Mali, Mauritania, Senegal: The Senegal River Basin Authority

The Senegal basin countries show that regional cooperation—rather than unilateral development of a shared resource—can improve the possibilities for tackling poverty. Driven by the idea of pan-African unity, Guinea, Mali, Mauritania, and Senegal realized that they could get more from the Senegal river by cooperating in its development, and at a lower cost to each country, than they could by proceeding unilaterally. In 1972 Mali, Mauritania and Senegal established the *Organisation pour la Mise en Valeur du fleuve Sénégal* (OMVS), also known as *l'espace OMVS* or a space within which countries could cooperate. Decisions are based on the *Clé de répartition* which espouses the principles of *equity*, or the countries' needs, and *solidarity*, or mutual support in sharing development costs.

By jointly owning and operating the Manantali and Diama dams, the OMVS countries have increased their electricity and water availability. This in turn is supporting economic growth by reducing investment risk and also reducing poverty by increasing income-generating activities across sectors. Though it is too early to quantify the overall economic impact, widespread perceptions of improved services are driving further cooperation within *l'espace OMVS* and beyond. Even though Guinea is not party to OMVS, it is working with the member countries to find ways of jointly developing the basin.

The Senegal basin experience is not only a political success; it is also a success in improving access to basic services. Its achievements have contributed to reducing poverty while moving the countries toward closer regional integration.

Powering development

The jointly-owned Manantali dam and its network of transmission lines covering 1,300 kilometers finally came online in 2002, and has been working at full capacity since May 2003. Together with the Diama dam, this followed improved provision of fresh water for agriculture and municipal uses. The countries believe it is more effective to provide these services jointly rather than unilaterally. This is what they have been working toward for the last 30 years.

Since 2002 electricity, though not sufficient, is at least more reliable and is slowly transforming the economies of the OMVS countries. It is clear that there is a growing confidence in these countries. In Guinea, however, which has not shared in the OMVS countries' benefits, enterprises in both the informal and formal sectors suffer economically from unreliable electricity. For example, in medical facilities across the country, vaccines and medicines already in scarce supply cannot be stored properly. Guinea's difficulties are linked to a lack of infrastructure and a lost opportunity to share in the basin's joint development.

Focusing on benefits, not allocations

The decision of Mali, Mauritania, and Senegal to cooperate marked a significant shift in how international river basins are developed. By choosing to develop the Senegal River jointly, the three countries focused on generating the services they needed and then sharing them equitably. Referred to as the "principle of benefit sharing," this approach focuses on sharing benefits rather than allocating the water itself. The international donor community is beginning to espouse this approach as the way forward in such situations.

The countries overcame traditional sovereignty concerns to establish strong political commitment to joint management and commonly held works, which then reinforced intra-basin relationships that facilitated economic growth by building trust that the benefits will be shared equitably and that the country hosting common works will respect their joint ownership. The OMVS countries used an economic model that separated the infrastructure's costs from the benefits each country would gain to devise the burden-sharing formula, the *Clé de répartition*. The loans to construct the Diama and Manantali dams were guaranteed equally by Mali, Mauritania, and Senegal. This burden-sharing approach also ensured an equitable allocation of water to different sectors. For example, the expansion in irrigation was divided equitably, with the irrigation area increasing from 20,000 hectares in 1980 to 120,000 hectares, mainly in the valley between Mauritania and Senegal. Agricultural intensification also helped to smooth the unequal balance of payments among OMVS members. Joint infrastructure ownership has meant that the basin countries have a common interest in safeguarding the works and the benefits that flow from them. Soon after the Manantali and Diama dams were completed in 1989, their existence and the relationships under *l'espace OMVS* helped pull back Mauritania and Senegal from armed conflict.In July 1991, Mauritania and Senegal worked out an agreement between themselves, based on recognition of their shared interests in the dams.

Providing infrastructure for basic needs

The OMVS countries created two types of shared infrastructure: physical and institutional. Physical infrastructure included water management works, telecommunications networks, and transportation links. Institutional infrastructure included OMVS and related agencies, which seek to harmonize national planning and legal frameworks to promote development, and trade and labor flows. Both infrastructure types are needed for the basin's development.

Running water has improved people's lives in the three countries. Waterborne diseases diminish after people are connected to the waterworks. The women's burden of water collection disappears and bathing is easier with running water in the household. Having a dependable reliable electricity source eases daily life for households and in small and medium industries. In Mali, the dams decreased electricity costs, increased supply, and reduced fuel imports used to generate electricity.

The Regional Hydropower Project shared across the OMVS countries provided an opportunity for them to introduce efficiencies that extended beyond the energy sector. For example, in connecting Manantali to the three national grids, dual-purpose fiber optic technology was used for the transmission lines, which the telecommunication sector can also use, thus lowering communication costs.

