

FACTS

DRIVING DEVELOPMENT BY INVESTING IN WATER AND SANITATION

Five Facts Support the Argument

Every dollar spent on water supply, sanitation and water resources management is an investment with strong potential for a solid return. The returns in multiple sectors could range from USD 3 to USD 34 for every dollar invested to meet the Millennium Development Goal water and sanitation targets. Adding rapidly deployable interventions targeted at the poor, such as improved household water treatment and storage, can have even higher returns, up to USD 60.

Investments in water can be an engine for accelerated economic growth, sustainable development, improved health and reduced poverty. Recent analyses and studies, upon which both this paper and the report Making Water a Part of Economic Development are based, have shown that multiple benefits can accrue. The amount and type of benefits can vary for different water use and management areas, and may have different ranges of variation for different places on the planet.

Today, nearly one person in five cannot access safe water and two in five lack even basic sanitation. Fortunately, improved water supply, sanitation and water resources management – if made a part of national Poverty Reduction Strategy Plans, for example, and accompanied by appropriate resources – can better the livelihoods of billions and generate billions in return.

Five Facts Support the Argument and are contained within.



Benefiting from the Environment

Improved water management, including pollution control and water conservation, is key to environmental sustainability and ecosystem integrity. Well-managed ecosystems more than pay for themselves, providing goods like fish and crops, and services like flood control and water purification. Yet many developing countries are losing 4–8% of their GDP through environmental degradation. **Fact:**

➡ A USD 1 invested in watershed protection can save anywhere from USD 7.50 to nearly USD 200 in costs for new water treatment and filtration facilities.

➡ In Uganda, the pay off from inland water resources use, through forest catchment protection, erosion control and water purification services, is valued at almost USD 300 million a year.

➡ The total benefits of a wetland in Cambodia amount to USD 3,200 per household per year. Poor households are most dependent on wetland resources for providing food security and income. They make on average 77% of their income from fisheries, compared to 56% for the other households.

➡ A study in China points at the considerable gains that can be made by improved water quality. The industrial income lost due to water pollution amounted to USD 1.7 billion in 1992 alone.

Reducing Hunger

Properly nourished people have healthier lives and are more productive. Each episode of diarrhoea sets back a child's growth by lowering its appetite and reducing its calorie and nutrient intake. Improved water management and increased investment in rain fed and irrigated agriculture, and in other water-related food sources such as fisheries, contributes importantly to reducing hunger and also increases household incomes. **Fact:**

➡ Improved management of water and fish habitats have clear economic impacts. For example, the loss of reduced annual catches of mangrove dependent fish species in the Indus delta is more than USD 20 million a year.

➡ In Sub-Saharan Africa, the larger flood plains of the inner delta of the Niger, the Sudd of the Nile, and the lake Chad basin, each yield up to 100,000 tonnes of fish per year and generate USD 20–25 million in income.

➡ Drip irrigation and treadle pumps give but two examples of the benefits of providing access to small-scale water technology to poor farmers. The direct total net benefits of promoting small-scale technologies have been estimated to be USD 100–200 billion for the estimated 100 million farmers targeted.

FACTS

Investment Arguments and Economic Gains

1 Improved water supply and sanitation and water resources management boosts countries' economic growth and contributes greatly to poverty eradication.

➡ Poor countries with access to improved water and sanitation services enjoyed annual average growth of 3.7% GDP; those without grew at just 0.1%.

2 The economic benefits of improved water supply and – in particular – sanitation far outweigh the investment costs, surprisingly good news for Northern and Southern decision makers who often view such investments as mere costs.

➡ Economic benefits ranging from USD 3 to USD 34 per USD 1 invested (depending on the region and technologies applied) would be gained in the health, individual and household, and agricultural and industrial sectors if the water and sanitation MDG targets are achieved.

3 National economies are more resilient to rainfall variability, and economic growth is boosted when water storage capacity is improved.

➡ Improved resilience to the effects of floods and droughts could make Kenya's GDP grow annually at a rate of at least 5–6% – the amount needed in order to start effectively reducing poverty – rather than the current 2.4% annual growth rate.

From Poverty to Productivity

Poor people gain most from reliable access to safe water and sanitation. Better health, reduced health care costs, and time saved in fetching water and finding safe places to defecate, jump starts economies. **Fact:**

➡ Countries with better water and sanitation have enjoyed annual average per capita GDP growth of 3.7%, while comparable countries without improved access averaged only 0.1%.

➡ Kenya, for example, needs an annual GDP increase of at least 5 to 6% to effectively reduce poverty. In 1996, a good year, it managed 4.1%. It suffers a direct long-term fiscal liability of about 2.4% of GDP annually, because of recurrent floods and droughts – natural disasters which better water resource management could ameliorate.

4 Investing in water is good business – improved water resources management and water supply and sanitation contributes significantly to increased production and productivity within economic sectors.

➡ It is estimated that 322 million working days per year – and an annual global value of USD 750 million from working days gained as a result of improved health – could come from meeting the MDG water supply and sanitation targets.

➡ Proper water supply, sanitation and water resources management is increasingly becoming a competitive advantage for attracting business investment.

5 The overall public and private investment needs for improved water supply and sanitation and water resources management are considerable. However, at the country level, meeting such investment challenges is highly feasible and within the reach of most nations.

➡ Broken down nationally, meeting such investment challenges by 2015 is clearly doable. The annual per capita cost to meet the MDG on water supply and sanitation in Bangladesh, Cambodia, Ghana, Tanzania and Uganda ranges from USD 4 to USD 7. The annual benefits accrued could range from USD 3 to USD 34 for every dollar invested.

