable balance between human numbers and natural resources on all islands excepting Rarotonga and, potentially, Aitutaki.
- 31 Land use plans, zoning and other controls are particularly needed on Rarotonga, but are not yet in use (see paragraph 27 above).
- 32 There is concern for degraded reef areas on Rarotonga and erosion on Mangaia, but there has been little more than cosmetic action up to the present because the causes have not been fully understood and treated at source.

PART D REQUIREMENTS FOR NATIONAL ACTION (Recommendations)

NEW ACTIONS

- 33 New Government structures are required on three main fronts. Firstly, for environmental conservation; there is a need here to house resource conservation and environmental protection in a more centrally administered locus such as the Premier's Department. Secondly, upon the determination of development objectives, Government requires a formalisation of feasibility assessment for adducing consistency of development projects in economic, social and environmental terms. Thirdly, for Rarotonga, there is the need, recognised in paragraphs 27 and 31 above, for effective land use planning and controls through the aegis of a town planning board.

- 34 Education : There is a need to expand upon the limited inclusion of environmental and developmental studies in social science curricula at primary, secondary and public education levels. This in turn may require the training of teachers for these services. Government recognises the importance of generally explaining the aims of economically, socially and environmentally balanced development to the youth of the country in order to sustain food producing capabilities and make understood the population limits of the Cook Islands.
- 35 Personnel : As noted above, the training of teachers in environmental awareness and development objectives is necessary as a concomitant to embodying balanced development objectives in a national plan. Technicians will also be required, but experience suggests that it will be difficult to encourage a Cook Island graduate in this direction and thus external assistance will have to be relied upon. The appointment of a qualified environmental officer serving an Economic and Environmental Council (akin to the Planning Advisory Committee) derives from observations made earlier about maintaining the vital balance between desirable economic growth, acceptable social change and sustained environmental balance. On one particular count, the international maritime park at Suvarrow, the need is noted for a ranger.
- 36 Facilities, Equipment and Expertise : Because of its limited population and Government service the CIG will be obliged to continue its reliance upon expertise and equipment for environmental monitoring from external sources. The CIG would be happy to make available its findings on environmental matters to other South Pacific countries on a reciprocal basis. Until the CIG develops its own capability, it will call upon outside expertise for the drafting of environmental legislation and the assessment of environmental and social impacts, associated with major development projects.
- 37 Information : A considerable range of data already available in existing surveys, reports and research have been described in PARTS A, B and C of this report. These findings have not been collated and the case arises for their assembly and storage at an information centre.
- 38 Similarly, there is a need to compile a record of traditional knowledge and practices relating to resource conservation and environmental protection, and it is likely that the existing Museum Society would provide a suitable home for this information service.
- 39 A particular requirement for inclusion in the Regional Environment Programme would be the monitoring of nuclear activities. The CIG would also encourage surveillance over the shipment of toxins and the designation of oil tanker lanes on the high seas.

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My programme in The Cook Islands was under the responsibility of the Secretary for External Affairs, Mr. J.A. Gosselin. I am particularly grateful to Mr. Tom Daniel and Mr. Jeff Liew for their co-operation and direct assistance.

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