The three countries have also benefited from using their common physical and institutional infrastructure, which includes shared hydrological data collection, to jointly manage extreme events, such as floods and droughts. A coordinated response was critical in minimizing the loss of life and socioeconomic damage from the 2003 floods to the Senegal basin's economy and the poor.

Evidence is growing that reliable supplies of water and electricity are encouraging income-generating activities, and making investments less risky in the OMVS economies. They have encouraged entrepreneurship at different levels, from new video halls opening in Mauritania to improved irrigation techniques used to grow higher value off-season crops near key markets in Dakar.

By contrast, in Guinea the shortage of reliable electricity and water supplies is seriously handicapping economic activity and pushing the government to seek stronger links with its Senegal basin neighbors, with a view to regional integration. Guinea's participation in basinwide decision making will open more cost-effective opportunities to augment existing energy supplies and tap the basin's development potential. Against the background of the New Partnership for Africa's Development (NEPAD), the four Senegal basin countries are looking to strengthen their integration through partnerships with each other, the international community, and the private sector.

The four basin countries have already collaborated in preparing the Global Environment Facility's (GEF) project on the Senegal River basin. Significantly, OMVS was designated as the recipient and executor of the GEF grant, not just on behalf of its member countries, but also for Guinea. As an indication of the political commitment to cooperate on all sides, Guinea was invited to Nouakchott to attend the OMVS Heads of State meeting in May 2003, and again for the first basinwide Inter-Ministerial meeting held in April 2004.

Tackling the environmental and social challenges

The Senegal River's regulation also brought problems. The Diama dam changed the ecology and livelihoods of the lower Senegal river in Mauritania and Senegal, and the Manantali dam affected traditional recessional agriculture in Mali. One of the biggest challenges for the countries is the need to tackle the growth of aquatic weeds, such as water hyacinth and typha australis, resulting from the uniform environment induced by the Diama dam.

Work is under way along the river's length to restore livelihoods lost by the drought and the flow's alteration. To restore the valley's ecological diversity and rural livelihoods, Mauritania and Senegal both established the Djoudj and Diawling National Parks in 1971 and 1991, respectively, on their sides of the river. Community-level measures have been particularly effective. For example, market gardening has proved successful in providing an alternative income source for local populations, especially women. The addition of two sluice gates has rekindled local fisheries. The ecosystem's regeneration has also stimulated wildlife. To encourage the public's decision-making role, OMVS is reaching out to stakeholders by inviting their representation in its central advisory bodies such as the *Commission Permanente des Eaux* (CPE). Conflicts among different water users were avoided in the Diawling National Park by working directly with local communities.

What cooperation can do for investment and inclusion

Applying the Shanghai framework to the Senegal basin highlights how the countries' innovative cooperation has created an enabling climate for investments and social inclusion.

- *Commitment and political economy for change*. The countries have repeatedly shown their commitment to change in their policies and declarations. National policies encourage private sector involvement through deregulation, and privatization is under way in the basin's energy sector.
- *Institutional innovation*. The OMVS institutions allowed member countries to give up some sovereignty for the basin's greater good. The countries own the infrastructure jointly; decision making is based on equality, with the benefits and burdens of development shared equitability.
- *Learning and experimentation*. Since 1963, there have been three different basin organizations, each with mandates that evolved with experience.
- *External catalysts*. The countries captured the political opportunities in the post-independence drive for pan-African unity. The severe droughts of the 1970s were another external catalyst. The 2003 floods prompted the OMVS system to further coordinate its activities with local communities.

Lessons from the Senegal Basin

Cooperative development of the Senegal River has benefited the economies of Mali, Mauritania, and Senegal by increasing the reliability of key inputs such as electricity and water.

- *Grasping opportunities through cooperation*. The group's success in collectively raising external investment shows what can be done if all parties cooperate rather than acting unilaterally.
- *Engaging top political leaders*. Political will was fundamental to engendering trust among basin countries and with key international partners.
- *Sharing a vision for development*. From the outset, the Senegal basin's development was based on an agreed plan that reflected the countries' priorities through a regional approach.
- *Engaging all stakeholders*. To tap regional opportunities, stakeholders at all levels need to participate in identifying and developing opportunities, and then in sharing the benefits.

- *Looking at different scales of development.* Outcomes at the local, national, and regional levels from development must also be assessed.
- *Binding cooperation with legal instruments*. Legal instruments are needed capture the agreements and bind future cooperation.
- *Promoting private sector involvement.* Maintaining a consistent policy for private sector involvement was critical.