

ANNEX 3

STAP ROSTER TECHNICAL REVIEW

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Integrated Management of Land-based activities in the São Francisco Basin

This GEF project is a US\$ 22.2 million water management program for the 640,000 km² tropical Rio São Francisco basin in northeastern Brazil. The population of the river basin is 13,000,000. The Rio São Francisco has its headwaters in Minas Gerais south of Belo Horizonte, and discharges 120 km³ annually (3,800 m³ s⁻¹ on the average) into the South Atlantic Ocean on the border between Sergipe and Alagoas. On the 3,200 km route to the sea, the river traverses a gradient of climatic zones, the climate becoming increasingly drier as the river winds through the Sertão. The richest *penaeid* shrimp fishery in Brazil occurs where the river discharges into the Atlantic. Further offshore flows the Brazil Current towards the south with a transport of anywhere from 20,000,000 to 40,000,000 m³ s⁻¹. Four large dams have been constructed along course of the river and are a major source for hydroelectric power with a combined yield of 10,000 MW. River water is also extensively used for irrigation of agricultural lands. The river has a rich cultural history and played a central role in the development of the interior of Brazil in past centuries. This GEF project appears well justified in terms of the importance of the Rio São Francisco to the continued development of the arid Sertão and is an opportunity for coordinated sustainable development of both river basin and coastal areas.

Scientific and technical soundness of the project:

The project is well conceived, and justifications are articulated convincingly. It is encouraging to see this type of project, which is focused on studies and analyses aimed at derivation of an intelligent set of plans for a consensus of optimized management and development of a major river basin.

Identification of GEF benefits and/or drawbacks of the project:

A major focus of the project is the coastal areas of Alagoas and Sergipe. It is encouraging to see that there now exists a realization that all activities within a drainage basin potentially have coastal consequences. This vision, which ought to be adopted elsewhere, is an overall benefit, and GEF plays an important role in encouraging this vision. Further, rational development and management of the river resources is of economic benefit to Brazil, the affected riparian states, special interest non-governmental organizations, and everyone living within the São Francisco basin, and thus is a benefit to GEF. There are no obvious drawbacks to the project although it is an expensive project.

Appropriateness:

The project as a whole appears to fit well within the context of the goals of GEF, and the operational strategies and priorities of the project would appear to be of high relevance to GEF.

Regional context:

The rational development and water management of the Sertão as proposed in this proposal is applauded. This region, a large portion of the São Francisco basin, is as of yet under-developed, at least partially as a result of the arid climatic conditions. However, the Rio São Francisco is a renewable hydroelectric resource on a grand scale. Well managed agriculture irrigation has the potential to enhance regional agricultural production. Better soil management and pollution and erosion control is encouraging. Also, the coastal region holds immense potential for tourism and ecotourism development, and is already a rich shrimp fishery resource.

Replicability:

If successfully executed, this project could well serve as a model for how to implement sustainable development in other large and small drainage basins by emphasizing the need for studies, analyses, and consensus solutions.

Sustainability:

The results of the project, when implemented, would potentially result in significant sustainable yields: optimum hydroelectric power generation, better water and soil management, pollution control, improved agricultural production as a result of holistic irrigation strategies, a blue-print for coastal tourism development, and optimized fisheries, and as an overall result, enhanced economic development.

Linkages to other focal areas, programs, and/or action plans:

This GEF project appears to be well linked to national and regional programs, and as long as project activities take adequate advantage of the international expertise provided by the participating international organizations, the linkages are good.

Other beneficial or damaging environmental effects:

The fact that the project will generate feedback between water resource management in the drainage basin and how the coastal area is utilized and developed is an important and novel benefit. There are no damaging environmental effects associated with the project.

Degree of involvement of stakeholders in the project:

The stakeholders represent an impressive combination of Federal Government organizations, state government organizations, municipal government organizations, universities, non-governmental organizations, and international organizations. As long as all units listed in the proposal are involved equitable in the execution of the project, there is great potential for successful execution.

Capacity-building aspects:

The studies and analyses proposed under this GEF project would benefit both government and non-government organizations by providing a strategic basin-scale blueprint for water management and development but with special attention directed towards the needs and priorities of each sub-region. The execution of the project would also have the potential to enhance the intellectual capacity and infrastructure of universities in the river basin. As a result, the public educational system is likely to improve and maybe also public health facilities.

Innovativeness of the project:

The scale of the project, an attempt to develop a holistic water management plan for a major river basin, is a very innovative approach. As long as equitable attention is given to

competing political and economic interests such that recommendations represent a balance between competing points of view, and an attempt is made to reach consensus solutions whenever possible, the project has the potential of becoming a success with minimal associated risks.

Implementing Agency Response

Prof Dr Kjerfve's review is strongly supportive of this project. No changes in the project were required.