

Categories: Sources Factors: Development	a) New Water	b) More efficient use of water	c) Other sources in basins that are not closed
1. Hydropower and power trading	New Water can be created by the siting of dams where evaporative losses are minimised. The interplay to Green and Blue Water dynamics should be addressed.	The siting of dams in transboundary basins influences the geographical pattern of water availability. This has a profound impact on the net benefits arising from a transboundary watercourse.	Power trade provides the opportunity to optimise complex power-supply alternatives allowing for a mix of sources of fuel, including hydropower, fossil fuels, nuclear, and renewable energy such as sun and wind. It reduces costs and provides for transparency in all transactions for the consumers.
2. Primary production	Desalinated sources of water are generally not suitable for agricultural use, due to cost and quality-related constraints. However, there is great scope for the re-use of treated wastewaters in many developing countries. Inter-basin transfers are also likely to become much more common in the future.	The key method of relevance to increasing the efficiency of water use for primary production involves closer attention to the Green Water-Blue Water interface. The output of the agricultural sector can be greatly enhanced in many transboundary basins, if this is taken into account.	Many opportunities exist for increasing the production of biomass by optimising land and water use. This provides opportunities to produce bio-energy to meet the growing demand for energy at the global level and scaling up e.g. aquaculture to meet growing food demands.
3. Urban growth and industrial development	The much higher economic returns from water in the industrial and services sectors (compared to the agricultural sector) provide a route to enhanced economic growth for many developing countries. However, societal effects must be addressed.	Where inter-sectoral allocations occur and move water from agriculture to the sectors with higher economic returns, it is most important that the resource is used efficiently, maximising the economic returns per unit volume.	To ensure reliable supplies of water for growing urban and industrial needs, water should be managed and stored so that losses are minimised. Water can be stored underground through recharge of aquifers for both water supply and to protect coastal aquifers from salt water intrusion.
4. Environment and ecosystem services	Enhanced attention to the upstream Green Water-Blue Water interface can improve or guarantee aquatic ecosystem services in downstream stretches of shared watercourses. Benefits from this can be transferred upstream, as in the 'Green Credit' proposals.	All forms of more efficient water use will alter river flow dynamics, and this offers potential for optimising returns from ecosystem services. Fisheries and tourism are especially important generators of income in such scenarios.	In basins that are not closed ecosystems such as wetlands that have been degraded can be restored by allocating water to restore their capacity to generate ecosystem services. This provides benefits such as water purification and increased biodiversity.
5. Others (every basin is unique and other opportunities may exist)	Many urban areas are found along coastlines. Desalination of seawater provides, where economically feasible, a new water source for high value use. The use of desalinated water may reduce the pressure to abstract water for e.g. urban areas in water stressed basins.	Recurrent droughts are a major obstacle for farmers relying on rainfed agriculture to receive a return on their investment. By improving the natural storage capacity through improved Green/Blue Water management and groundwater storage a basin system can be less vulnerable to the impacts of drought.	Floods destroy physical infrastructure and social and economic systems in many basins globally. Flood protection and early warning systems may be important strategies to increase the resilience of basins providing downstream benefits. Storage infrastructure or restoring watersheds are tools to consider.

Table 1. The conceptual framework for the TWO Analysis.