

Financing Transboundary Water Management*

Introduction

Transboundary water management is an international public good of increasing concern to the global community. Over 40% of the world's population lives within transboundary basins and aquifers, making the successful management of this resource central to poverty reduction, sustainable development of the environment and long-term political stability.

To date, financing for transboundary management has been limited and dispersed. This policy brief assesses the current financing situation and makes a case for increasing the financing of transboundary water management processes. This includes a focus on innovative financing options appropriate to particular stages in the management process and an analysis of appropriate roles for donors and national governments to take at particular stages.

Financing snapshot

At present, annual funding of all water sectors ranging from water supply and sanitation to river basin management amounts to some \$80bn. This is about a quarter of the equivalent figure for countries of the North, and represents just twice the amount spent by Japan alone. In terms of global scale, this is just twice the annual UK defence budget or 6% of annual US health spending. The current priority within the \$80bn is public spending on national water sector infrastructure, rather than regional-level institutional development. Private sector spending only represents a small proportion of the total.

Investments in water in developing countries, 1996

	\$bn pa	% of total
International flows		
Multilateral and donor aid	9.1	11-12
Private investments	4.1	5
Sub Total	13.2	
Domestic flows		
Government, public sector	51-55	61-72
Domestic private and community	12-15	14-20
SubTotal	63-70	
Total	76-83	

Source: Global Water Partnership, 2000

In 1996 – the last year for which comprehensive data were available – about 12% of international financial flows came from the donor community, and a minimal 5% from private sources. In water supply and sanitation, international private flows were more or less equivalent to donor flows, at around \$3.5bn pa. The balance came from domestically generated sources, both public and private. Within developing countries alone, the great majority (70%) of investment is generated in the public sector.

Development aid to water management

Against the overall trend in aid flows, spending on water interventions actually increased during the 1990s. In 1997 the largest proportion came from the World Bank. Other major donors included the Asian Development Bank (\$5.6bn between 1991 and 1996), InterAmerican Development Bank (\$820m in 1998), European Union, UNDP and UNICEF (\$200-250m pa). These figures are broad estimates of total spending on all water activities. Within these amounts there has been some move towards activities such as capacity building, but overall very little is spent specifically on transboundary water resources, probably less than \$350m annually in spite of the growing acknowledgement of its importance.

At a regional level some multilateral development banks are beginning to promote co-operation in water policy development and transboundary management. A recent example is the Asian Development Bank (ADB) policy document which states that 'based on joint requests from riparian countries, the ADB will support joint projects for the planning, development and management of shared water resources' (ADB, 2000). However, this is the exception rather than the rule.

Process financing

The lack of funding for transboundary management reflects, to some degree, the poor record of institutional development in this area. A recent study (ODI/Arcadis Euroconsult, 2001) highlighted the lack of, and therefore need for, a process-oriented view of transboundary management that emphasises institution-building as a first priority. A current – and rare – example of such a process-oriented approach is the Nile Basin Initiative (see box), which has both created a significant process of institution-building within complex political environments and linked this process to a shift from water sharing to benefit-sharing as the basis for transboundary cooperation.

A key factor in poor institutional development is the lack of co-ordination and consolidation of current financing initiatives, coupled to which are differing approaches of donors, host countries and the private sector. The ODI/Arcadis study advocated process financing to facilitate the

Box 1 The Nile Basin Initiative

Two characteristics of the Nile Basin Initiative deserve note. Firstly, that it has taken several years to develop the shared vision and commitment of all the riparians. Now that that vision has been agreed, there is a secretariat in Uganda and a body capable of managing the process, yet strongly linked to the individual countries. Secondly, that an external institution (the World Bank) played an important role in establishing and facilitating the institutional development of the NBI (though being careful to ensure ownership by riparians states), building donor confidence in the sustainability and effectiveness of the NBI.

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development of coordinated and coherent transboundary institutional arrangements through four principal stages, see box below.

Stage 1 is the initiating process, or establishment of institutional mechanisms for effective management (including agreement on anticipated benefits and modes of cooperation). This critical starting point requires feasible political environments for inter-riparian engagement. Stage 2 is the operation of the institutions themselves. Stage 3 is the implementation of water management programmes (including data collection, surveys, joint planning and monitoring and steps towards confidence-building). Finally, Stage 4 is investment in infrastructure for shared river management. This is likely to come at a much later date, reflecting the need for a long-term view (and commitment to) the process set in train.

