



Making every drop count

Water and Australian aid



The Australian Government's
Overseas Aid Agency



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An Indonesian child enjoys a drink of water on the island of Flores. After an earthquake and tidal wave devastated the island in 1992, the Australian and Indonesian Governments joined forces to rebuild water supply and sanitation systems, improving the health and lives of 400,000 people.

Photos pages 15 and 17: Will Salter Photography.

Foreword



Water is essential for health, food production, and poverty reduction.

But it is a finite and vulnerable resource under mounting stress.

Over the past century, while world population has tripled, water use has increased six fold. In Asia, 2 billion people do not have access to hygienic sanitation, and around 700 million people do not have access to safe drinking water. Globally, ten thousand people die each day from water related diseases.

And demand for freshwater continues to grow at unsustainable rates. Population increases, the needs of industry, agriculture and food production, and growing urbanisation are placing increasing pressures on water resources and infrastructure. It is estimated that by 2025, 4 billion people will be living in conditions of water stress.

The rising competition for water has the potential to increase tensions between users, both within and between countries. In our region, water looms as a major transboundary issue that could threaten security and stability.

For these reasons, I identified water and sanitation as a priority focus for our aid program in my statement to Parliament in September last year *Australian Aid: Investing in Growth, Stability and Prosperity*.

Making every drop count articulates how our aid program will work with partner countries to help address the region's water challenges. The policy emphasises the fundamental importance of water governance in managing the sustainable use of water between its competing demands. This is complemented by a focus on improving the efficiency of existing water systems and increasing access to water and sanitation services, especially for the poor.

Australia is well placed to assist, with lessons hard won from managing water resources on the world's driest inhabited continent. *Making every drop count* seeks to use this knowledge and expertise to help our developing country partners tackle their water challenges. In doing so, we will strengthen our existing partnerships and forge new ones with Australian organisations involved in water and major water investors such as the World Bank.

Water is essential for development. Australia has much to contribute. *Making every drop count* will ensure that contribution is effective.



Securing appropriate treatment for urban wastewater is a major challenge in Asia. In East Timor, an Australian project assists in clearing and rehabilitating city drains before the onset of the wet season.

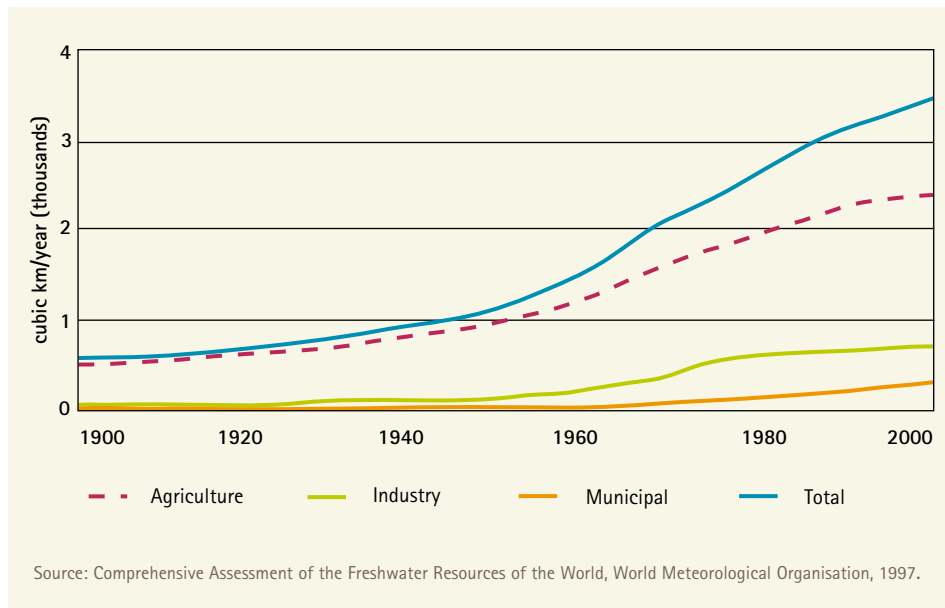
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1 The challenge

Water is essential to economic growth and poverty reduction. Yet global demand for freshwater is growing at unsustainable rates. By 2025, four billion people – one half of the world's projected population – will live in areas where there is insufficient water.

