

Improved Fisheries Management in Tropical Reservoirs (PN34)

Objectives

Reservoir fisheries enhancement and improved knowledge of social processes that influence reservoir productivity

Where: Lake Volta, Ghana

Method/Activities

- Evaluation of traditional and established fish and fisheries production and management approaches, focusing on *acadjas* (brush parks) fishery in Lake Volta.
- Development and testing of fisheries enhancement tools with emphasis on smallscale cage culture technology inshore of Lake Volta.

Key Achievements

- A series of 'capacities strengthening' and 'community consensus' workshops was held and post harvest interventions for improved fish processing and trading were implemented with the stakeholders.
- In Ghana, small-scale cage culture technology tested in Lake Volta is now being adopted and adapted by some 20 cage operations in the lower Volta River basin.

Conclusions

- Natural biophysical constraints are important in defining the ecological production processes of reservoirs, but the socio-economic settings community/societies around the reservoirs eventually shape the human production enhancement possibilities. There are substantial opportunities for increasing fish harvests in these reservoirs through a combination of better harvesting strategies, stock enhancement, and market development.
- In Lake Volta, investments in *acadjas* (brush parks) fishery enhancing techniques appeared to be followed by tension and social issues often associated with the 'privatization of the commons'.
- Despite initial engagement of an increasing number of households in cage culture it is too early to consider this evidence of a real 'take-off' in its adoption or to draw conclusions about the long-term economic viability of the activity. The initial minimum investment required to establish cage culture represents an important constraint for the poor.

Policy conclusions:

- Fisheries represent a neglected opportunity for increasing the productivity of reservoirs, especially of the poor and landless but the adoption of technical or institutional innovations by the poor is constrained by their limited organizational and institutional capacities, both individually and collectively, hence the need for capacity building in this respect is evident.
- Changes in reservoir management require cooperation between the different stakeholders. A general problem, not unique to this project, signals fundamentally different perceptions of the exploited system between managing institutions and performing practitioners.



Value and relevance for the BDC

- The project results provide lessons for reservoir management in different environments, at different scales including small reservoirs in the Volta Basin.
- The context and background for methods chosen to increase fisheries productivity are largely based on the institutional context or perceptions about the system states and processes and how one may influence them.

Lessons for:

- Project V5, *Coordination and learning for adaptive management and change* as there is the apparent paradox between institutional beliefs about governance, management and control of the production processes, and local livelihood adaptation to given natural production processes. Poor people are constrained by their limited organizational and institutional capacities, both individually and collectively, hence the need for capacity building in this respect is evident.
- Of potential relevance to Projects V3, *Integrated management of small reservoirs for multiple uses* and V4, *Sub-basin management and governance of rainwater and small reservoirs* are wider reflections on reservoir fisheries productivity in small vs. larger reservoirs and the conclusion that smaller reservoirs are generally easier to manage. Larger bodies of water seem inherently less amenable to management, particularly at local levels.