In their own right, running costs of water management institutions are relatively modest compared to the initiation costs involved. They range between \$200,000 and \$2m a year for the respective arrangements on the Incomati, Okavango, Rhine, Danube and Mekong river basins. In principle these costs of joint river basin committees and secretariats should be borne by the riparian countries themselves. However, to help promote *politically feasible* environments for the establishment of such arrangements, there is a strong case for donor financing at the initiating stage, and particularly multilateral and regional institutions that are able to play third-party mediating and facilitating roles.

The World Bank has supported basin management processes over a long period, ranging from the Indus Treaty negotiations to the current Nile Basin Initiative. Beyond funding dialogue between riparians and subsequent institutional development,

the Bank has added political weight and capacity to the formulation of joint objectives and programmes. The UNDP has provided similar inputs in the past to joint management processes on the Mekong and has included transboundary water management within the objectives of its Environmental Trust Fund. In addition to these established institutions, new initiatives emerged during the 1990s that not only provided some of the potential architecture of a new, more integrated, global effort at financing transboundary management, but also worked to link the goals of more effective water management at a policy level to the achievement of sustainable development and poverty reduction at a local level.

The Global Water Partnership (GWP), established in 1996, promotes integrated water resource management at a country level and has a programme of building water partnerships, developing service-providing alliances, synthesising practical knowledge and promoting action programmes in water. The focus is not, however, explicitly on transboundary water management, though it can facilitate initiatives. Another initiative is the Petersberg Group, sponsored by the German Government and the World Bank which, *inter alia*, formulates principles for transboundary water management. Green Cross International, an international NGO, has supported diplomatic processes in this field and the Global Environment Facility (GEF) aims to provide support for international environmental public goods with a particular focus on biodiversity and climate change. At present the concept of funding 'incremental costs' is central to the GEF approach. Between 1992 and 2000 funds for freshwater-related international water projects under GEF amounted to \$187m. Most of the projects have been concerned with the preparation of shared strategic plans and knowledge development. It is anticipated that GEF could assist in extending the range of international financial instruments available for process-financing.

The importance of harnessing the strengths of all these initiatives, including GEF, in order to achieve innovative and process-oriented approaches to financing through a networked and co-ordinated international framework seems self evident. The various activities promoting transboundary water management currently lack critical mass and new financing modalities have yet to be developed. The following proposed financing options could provide for a more co-ordinated and coherent international approach.

Innovative financing options

Four options are identified for financing transboundary water resource management either through strengthening the financial basis of transboundary institutions (trust funds) or through extending the range of financial instruments available to such institutions (revolving funds, public-private partnership, and inter-riparian investments).

Trust funds for programme implementation

To allow continuity and ownership of shared water management programmes, trust funds or endowments could be introduced, administered by the transboundary institution. Trust funds have been used in the last 15 years to provide security and resources to environmental programmes, though they have not been widely used in transboundary programmes. They provide a means of diluting direct donor control over the administration of resources and of building capacity in financial and institutional management. A certain level of confidence in the shared water management programme is required to change from bilateral donor projects to the development of trust funds. Whilst trust funds can

Stages in process financing transboundary water management			
	Financing goal	Current means	Possible Arrangement
1. Initiating process	Cost of establishing and tailoring transboundary institutions	Mixed and patchy	By international or regional organisations with sufficient strength and capacity
2. Institutional arrangement	Management costs of the transboundary institutions	By riparian countries and externally	By riparian countries solely
3. Programme implementation	Cost of basin management; development of uncontested data base, planning, monitoring	By bilateral donors and UN agencies	On the basis of formulated programmes, including trust fund financing by bilateral, multilateral and private donors
4. Investment in shared water management works	Cost of investment in water-related infrastructure	Uncoordinated national investments by public and private sector	Co-ordinated national and regional investment; Risk financing (co-financing regional development banks and private sector); New financing to include inter-riparian financing and cost recovery

give longer-term security to institutions and programmes, and can smooth out funding fluctuations that arise when organisations are dependent on annually allocated resources, whether from government or donors, the difficulties can be substantial. These include developing an endowed institution or institutional structure at a transboundary level that has a high level of transparency and legitimacy, both essential requirements in building inter-state confidence in the process. Operating costs for trust funds must also be factored in and are often in the region of 20-25% of the total fund.

