

# **SUMMARY INITIAL ENVIRONMENTAL EXAMINATION REPORT**

Supplementary Appendix to the  
Report and Recommendation of the President  
to the Board of Directors

on the

**ALTERNATIVE LIVELIHOODS DEVELOPMENT PROJECT**

**REPUBLIC OF THE FIJI ISLANDS**

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The report is available on request.

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## **FIJ: ALTERNATIVE LIVELIHOODS DEVELOPMENT PROJECT SUMMARY INITIAL ENVIRONMENTAL EXAMINATION**

### **A. Introduction**

1. The proposed Project is aimed at offsetting the adverse consequences of sugar industry restructuring and lease expiry by improving on- and off-farm livelihood opportunities in the sugarcane growing areas. Diversifying farming, upgrading existing rural access roads, and construction related to training facilities involve various interventions that could affect the environment. The Project has therefore been classified as an environment category “B” project according to Asian Development Bank (ADB). An initial environmental examination (IEE) and a summary initial environmental examination (SIEE) were prepared in accordance with ADB’s guidelines for environmental assessment.<sup>1</sup> The Ministry of the Environment is responsible for implementing the Land Conservation and Improvement Act, Fiji Islands’ main environmental legislation. This SIEE addresses the tenets of the Act in relation to ADB guidelines.

2. The objective of the IEE is to identify impacts, evaluate their severity, recommend mitigation measures, and propose a monitoring plan for use in project formulation. Project components to be financed involve institutional development; farm services, including research and training; and some small physical infrastructure. The approach used to conduct the IEE was to integrate the identification of potential environmental impacts and measures to avoid or mitigate technical, social, economic, and institutional issues causing such impacts into the project design. The IEE approach, therefore, used information from (i) the household survey that was part of the project preparation technical assistance; (ii) a number of focus group sessions with farmers, villagers, and squatters; and (iii) a number of secondary sources, including the 1999 census, the 1995 soil survey, the Land Resources Planning and Development Division and the Geographic Information System unit of the Ministry of Agriculture Sugar and Land Resettlement (MASLR), and the Ministry of Environment. Environmental screening checklists were applied to project activities during project design, and as a result the scope and range of activities now proposed do not present any major outstanding issues.

### **B. Project Description**

3. The purpose of the proposed Project is to improve on- and off-farm livelihood opportunities to support employment and poverty reduction in rural areas, particularly in western Viti Levu and Vanua Levu. The consequences of sugar industry restructuring may force up to 5,000 farmers to seek alternative livelihoods, and at the same time the expiry of 10,300 sugarcane farm leases over the next 25 years is resulting in experienced farmers leaving the industry while landowners with limited capital and farming experience are entering the industry.

4. In providing opportunities, the Project encourages participative evaluation of new technologies and livelihoods, therefore changes promoted by the Project are expected to be gradual rather than abrupt. The Project has four components to achieve its objectives: (i) promoting agricultural diversification, strengthening agricultural services, and developing effective public-private sector partnerships in commercial agriculture; (ii) encouraging people to engage in off-farm livelihoods to create income-generating capacity in rural areas by strengthening public and private sector vocational training and advisory capacity; (iii) strengthening rural financial services offered by microfinance institutions (MFIs) and promoting sustainable MFIs in areas poorly served by commercial banks; and (iv) project coordination. The

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<sup>1</sup> ADB. 2003. *Environmental Assessment Guidelines*. Manila.

total cost of the Project over 6 years is estimated at US\$49.8 million.

### **C. Description of the Environment**

5. Existing environmental issues in Fiji Islands include loss of biodiversity, soil erosion, watercourse deterioration, fertilizer and agrochemical residues, and urban and agricultural industrial waste. Population and industrial development have put pressure on land and water resources for agricultural and urban use. Unplanned and unserved squatter settlements have resulted in environmental and sanitation problems around urban and peri-urban areas.

6. The Project is located in the sugarcane belt of western Viti Levu and Vanua Levu, which consists of coastal plains and inland areas up to elevations of around 200 meters, of which about 40% is unsuitable for arable farming because of slope, drainage, and soil constraints and is most suited to conservation, forestry, grazing, or appropriate urban development. Fiji Islands is young geologically and has a rugged landscape with a high rainfall of about 2,200 millimeters/year, of which 85% falls in December to April, often in the form of intense rainfall associated with tropical cyclones. The climate is typically humid tropical and subtropical at higher elevations. Varied natural resources are derived from uplifted marine sediment, volcanic activity, and fringing coral reef. Climate is a significant factor in agriculture. Sugarcane favors the relatively dry season, experienced between May and October in the western side of the islands.

