

# Water for Sustainable Development

## A Sustainable Development Network Briefing Paper

### Facts about water and sanitation

- Over 1 billion people lack access to clean drinking water.
- Over 2 billion people lack access to improved sanitation.
- The majority of these people are in Africa and Asia, mostly in rural areas.<sup>1</sup>
- Dirty water and poor sanitation is a primary vehicle for poverty diseases:
  - There are 4 billion cases of diarrhoea each year, resulting in 2.2 million deaths, most of them children under the age of five. “This is equivalent to one child dying every 15 seconds, or 20 jumbo jets crashing every day.”<sup>2</sup>
  - Water-borne diseases, including intestinal worms, guinea worms, schistosomiasis, trachoma, cholera, typhoid, hepatitis A, and dysentery, affect at least half a billion poor people.
  - Another half-billion people are affected by water-related diseases, such as malaria and dengue fever.<sup>3</sup>
- Government provision and management of water has failed poor people.
  - When water is provided by government it is typically of poor quality, it is also “underpriced and used wastefully, the infrastructure is frequently poorly conceived, built, and operated, and delivery is often unreliable.” As with other systems of government patronage, water is allocated to the wealthy and politically powerful, whilst the poor go thirsty. Wealthier residents of cities “enjoy access to cheap, municipally supplied water” but the poor “must resort to very expensive private water truckers to meet their daily needs.”<sup>4,5</sup>
  - Women and female children exert over ten million person-years of time and effort, every year, to carry water from distant, often polluted sources.<sup>6</sup> The opportunity cost of such water collection – that is to say the alternative, more productive, uses to which these people could put their time – is almost unimaginable.
- Under state ownership, perverse incentives cause human and environmental harms.
  - Water delivered to agricultural and industrial users is often under-priced or even subsidized. As a result, users do not include water in their assessment of production costs. This causes market distortions and results in inequitable distribution of water.
  - In Pakistan, “the provision of irrigation water at prices substantially below the cost of delivery, a policy that has increased waterlogging, led to the loss of many mangrove forests in the coastal areas, and diminished biodiversity (NCS). The former policy of subsidizing agricultural chemicals led to excessive use of pesticides.”<sup>7</sup>
  - In the US, “Irrigation subsidies waste millions of taxpayer dollars by assisting corporate agribusiness, and hurt the environment by encouraging inefficient water use and destroying precious wetlands and wildlife populations.”<sup>8</sup>
  - Fertilizers, pesticides and other agricultural inputs are subsidized in many poor countries, leading to overuse and in turn to pollution water supplies, causing environmental damage.

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<sup>1</sup> *Global Water Supply and Sanitation Assessment 2000 Report*. World Health Organisation.  
[http://www.who.int/water\\_sanitation\\_health/Globassessment/Global1.htm#1.1](http://www.who.int/water_sanitation_health/Globassessment/Global1.htm#1.1)

<sup>2</sup> *Ibid.*

<sup>3</sup> World Health Organisation, Fact Sheet No. 112. <http://www.who.int/inf-fs/en/fact112.html>

<sup>4</sup> Mateen Thobani. “Tradable Property Rights to Water”, February 1995.  
<http://www.worldbank.org/html/fpd/notes/34/34thoban.pdf>

<sup>5</sup> Rinku Murgai. “Skirting the Rules: Collective Management and Informal Exchange of Formal Water Rights in Pakistan”.  
<http://dlc.dlib.indiana.edu/documents/dir0/00/00/01/00/index.html>

<sup>6</sup> *Ibid.*

<sup>7</sup> Rashid Faruqee, “Role of Economic Policies in Protecting the Environment: The Experience of Pakistan.”  
<http://econ.worldbank.org/docs/336.pdf>

<sup>8</sup> Green Scissors 2000. <http://www.foe.org/eco/scissors2000/agriculture2.html>

## Making access to water and sanitation sustainable

Equitable access to clean and affordable water and sanitation is clearly a priority for sustainable development. But how can water be delivered equitably, efficiently, affordably and sustainably? Two simple rules will suffice:

### 1. Decentralise water ownership and management by enabling the creation of permanent, enforceable, transferable property rights to bodies of water.

- “When water is a free resource - as it typically has been throughout the ages - we consume as much as we possibly can (given our private costs)...To act as if water is free gives rise to problems. Thus we have to start prioritizing the uses of this resource. Should we use more water to produce extra food, or should we use more water in the cities and force agriculture to become more efficient? Pricing water ensures the most efficient trade-off.”<sup>9</sup>
- But pricing alone is not the solution. Prices without markets can create rents, which merely reinforce the bureaucratic control over resources. What is needed is the divestment of state owned water resources and the creation of true water markets.
- “The best solution for water misallocation is to get government out of the day-to-day allocation decision-making process.”<sup>10</sup>
- When water ownership and management is decentralized, the owners have incentives to invest in improvements in provision. They develop and implement technologies that save water, as well as sanitation technologies, such as sewage collection and disposal, chlorination and other forms of water treatment.
- Decentralization also reduces health and environmental harms as water is allocated to more efficient uses.
- Water markets have been successful in many countries, including Australia, Mexico, Spain, and, perhaps most spectacularly, in Chile.<sup>11</sup> In 1970, only 27 per cent of rural Chileans had access to potable water. In 1981 water rights were privatized and by 1997 rural access had risen to 94 per cent.

### 2. Eliminate subsidies of all forms

- If all direct and indirect subsidies to water use were removed, the market would be able to flourish, free from distortions. As a result, the incentives to increase the effectiveness of water use and to invest in conservation and new technologies would all be that much greater.<sup>12</sup>
- Eliminating subsidies to fertilizers, pesticide and other agricultural inputs would massively reduce the environmental damage caused by overuse of these inputs.

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The Sustainable Development Network (SDN) is a global network of organizations, whose mission is to encourage policies which allow individuals to pursue their goals without bureaucratic intervention. The SDN focuses on the institutional framework within which people act, to ensure that policies encourage individuals to make the best use of resources and to protect the environment, while improving both their own wellbeing and the wellbeing of others.

<sup>9</sup> Bjorn Lomborg, *The Skeptical Environmentalist* (Cambridge UP, 2001), page 156.

<sup>10</sup> “Pipe Dreams for the Poor” by Roger Bate. <http://www.techcentralstation.com/1051/envirowrapper.jsp?PID=1051-450&CID=1051-030402D>

<sup>11</sup> See Roger Bate. “Water – can property rights and markets replace conflict?” in *Sustainable Development: Promoting Progress or Perpetuating Poverty?* ed. Julian Morris, 2002.

<sup>12</sup> APEC Center for Technology Foresight. [http://www.apectf.nstda.or.th/html/body\\_issues\\_p2.html](http://www.apectf.nstda.or.th/html/body_issues_p2.html)