The Mekong is an example of the need for such a trust fund. Although considerable external support has been provided for the implementation of the transboundary river management programmes (\$15-20m annually), the Mekong River Commission charged an 8% overhead on these activities and thus had an interest in keeping activity levels high. The result was a disparate range of essentially supply-driven activities by the mid-1990s that could have been avoided had the river basin management programme been administered under a trust fund with clear objectives and priorities.

Revolving funds to engage private investors in projects with positive transboundary externalities

At present there is only limited engagement of the private sector in transboundary water management, partly because such investment offers few straightforward opportunities for profit. The private sector has, however, played a more significant role in other sectors with regional or global implications, including involvement in Ozone Depletion and Climate Change. The GEF assists with the implementation efforts of the Montreal Protocol to phase out ozone-depleting substances, a number of which involved innovative mechanisms including revolving funds and concessional loans to engage the private sector. Similar revolving funds could be established at a transboundary level to promote investments with positive transboundary externalities, such as water treatment, conservation and pollution-avoidance techniques, through grants, technical assistance and loans to the local private sector. Funds could come from a range of sources including pollution fines, licence costs and water charges, with additional funding from bank loans. In the US similar funds exist and provide concessional loans for water treatment investments, or to buy up water rights for in-stream flows. Similarly, river basin organisations in France and Indonesia have a funding base rooted in a variety of water-related charges, which allows them to tap into other funding resources as well.

At present international taxation for international water projects is unattainable; and no such proposals exist. There is scope, however, to work on this in the future in more mature (and possibly smaller) river basins, particularly where there are few large water users and polluters and, hence, taxation regimes are easier to manage.

Risk financing of large private investments

Nevertheless, a revolving fund may not be adequate for investments that have large sunk costs. So far, such long-gestation private investments in transboundary water management have been limited. The most common area is hydropower, but typically this has been on a single-country basis. There is evidence that the stricter rules set by multilateral financing agencies on investing in large dams on transboundary rivers has caused project developers to resort to private capital, sometimes using export credits that generally have easier approval criteria on issues such as resettlement, environmental security and other, transboundary, concerns. In recent years, however, interest in hydropower investment has fallen and even export credit agencies have begun to

back away from insuring controversial dam projects.

Outside hydropower there are no major examples of private investment in transboundary water management. Nevertheless, opportunities remain for private investment in projects that give a return ranging from navigation and shared reservoirs, to bridges and ferry services. In some cases, precisely because of their transboundary nature, cost recovery by private parties may be the most practical way to provide the service. There are, however, inevitably higher political risks associated with this type of transboundary investment.

Public-private partnership in the Senegal River basin

Co-operation between the countries sharing the Senegal River (Mali, Mauritania and Senegal) resulted in the signing of the Convention of the Establishment of the OMVS (Senegal River Development Organisation) in 1972. One result of the regional co-operation was the Manantali dam, completed in the 1990s after a string of controversies surrounding its social and environmental impact. The project used donor contributions and loans (\$620m for two dams), guaranteed by export credit agencies. Though OMVS actively sought private investors to build a power generation unit, none were found. By 1997, transboundary legal and institutional arrangements had been reinforced by establishing an inter-state public company—SOGEM—for the management and exploitation of the Manantali dam. OMVS/SOGEM awarded Eskom Enterprises from South Africa the contract to operate and maintain the station at a cost of \$82m. The OMVS experience shows, above all, that significant groundwork is required before the private sector can be inducted in large transboundary water projects.

Public-private partnerships at a transboundary level can help to minimise such risks. Contract stability would preferably come from locking private investment into transboundary agreements (facilitated by a third party) and having international river basin organisations become a party to the contract. Public-private partnerships could be supplemented by political risk insurance and investment guarantees.

