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Applying economic instruments for transboundary basin management: the case of Kura river

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Context of the project



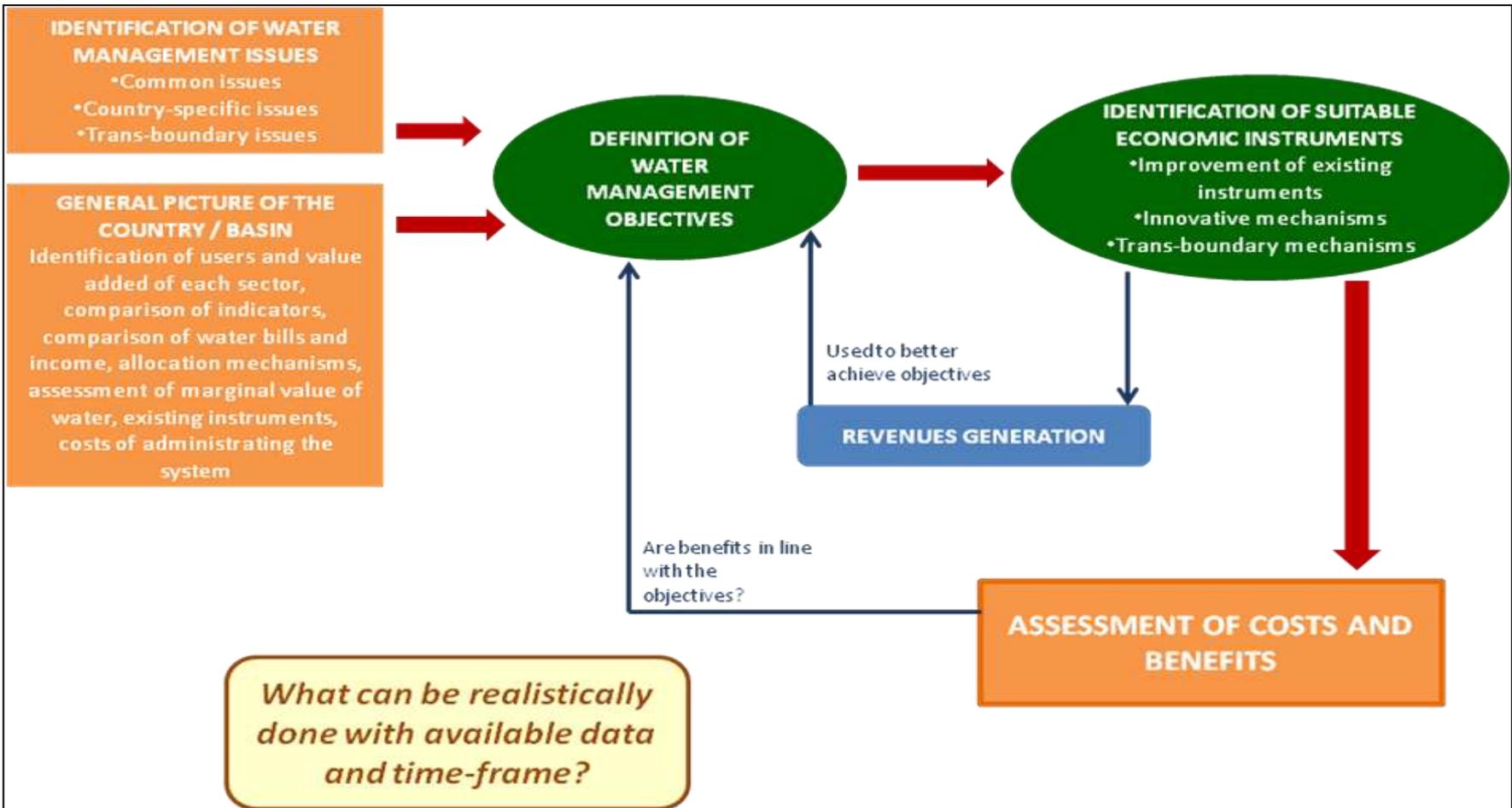
In 2006, Armenia, Azerbaijan and Georgia signed the European Neighbourhood Policy Action Plans with the European Union (EU)

Under these plans, each country is committed "to identify possibilities with neighbouring countries for enhanced regional co-operation, in particular with regard to water issues".

The three countries are also committed to the implementation of the EU Water Framework Directive (WFD) and the development of River Basin Management Plans (RBMP), including for transboundary river basins.



The conceptual framework developed and applied in the OECD Kura project





Existing economic instruments (EIs) and their performance

Economic instruments and performance criteria	Armenia	Georgia	Azerbaijan
Tariffs for drinking water and wastewater			
Average Unitary Rates (USD/m ³)	0.38-0.47 DW 0.03 WW	0.12-0.25 DW 0.04-0.05 WW	0.35-0.4 DW 0.08 WW
'User pays' principle	Partly satisfied	Partly satisfied	Partly satisfied
Cost recovery	93% of O&M costs	75% of O&M costs	71% of O&M costs
Incentiveness for a more efficient use of water resources	Poorly satisfied	Poorly satisfied	Poorly satisfied
Affordability	0.9-2.1%	2.2% in Tbilisi	2%
Irrigation water tariffs			
Average Unitary Rates (USD/m ³)	0.01-0.09	45 UDS/ha/year	Not available
'User pays' principle	Partly satisfied	Poorly satisfied	Not satisfied
Cost recovery	53% of O&M costs	Revenues much lower than expenses	1.7% of O&M costs
Incentiveness for a more efficient use of water resources	Partly satisfied	Not satisfied	Poorly satisfied
Affordability	Partly satisfied	No info	2%