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Improving Education

Literate people have increased livelihood opportunities. Improved health and reduced water-carrying burdens improves school attendance, especially for girls, and raises education levels. Separate sanitation facilities for girls in schools increases their school attendance. School children are especially prone to worm infections; improving sanitation and hygiene can prevent these infections and contribute to improved school attendance and better concentration. **Fact:**

➡ A staggering 270 million school attendance days could be gained if the MDG targets are met.

➡ Infections can seriously affect children's learning ability. Yet the more they can learn, the more benefits there are: evidence from one African study showed a 10% increase in female literacy rates reducing child mortality by 10%.

Better Lives for Women

Improved access to safe water and basic sanitation has substantial contributions to make to gender issues and improving women's lives. The resulting increased child survival rates will start a trend towards lower fertility rates. That in turn means a lighter burden for women, as few pregnancies per woman reduce maternal mortality risks. Closeby water and sanitation facilities also reduce the risk of sexual harassment, for women and girls in particular, when gathering water or searching for privacy. **Fact:**

➡ In Karnataka, India, women – as they are throughout much of the world – are those most in charge of providing and managing water for home use, household cleanliness and sanitation. Improved services from a USD 200 million project completed in 2001 benefited the women of Karnataka enormously.

Investing in Future Generations

Improved water and sanitation directly reduce the risks of illness and death for especially young children and improves maternal health. They also mean improved nutrition and food security, which reduce susceptibility to disease. Improved health and reduced burdens from water carrying limit direct risks to mothers. Sufficient safe water for washing before and after birth cut life-threatening infections. **Fact:**

➡ Economic growth is higher in countries with lower initial infant mortality rates.

➡ Globally, meeting the target for sanitation would save 1 billion "baby days" from diarrhoea illness.

➡ Four times more children die from diarrhoeal diseases as from HIV/AIDs.

➡ Time saved in water collection or toilet-queuing is time that could be spent more productively on social, economic and educational activities. The World Health Organization estimates that time/convenience savings equivalent to a value of USD 64 billion would accrue from reaching the MDG water and sanitation targets.

Health is Wealth

Easily avoided illnesses hold back economic development. At an estimated 7.5, the global cost-benefit ratio of achieving the MDG water and sanitation targets is significant, mainly due to reduction of diseases and health improvements. Better water management reduces deadly risks from mosquito habitats and a range of water-borne diseases. Diarrhoea kills more people worldwide even than HIV/AIDS, tuberculosis or malaria. In Africa South of the Sahara it has been estimated that malaria alone retards annual economic growth by 1.3%. Improved health and nutrition also reduce susceptibility to and severity of HIV/AIDs and other major diseases. **Fact:**

➡ The cholera epidemic that swept Peru in 1991 cost its economy an estimated USD 1 billion to treat. USD 100 million could have prevented the epidemic.

➡ Meeting the MDG target for water and sanitation implies an annual health sector cost saving of USD 7 billion. An additional USD 340 million is saved due to avoidance of costs incurred by seeking treatment, including expenditures on care, drugs and transport and the opportunity costs of time spent seeking care.

DRIVING DEVELOPMENT BY INVESTING IN WATER AND SANITATION

Good business: that's what investing in improved water, sanitation and water resources management is for national economies and poor people. The greatest economic benefits of such investments will be felt in those countries with the greatest water, sanitation and poverty challenges.

That's because such investments, through among others health improvements, boost economies and allow individuals and households to explore new livelihood opportunities and to develop businesses to increase productivity and venture into new markets. Investing in the health of people, ecosystems and more efficient water use are investments that not only yield immediate economic benefits but also safeguard future economic gains.

To secure these benefits, strong leadership and commitment from government – ministers and agencies with authority for budget allocation, most of all – is needed. Support and commitment from civil society, business leaders and opinion makers is needed, too.

Such leaders need to make water and related services a part of the concern for economic development. There is a need to understand, articulate and ensure that the economic benefits of improved water supply and sanitation and water resources management be included in national strategic macro-economic decision making. Simply put, investments in the water sector generate economic benefits that considerably outweigh costs, are critical for economic growth and help eradicate poverty.

This compelling case should help decision makers to take immediate action. At the national and global levels there is considerable momentum that will grow as understanding increases that the investments required are within reach for most countries and will benefit especially poor people.

The Stockholm International Water Institute (SIWI, on behalf of the Governments of Norway and Sweden) and the World Health Organization (WHO), have produced Making Water a Part of Economic Development, a report which reaches five main conclusions. Those conclusions are presented here as "Five Facts Support the Argument."

The review by SIWI and WHO of economic analyses done in relation to water development, management and use points towards significant differences in the economic returns of the various water investment options that exist.

Based on the review, a poverty-focused, preliminary investment priority list can be established:

- (1) improving access to safe water supply and basic sanitation, and hygiene including household water management, have the highest immediate economic returns;
- (2) protecting the integrity of aquatic and water-related terrestrial ecosystems; and
- (3) water resource management, including, where feasible, investment in hydraulic infrastructure such as dams, irrigation schemes and flood control works.

The review also revealed important qualitative and quantitative differences between analyses of the various options up to date, and this global ranking may not apply in a specific national or local context.

Making Water a Part of Economic Development, and its companion, Securing Sanitation: The Compelling Case to Address the Crisis, can be downloaded from www.siwi.org and from www.who.int/water_sanitation_health.



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