Political risk insurance covers issues including loss of investments because of restrictions on repatriating profits out of the country, expropriation and nationalisation, breach of contract and war and civil disturbance. Insurance is almost exclusively geared to foreign direct investment in single countries. Though political risk insurance is unusual for investment in transboundary rivers, on the face of it there seems to be no reason why it could not be tailored to this requirement. A transboundary institution could set up a risk guarantee fund for transboundary projects in order to facilitate economically viable projects that face political exposure through uncertainty in transboundary contracts (e.g. selling hydro-power generated in one country to customers in another country). The riparians may also be asked to limit the political risk, either through a guarantee, or by taking part in the investment consortium, in so doing helping to avoid investors being lured into risky projects with possibly negative effects on social development and the environment.

Inter-riparian financing by public means

Inter-riparian financing requires riparian countries to fund activities beyond their national territory. However, no major examples were found in the ODI/Arcadis study, which partly reflects the weak institutions of management in many major international river basins and the lack of economic means of some riparian countries. At present, public investments in transboundary waters are almost without exception on a national basis; international taxation regimes for transboundary water management remain difficult to implement and have yet to

be applied in any major river basin.

Nevertheless, in some river basins (in the Westerschelde for example between the Netherlands and Belgium or the Meuse shared by France as well), there are examples of inter-riparian financing of water quality control and navigation improvement. Lessons to emerge include the difficulty of inter-riparian investments being arranged and managed, especially when the benefits for the host country are small in comparison to the benefits of the other riparians. Important prerequisites for success include an obvious benefit for the funding riparian exceeding the financial and political costs of implementation, a definition of the scope of works that is as precise as possible, committed financial contributions, clear responsibilities for cost overruns and tax provision, and a joint management structure to oversee the works and undertake cost control.

Donor opportunities and roles

The feasibility of the different financing options presented depends largely on the strengths of institutional arrangements in place. As the institutions mature from perhaps intergovernmental committees to full river basin management organisations, the scope to leverage other sources of finance and expand the range of regional investments may increase. At present few transboundary, inter-riparian or regional organisations have reached this state of development.

Donors can play an important role in providing resources to build and strengthen the enabling environments in which financial co-operation over transboundary management becomes a possibility. The Nile Basin Initiative shows how careful preparation and the commitment (through process ownership) of the riparians themselves can encourage donor support, particularly in awareness raising and capacity building, which in turn provides a stable political environment to attract other sources of funding.

With the establishment of strong transboundary institutions, ways of engaging the private sector can be explored, including demonstrating how the private sector can help in water conservation and pollution abatement. Subsequently, donors may set up revolving funds to extend this demonstration effect to other transboundary and sector-wide approaches. For larger, revenue-raising projects contract stability may be enhanced through international agreements and the setting up of funds for risk financing. A crucial proviso is the provision of sufficient time to find the right regulatory and incentive framework. Elsewhere, rushed approaches have led to difficult and ineffective public-private partnerships.

Conclusions

The options for financing transboundary water management are varied, but require new approaches to inter-riparian and transboundary development. The risks inherent in regional co-operation are clear when the focus is on a resource as vital as water, and where there are frequently complex and competing demands placed on the resource by riparian countries.

To explore fully the potential financing options outlined above requires a co-ordination of international effort by major financial and institutional stakeholders including financing agencies, UN institutions, and other global actors such as the GEF and GWP. Such coordination needs to focus explicitly on the process issues outlined above.

Not only would such a coordinated approach assist in building sound processes of institutional establishment and functioning, but it would also help to support wider regional development efforts including those undertaken by ASEAN, MERCOSUR, ECOWAS, and SADC*.

To create the necessary level of coordination the international community needs to explore the scope for an International Shared Waters Facility that can, *inter alia*: develop new institutional initiatives; propose standards and generic tools for data management in transboundary water management; serve as a mechanism for arbitration; and encourage new financing arrangements and modalities. To this end three major foci in coming years should be:

1. Raising the profile of international water management as well as increasing its prioritisation by the national governments of riparian countries;
2. Supporting developing countries through providing the right incentives to expand the financing options available (in particular those that engage in transboundary institution-building, inter-riparian funding and suitable private sector entry), which could include supporting country budgets, either through sector-wide approaches or through earmarking, thus reducing the need for country-driven projects; and finally
3. Providing co-ordinated support and process financing to transboundary institutions that provide long-run stability and suitable environments for transboundary water investment.

* Respectively, the Association of South East Asian Nations, Mercado Común del Sur (Southern Common Market of Brazil, Argentina, Uruguay and Paraguay), Economic Commission for West African States and the Southern Africa Development Community.

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