Existing EIs and their performance

Economic instruments and performance criteria	Armenia	Georgia	Azerbaijan
Abstraction fees			
Unitary Rates (USD/m ³)	0.0013-0.0039	0.006-0.3	0.25-0.42
'User pays' principle	Poorly satisfied	Poorly satisfied	No info
Cost recovery	Not appl.	Not appl.	Not appl.
Incentiveness for a more efficient use of water resources	Not satisfied	Not satisfied	No info
Affordability	0.03%	No info	No info
Pollution fees			
Unitary Rates (USD/m ³)	Depends on pollutant	Abolished in 2005	0.015-0.020
'Polluter pays' principle	Partly satisfied	Not satisfied	Partly satisfied
Incentiveness for a more efficient use of water resources	Poorly satisfied	Not applicable	No info
Cost recovery	Not appl.	Not applicable	Not appl.
Affordability	Not relevant	Not applicable	Not relevant
Fines and penalties			
Fine range (USD)	137-410	60-364	3,000-15,500
'User pays' principle	Partly satisfied	Poorly satisfied	Partly satisfied
Incentiveness for a more efficient use of water resources	Poorly satisfied	Poorly satisfied	Poorly satisfied
Cost recovery (costs of pollution)	Not satisfied	Not satisfied	No information



Water management issues not addressed by existing EIs

Water management issue	Armenia	Georgia	Azerbaijan
Overuse of biological resources (including fish)	X		
Illegal waste dumping into the rivers	X	X	
High water losses due to poor infrastructure	X	X	X
Water pollution from municipal wastewater, mining and industry, agriculture	X	X	X
Soil erosion due to overgrazing and deforestation, resulting in excess sedimentation and mudflows	X	X	
Flood events	X	X	X
Non-consumptive water use: hydroelectric power		X	
Excess surface water abstraction	X	X	
Inefficient water use (domestic, industrial and agriculture)		X	X
Modified (decreased) river flows as a result of climate change	X	X	X
Seasonal water scarcity		X	X



Potential new EI for an improved water management

Potential economic instruments	Description	Overall feasibility		
		AM	GE	AZ
Adaptation / improvement of existing water abstraction fees	Application of different water abstraction fee levels for industry and households (Armenia). Enforcement of existing legislation: charges also on surface water abstraction (Georgia)	+	+	+
Charge for non-consumptive water use (hydropower)	Extension of water fees to hydropower companies, which at the moment are exempted	+	+	+
Reform of existing water tariffs	Differentiation of tariffs according to season, to cope with seasonal water scarcity (Armenia). Higher tariffs and differentiation of tariffs according to flow variation and water availability (Azerbaijan)	+		+
Introduction / reform of existing pollution fees	Pollution fees would be applied at permit level (Armenia) Re-introduction of pollution fees (Georgia)	+	+	+
Adaptation / improvement of existing fines	Adaptation and enforcement of existing legislation needs to be ensured. In Georgia, extension of fines to illegal waste dumping		+	+
Innovative pollution fund	Polluters polluting above an authorized limit pay a fine, and the revenues are then put in a fund.	+		



Potential new EI for an improved water management

Potential economic instruments	Description	Overall feasibility		
		AM	GE	AZ
Extra / product tax for polluting substances	Creation of an extra/product tax on hazardous chemicals, and establishment of “deposit-refund system” under which the tax/duty is returned in exchange for returning unwanted products	+		
Charges on fertilizers	Imposition of charges on the import and production of chemical fertilizers and pesticides used in agriculture	+	+	
Reducing taxes on water saving technologies	Tax reduction (e.g. VAT) for those companies introducing water saving technologies in the production cycle	+	+	
Environmental insurance system	Liability for environmental damage or cleanup costs may lead to the creation of a market for environmental insurance. Insurance premiums levels would then act as an incentive to pollute less.		+	
Payment for ecosystem services	Erosion can be reduced through reforestation and other activities. For these services, downstream communities pay upstream communities to compensate for the lost opportunity of using their land for agricultural purposes.	+	+	+
Beneficiary pays principle	Joint investments for improved wastewater treatment on the territory of Georgia (e.g. Gardabani WWTP).		+	+



The potential for enhanced transboundary cooperation

Cooperation on water management issues between the three countries can happen at two levels

Opportunities at the national level

How can economic instruments be applied at the national level to address effectively trans-boundary water management issues?

Measures and instruments for water management can be tailored to pursue common water management objectives at the river basin level, agreed upon by the three countries

Opportunities at the trans-boundary level

The potential for actual trans-boundary cooperation and for the development of trans-boundary economic instruments would obviously be the result of a coordinated approach to water management

The potential for enhanced cooperation

Constraints to transboundary water management

- It is totally a new topic in the region
- As it is likely to encounter low political acceptability, it might be difficult to develop in the short term, and a good deal of discussion and negotiation would be needed
- Limited information is currently available on specific water conditions and management issues along the borders between the three countries



WHAT COULD BE DONE NEXT? Transboundary water management could be the subject of a regional dialogue:

- Review of on-going experiences in other geographical areas, to identify good practices and suitable models of cooperation
- Relying on the platform provided by the current National Policy Dialogues in the countries to initiate a regional dialogue by a pilot project on flood prevention and control between Georgia and Azerbaijan
- Exploring potential transboundary benefits from improved water management, the particular role of economic incentives, and the institutional framework required