7. Terrestrial biodiversity, linked primarily to Fiji Islands' tropical forests, is both biologically significant and contributes valuable environmental services, such as watershed protection. It also has the potential to play a much stronger role in the country's tourism industry as a natural attraction. The Project area is generally sugar cane area located in rural areas of western Viti Levu and Vanua Levu where biodiversity is low since the area has been developed as settlements and sugar plantation.

6. Sugarcane and subsistence farming dominate Fiji Islands' agriculture sector. The preferential prices allowed the development of inefficient and unsustainable practices, including the expansion of sugarcane farming onto unstable slopes and areas of marginal soil. Sugar contributes 50% of cash farm income, while other cash crops and off-farm income contribute about 20% each. Subsistence farming, including the use of forest and coastal resources, has traditionally met a range of rural households' needs and given them resilience to political upheavals, tropical cyclones, and other shocks. Commercial farms are leasehold with no incentive for capital investment in land care, and many evictions and uncertainty about lease renewal have exacerbated a poorly developed land care ethic among farmers. With 21,371 registered sugarcane farms (as of January 2003) covering 64,000 hectares, the farms are small, typically 4 hectares, of which 80% to 90% is planted to sugarcane, with the balance used for subsistence crops and a residence. With the expected reduction in the price of sugar, many farm households will need to improve yields or diversify to maintain their incomes.

### **D. Environmental Impacts and Mitigation Measures**

7. In providing alternative livelihood opportunities, the Project does not involve the use of coercion, but rather it encourages participative evaluation of new technologies and livelihoods as far as possible. This process, and therefore the impacts from livelihood changes promoted by the Project, is expected to be gradual rather than abrupt, and will depend on the nature of the livelihoods adopted by project beneficiaries. Impacts from small infrastructure construction are more immediately identifiable. The project components that have some potential for affecting

the environment are (i) the agricultural diversification, (ii) the construction of training facilities, and (iii) the upgrading of existing rural roads.

### **1. Environmental Impacts Due to Agricultural Diversification**

8. No significant environmental or social impacts are expected from the promotion of alternative crops and farming systems. A positive impact on the deterioration of soil fertility resulting from unsustainable practices is expected from the reduction in sugarcane farming on steep slopes, the adoption of agro forestry and sloping land agriculture techniques on steep and marginal soil areas, and the adoption of improved crop rotations in arable areas. These farming techniques will provide alternative incomes from more sustainable practices and do not involve the introduction of exotic species, which could pose bio security risks.

9. A positive impact on the availability and range of foods is expected, because the diversification from sugarcane into the cash crops promoted focuses on food crops (grains, vegetables, fruits). Traditional household food security strategies are sustained to ensure that households' non-cash needs are met without pressure on off-farm natural resources. The promotion of agro forestry is expected to have a positive impact on forest resources by providing on-farm alternative timber and firewood sources. A positive impact on employment is expected, and therefore the exploitation of marine and forest resources, typically used as a strategy for obtaining food and income in lieu of employment, is likely to be reduced.

10. The intensification of agriculture may result in negative impacts, including excessive agrochemical residues, loss of soil fertility, escape of inappropriate genetic material and pests or diseases, and problems associated with the inequitable distribution of water rights and unsustainable water user groups. The mitigation of such potential impacts from agricultural intensification will include (i) developing recommendations/guidelines, training, and extension based on integrated pest management principles and practices for the appropriate use of fertilizer, manure, agrochemicals, and irrigation; and (ii) developing new irrigation systems using small-scale, water-efficient delivery systems under individual ownership to avoid past sustainability problems associated with water user groups and with access to water resources planned and monitored by MASLR's Land and Water Resources Department under the Irrigation Act.

11. The potential environmental impact from the risk of farm enterprises becoming unsustainable through ill-considered diversification is mitigated by strengthening and improving farmers' access to whole-farm enterprise planning services based on sound land use, counseling and referral services based on farm households' objectives, and access to rural financial services.

### **2. Environmental Impacts Associated with the Construction of Training Facilities**

12. No significant environmental impact is expected from the construction of training facilities in Labasa and Lautoka as long as existing local requirements are complied with. The environmental impact will be assessed and mitigation measures taken as part of standard compliance with building standards. The proposed project support is to the Sangam Institute in Labasa to construct additional training facilities and to the Training and Productivity Authority of Fiji for the rehabilitation of existing buildings in Lautoka.

