

1. "Population, resources and development in the eastern islands of Fiji:  
Information for decision making"

General Report No 1. Man and the Biosphere (MAB) Programme Project 7:

Ecology and rational use of island ecosystems

United Nations Educational, Scientific and Cultural Organisation (UNESCO)/

United Nations Fund for Population Activities (UNFPA)

Man and Biosphere Programme International Secretariat, UNESCO, Paris.

August 1977.                    407 pp.

2. Island Reports No 1. "The hurricane hazard: Natural disaster and small  
populations"

R F McLean; T P Bayliss-Smith; M Brookfield and J R Campbell

(Editor: Harold Brookfield)

Australian National University, Development Studies Centre

(for UNESCO)                    1977                    175 pp.

The General Report No 1 is the first of three of the MAB Project, and the Island Report No 1 is the one of five supplementary reports, to the General Report, which deals with the hurricane hazard. They are all the product of an inter-disciplinary project which so far has spanned more than two years and involved eight principal authors, numerous subsidiary authors and contributors, assistants and helpers from at least eight universities in at least four countries. The General Report includes studies of geography and topography and climate, population and population change; land and soil and marine and reef resources, agriculture and commerce, marketing and transport, government, administration and communication and future strategies for development, as well as the impact within and upon all these by natural

hazard - principally hurricane. Natural disaster is placed firmly in an ecological perspective, and the impact of development and socio-economic change on the creation of disaster itself receives a focus of attention.

The total population of the 100 inhabited islands of Fiji is 580,600. The 42 inhabited eastern islands have a total population of about 37,500, or 6.4 per cent of the total national population. The largest island population studied is 7,351 and the smallest 5. Hurricanes are a frequent rather than a rare risk in eastern Fiji. In 96 years since 1880 at least 75 tropical cyclones have affected the eastern islands.

Hurricane "Bebe" occurred "out of season" in 1972 and after a period of comparative hurricane inactivity. 22% of Fiji's national population were made homeless. Within the next 28 months came "Juliette", "Lottie" and "Val", each making different tracks through the eastern islands and causing the same 10,000 people to suffer three seriously damaging hurricanes within two years. No island of the group is deemed free of the hurricane hazard and the incidence of hurricane activity over a one-hundred-year period is closely analysed. Whilst the occurrence of hurricane per island is random and infrequent, the national occurrence is more regular, and more certain, making the initiation of preparedness and preventive planning by central government imperative. Collaboration by the State with regional international preparedness measures by the joint operation of the Disaster Fund (South Pacific Bureau for Economic Cooperation) is seen to be good sense, but the importance of long-term national and sub-national preventive planning strategies must be undertaken as well to reduce vulnerability in addition to preparing for disaster.

Three significant aspects of vulnerability are identified. In housing construction, where the locally perceived need to build more strongly has in

fact raised damage potential and increased the period of time required for reconstruction. ". . . the return to normal life at the village level after a hurricane now appears to take a much greater time than before World War II". What that "normal life" is, and has been, in its widest sense, is the subject of analyses throughout the General Report.

Changes in staple crops, and increases in cash cropping, often at the expense of food crops, have increased agricultural, and as a result human, vulnerability to disaster. With greater reliance on copra as a cash commodity, coconuts which are planted as part of food gardens, eventually replace them. As a result, the food gardens have been pushed further and further away from the villages and "the gardens have had to extend up-slope and up-valley into areas formerly regarded as too steep, difficult, poor or remote to be cultivated. These slopes are, however, very exposed to wind and storm damage. In 1975 a larger proportion of the crops was destroyed by hurricane or subsequently rotted in the ground than was the case in 1948 . . ." when the process being described had not become so well established (Bayliss-Smith).

Perhaps even more significantly the role played by a centralized form of colonial government in the encouragement of cash-economy, and in reliance for all matters on the national, or possibly sub-national/regional, capital and seat of administration, to the detriment of local self-reliance, is the cause of much of the current dependency on relief supplies after each disaster. Although "the modern pattern of very substantial dependence was therefore not an immediate consequence of colonialism", means of achieving greater local responsibility, and as one result, greater self-reliance in disaster, are discussed and identified for being in need of encouragement by the present Central Government, represented at local levels. Reinforcement and replacement of weak or non-existent systems of transport and

communication are a pre-requisite for this process, after which will be the need for information on methods for implementation at local levels for the reduction of vulnerability to hazard.

The analysis of disaster-relief in Fiji throughout its comparatively short history as an organised and established system is additional useful reading, which highlights the "drift into dependency" on Central Government that has resulted. "Whereas even as late as the 1940's it was possible for islanders to handle much of their own recovery from devastation, this was no longer possible in the 1970's. Islanders found themselves desperately short of food and relief supplies were required in large quantity and over a wide range of needs . . . expectations from life are now much higher than they were in former times. But the result has been the abandonment or virtual disuse of many of the adaptive mechanisms formerly present in the socio-cultural system. In times of disaster, therefore, Kabara now depends absolutely on the State and no longer has the means to handle its own recovery from devastating events" (Campbell).

Specific recommendations for future adaptation to a frequently occurring hazard are restricted to observations regarding commercial coastal development, and the advisability of the relocation of settlements (often back to historically previous sites) as a preferable alternative to current expensive efforts in engineered sea-defences. These are volumes of "information for decision making", but that decisions should be made soon for the reduction of vulnerability to hurricane and for the increase in local self-reliance is clearly imperative. The availability of existing methodology for these purposes, not least in hazard and disaster research, is made clear within these studies in this particular geographic area.

Local disaster on small populations on small islands are the common-denominator of national disasters in Fiji, just as disasters in small settlements are the common denominator of the more massive disasters in large countries of contiguous provinces. By these dissections of hazardous island life these volumes are of colossal relevance to all disaster research whether it is concerned with urban or rural disaster, relief or prevention, housing or nutrition. But their greatest value will be their contribution to the eventual expansion of motive and focus from within the subject of the disaster event, to the ecological context in which recurrent disasters themselves occur.

James Lewis

c1978

Centre for Development Studies

University of Bath.