



FIJI ISLANDS: *FLOOD MANAGEMENT - REWA RIVER BASIN*

1. **Location of the study:** Viti Levu Island, Fiji
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3. **Brief description of flood management practice**

The Rewa River is on the island of Viti Levu, one of the two main islands of Fiji. It flows from the central high lands to the southeast. It has narrow flood plains running into the well-rounded hills in the middle catchment. At the lower reach the river meanders and in the delta splits into several tributaries. The catchment area is 2960 km².

The flood plains and delta are prone to floods. They have fertile soils, which support agricultural crops and a dense population. The urban population is 5,744 and an additional 15,873 people live in the peri-urban area². The watershed including the delta has a population of approximately 196,000 people.

Between 1983 to 2003 seven major floods affected Fiji with damages and lives lost. The flood-induced losses have serious social and economic implications. Relief and rehabilitation costs are high. The national GDP and government's development plans and programmes are adversely affected. Resources earmarked for capital development works have to be urgently redirected for relief and rehabilitation.

Dredging of the Rewa riverbed is the major structural flood management measure to increase flood discharge capacity. The low gradient of the bed in the lower reaches of the river system has high sedimentation. In many low-lying flood prone areas a network of drains and floodgates have been established to enable floodwaters to escape and prevent seawater entering, helping prevent water logging and assisting rapid drainage. At the river mouth along the delta some 40 floodgates and 85 km of sea wall are in place along the coast.

As a non-structural measure, a flood forecasting system is in place and has operated for the last two decades. Forecasts and early warnings of impending floods are issued to alert the habitants, and have effectively been instrumental in reduced damage and losses.

The *National Disaster Management Act* of 1998 gives authority and provides institutional arrangement for all actions related to disaster management and related activities, and defines the functions and duties of government and relevant agencies. It also stipulates the establishment of a *National Disaster Management Council (NDMC)*.

4. **Key issues**

The flood management measures in the Rewa as yet do not constitute an integrated system and improvement in catchment management and appropriate land use strategy is still needed.

Flood management requires an integrated approach to address all issues in a holistic manner. Issues related to land and water resources use need to be planned and executed in a manner that will reduce or eliminate risks.

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Community co-operation and participation is essential for the success of flood mitigation programmes. The Drainage Boards include members of different communities from different areas as the beneficiaries. With the latter having ownership of the scheme support for changes, improvements and reviews are undertaken with enthusiasm.

Public awareness and education on the application of IFM is necessary. Full community participation with ownership needs to be supported with strengthened institutional arrangements and resources.

5. Relevance to the concept of IFM

Integration of land and water management

Aspect 2 - Land and water management

Participatory approach

Aspect 7 - Community-based approach

Aspect 9 – Effective linkage between existing institution

Integrated hazards impact mitigation

Early warnings and forecasts

Aspect 11 - Free and open exchange of data

6. Comments

- (i) Potential strong points of the case study
 - Structural and non-structural measures for flood management
- (ii) Potential for practices mentioned to be transferred/applied to other regions with geophysical and socio-economic characteristics)
 - The information provided in this case study could well be used to transfer experience to other basins with similar geographical and socio-economic development conditions