### **3. Environmental Impacts Due to the Rehabilitation of Existing Rural Roads**

13. The Project will provide for the rehabilitation of about 600 kilometers of existing farm roads. The proposed farm roads do not pass through forests, wetlands, or other ecologically sensitive areas. The existing roads, which are required to move goods and services from farms to markets, do not need to be widened or diverted. Land clearing is not needed. Adequate measures will be enforced to control erosion and silt at the edges of slopes and along drainage channels at all times. As the Project will only upgrade existing farm roads, the rural infrastructure component is unlikely to have any significant adverse environmental impacts. ADB's guidelines and national laws, regulations, and standards will be adhered to during implementation.

#### **E. Institutional Requirements and Environmental Monitoring Plan**

14. MASLR will be the executing agency for the Project. MASLR will set up a national steering committee consisting of representatives of the implementing agencies, other relevant agencies, and stakeholders. The committee will oversee project implementation and will play a monitoring and supervisory role. In particular, the committee will coordinate project implementation across government agencies and facilitate liaison between agencies. Western and Northern divisional steering committees will also be established to fulfill a high-level coordinating role at the local level. A project coordinating unit with offices located in each division will have day-to-day responsibility for coordinating project activities, including environmental monitoring, at the local level.

15. The national and divisional steering committees will include a Ministry of Environment representative responsible for the environmental monitoring plan and to ensure that all applicable national laws, regulations and standards, as well as ADB's environmental requirements, are adhered to during project implementation. As part of its coordination role, the project coordination unit will be responsible for facilitating local proposals for project assistance, including facilitating compliance with the environmental monitoring plan. The plan will cover agricultural diversification, water resource use, and construction activities.

16. By means of integrated pest management training by MASLR, agricultural diversification will include agriculture extension and existing pesticide residue testing by the Quarantine Authority as part of export protocols. The diversification will also make use of existing hydrological monitoring and proposed local hydrological surveys to be conducted by MASLR's Land and Water Resources Management Unit as part of sinking water bores. This unit is responsible for applying water resource assessment and monitoring requirements to farmers seeking irrigation licenses.

17. Local government authorities are responsible for monitoring building standards under the Public Health Ordinance and Local Government Act. Downstream processing of proposals from private investors must detail applications for permission to construct any facilities (e.g., agro-processing facilities). These applications will include individual and detailed IEE as required by the Ministry of Environment and monitored by local authorities. The applications and IEE would be scrutinized by the concerned ministries, which would also ensure that any mitigation and monitoring are conducted.

## **F. Public Consultation and Disclosure**

18. Project formulation has included significant public consultation. More than 1,000 people were consulted individually and at stakeholder meetings that included (i) farmers, villagers, urban residents, and squatters; (ii) representatives of training institutions and schools; (iii) representatives of the business community from a range of industries, including agribusinesses, forestry, tourism, and manufacturing; and (iv) community leaders and government agency staff. Workshops and meetings were held in Lautoka, Labasa, and Suva to discuss (i) agricultural issues and opportunities, (ii) housing and settlement issues arising from lease expiry, and (iii) project design and participation. Relevant environmental feedback on agricultural diversification is incorporated into the project design, for example, by means of activities promoting improved crop rotation and agro forestry.

19. Project activities relating to construction will be subject to full public consultation and disclosure as required to comply with Fiji's Land Conservation and Improvement Act and ADB's guidelines on environmental assessment. Public consultation and disclosure will be implemented with local communities and other stakeholders, and will be monitored by the Ministry of Environment through district councils and by the project coordination unit.

## **G. Findings and Recommendations**

20. Further assessment of the environmental impacts of rural roads rehabilitation will be done as part of the detailed design where specific mitigation measures will be identified to address any negative environmental impacts.

21. The environmental screening process undertaken during project design thoroughly assessed a wide range of potential impacts caused by physical, social, or economic factors. The IEE finds that environmental impacts from the Project are limited in magnitude and significance and can be mitigated through the implementation of proposed mitigation measures using existing guidelines, technological controls, and regulatory mechanisms already in use in the country. Thus a detailed environmental impact assessment is not required for the Project.

## **H. Conclusions**

22. The overall conclusion of the IEE is that environmental impacts of the project are limited and can be mitigated using existing guidelines, mitigation measures through technological controls, and regulatory mechanisms. The environmental mitigation measures will be incorporated into the project design and will be implemented. Mitigation of impact related to agricultural development will be reinforced through the technology transfer mechanism, working through MASLR, the steering committees, the divisional agricultural extension services and field offices, to extend through the agricultural industry organizations and reach the farmers, who will then directly benefit from and implement the proposed on-farm environmental protection measures and proactive functions related to environmentally-friendly practices.

25. The overall environmental impact of the Project could be mitigated to acceptable levels, therefore detailed environmental impact assessment for the Project is not required.