

Annex 2: Pre-discussion Briefs

Roundtable 3: Sound Financing Strategies and Affordability of Water

- Imperatives to Resolve World's Water Challenges
 - Financial Viability of Water Supply through Conventional Means
 - Financing Water Supply through Innovative and Long-term Solutions
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Aspect 1: Imperatives to Resolve World's Water Challenges

1 Water is natural resource but clean water remains scarce relative to demand, especially in fast-growing regions, and this has resulted in various water challenges.

2 *Water usage has been growing far faster than the number of people.* During the 20th century the world population increased fourfold, but the amount of freshwater that it used increased nine times over.¹ According to WHO, almost one fifth of the world's population (about 1.2 billion people) lives in areas where the water is physically scarce. One quarter of the global population also live in developing countries that face water shortages due to a lack of infrastructure to fetch water from rivers. Already 2.8 billion people live in areas of high water stress, and this will rise to 3.9 billion – more than half the expected population of the world – by 2030. By that time, water scarcity could cut world harvests by 30 per cent – equivalent to all the grain grown in the US and India – even as human numbers and appetites increase.²

3 *Climate change is depleting the available water resources rapidly.* For example, the glaciers of the Himalayas, which act as gigantic water banks supplying two billion people in Asia, are melting ever faster as global warming accelerates. Meanwhile devastating droughts are crippling Australia and Texas.

4 *Shortages are already beginning to constrain economic growth* in areas as diverse and California, China, Australia, India and Indonesia.³ Also, conflicts about water can occur at all scales; “hydrological shocks” brought about by climate change are likely to increase the risk of major national and international security threats.

5 *Imperatives to achieve full cost recovery.* Lessons can be drawn from the experiences of OECD and transition economies in developing systems for financing infrastructure and water services provision and in applying full cost recovery water pricing systems. Many of the countries of Eastern Europe, Caucasus, and Central Asia (EECCA) face serious financial deficits in the water sector. The extensive water infrastructure left from the communist period is deteriorating, resulting in reduced service quality and increased health and environmental risks. These countries face significant problems in maintaining existing infrastructure, let alone expanding it due to insufficient funding.⁴

¹ Water scarcity 'now bigger threat than financial crisis', The Independent, 15th Mar 09

² World Economic Forum Water Initiative, Managing Our Future Water Needs for Agriculture, Industry, Human Health and the Environment, WEF, Jan 09

³ The World Water Development Report, UNESCO, Mar 09

⁴ Improving Water Management: Recent OECD Experience, OECD, Feb 06

Aspect 2: Financial Viability of Water Supply through Conventional means

6 Among various governance and management measures, full cost recovery is key to ensure continual maintenance and expansion of existing infrastructure, and to bring about innovations in technology to achieve a sustainable water supply.

7 **Recovering cost through pricing** - OECD's work with EECCA countries is focused on developing realistic plans to finance infrastructure maintenance and expansion through applying water charges, in combination with other available financing. This work indicates that in many places there is significant scope for increasing household water prices in order to better cover operation and maintenance costs. Proper pricing is important because it helps ensure financing of investment and recovery of cost/returns, timely maintenance and replacement of ageing infrastructures, and hence improves sustainability of water supply. Such reforms should go along with measures that ensure that the poor have affordable access to water services.

8 Water should be priced to reflect its scarcity and bring about long term benefits. Besides being an important tool to ensure the financial viability of supply, price of water should be set to reflect the need for water conservation (scarcity) and to ensure affordability. In many countries, consumers rarely pay the actual cost of water as a result of huge government subsidies. In fact, many governments practically (and sometimes literally) give water away for nothing as it is regarded as a social good that should be provided for by the government. Although pricing water at a reasonable cost can generate political pressures in the short run, it can lead to substantial efficiencies in the longer run and eliminate a perverse drain on government budgets. Higher prices will encourage more efficient use of water to reduce wastage. In Singapore, water is priced not only to reflect the full cost of production and supply through the water tariff, but also to reflect the higher cost of alternative water supply sources through the "Water Conservation Tax". This tax is pegged to the difference between the water tariff and the cost of the marginal source, and channeled into the government consolidated fund which can be used to fund national projects such as R&D in water treatment processes, etc.⁵

9 As a basic necessity and a social good, mechanisms need to be in place to ensure the affordability of water. A way to avoid hurting low-income families is use a block rate pricing system where a low level of consumption—that required to satisfy basic needs—is cheap, while prices increase at higher levels of consumption. Subsidies should also be targeted at specific groups of low-income families.

10 **Recovering cost through public spending** - Public spending on water also often needs to increase, especially in the poorest countries where consumers are unable to afford the full costs of water services. Public spending will not only need to come from local governments, but also from regional and central government sources, since local governments usually lack the means to shoulder the financial burden alone. This also means that water infrastructure depends on political processes, rather than just technical issues. Development assistance plans from governments also have a role to play.

⁵ Clean, Green & Blue, Tan Yong Soon (Permanent Secretary, Ministry of Environment and Water Resources, Singapore)

11 **Recovering cost through private sector participation** - Many governments are increasingly turning to private sector to provide new technologies, increase efficiency, help governments ensure continuous access to quality water, and provide the capital needed to upgrade aging infrastructures. Morocco, Jordan, the UAE, Oman and Saudi Arabia are showing early indications of success.

12 **From politics driven to profit/performance focused.** As a result of political and social reluctance to introduce cost-reflective tariffs, water is often priced below cost of source and service as it is typically not considered an economic resource. Such thinking needs to be changed in the long run, so that with the workings of the market forces and an emphasis on profits and hence performance, existing problems such as inadequate infrastructure, lack of funding, can be gradually resolved.

13 Because water is not properly valued, it is wasted and water resources are misallocated. It also prevents economically viable projects. While it is widely believed that the poor cannot pay for water, they often have to pay *more* for their supply than their wealthier counterparts because of limited access to the formal distribution system.

Aspect 3: Financing Water Supply through Innovative and Long-term Solutions

14 International organizations and financial institutions can take a lead role in bringing private investors into the global water sector and uniting demand- and supply-side interests in addressing the issues of access, scarcity and quality. The Asian Development Bank, for example, had lent \$25.0 billion for water-related projects as of end 2009. Moving forward, the Asian Development Bank Water Financing Program 2006-2010 seeks to double investments in rural and urban water services and basin water management to well over \$2 billion annually.

15 **Recovering cost through new modes of financing** – New modes of financing have been developed over the years, including micro-financing for small scale applications, and DBOO / BOO modes for large scale applications. Other possible ways of financing include say for water infrastructure to be financed together with land-use/ building development such that the cost of such infrastructures is paid for by either the land developers or land owners, the ultimate beneficiaries of these infrastructures.

16 **Investment in long term solutions.** It is important to invest early to meet growing demand and to replace ageing infrastructures; and to invest in new technology to improve supply and reduce long term costs. However, investors have to take a longer term horizon before they see returns and may not be willing to take the risks. Governments can help to defray part of these initial risks.