Global water withdrawal by sector (1990-2000).



The poorest suffer most. Over 1.1 billion poor lack access to safe water. As a result, 10,000 people die each day from avoidable water-related diseases.

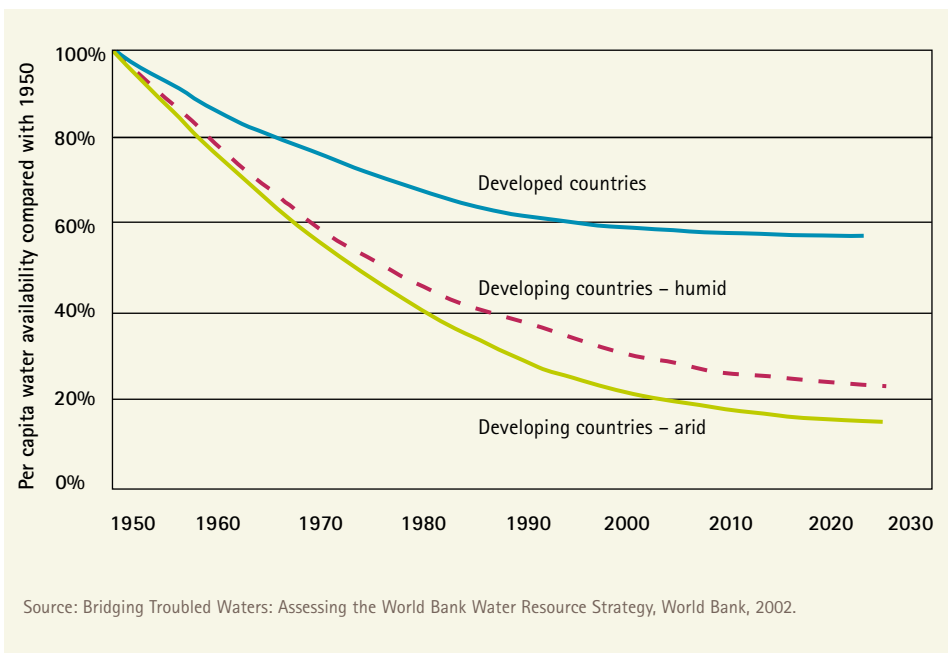
Food security is also at risk. Salinisation, waterlogging and deteriorating water quality threaten the region's agriculture.

By 2025, half of Asia's population will live in urban areas. This will further increase demand for water supply and for sanitation and wastewater treatment facilities. In Pacific Island countries, rapid population growth, urbanisation and demands of industrial development are placing great strains on limited water resources.

As global water scarcity grows, competition between users and jurisdictions will increase. Without effective management of water resources, tensions may rise both within and between countries.

For Australia the implications are significant. Australia's aid and foreign policy objectives recognise the importance of water to regional growth and stability. This policy outlines how we will deploy Australian experience, expertise and leadership to strengthen sustainable access to water and help secure regional and national prosperity.

Water availability continues to decline (1950–2030).



Water: An International Issue



Two billion people in Asia lack access to adequate sanitation services. An Australian project in Bangalore, India helps local authorities to extend and improve sanitation services to the city's poor.

The UN Millennium Summit in 2000 agreed to a set of development targets known as the Millennium Development Goals (MDGs). The Summit set a target to halve by 2015 the proportion of people without access to safe drinking water. The World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002 added an additional target of halving by 2015 the proportion of people who lack access to basic sanitation. Water is also a major factor for meeting many of the other international development goals including eradicating extreme poverty and hunger, reducing child mortality, combating the incidence of malaria, and ensuring environmental sustainability.

A consensus emerged at the WSSD on what must be done to attain these goals. This included helping developing countries

to draft national water resource management and efficiency plans and to build their capacity to monitor the quantity and quality of water resources.

The WSSD reaffirmed the need to mobilise resources from all sources in order to meet these international goals. While recognising the important role of well-targeted and effective aid, the Summit stressed the need to mobilise domestic resources, including those generated from greater trade liberalisation, and foreign direct investment in support of development objectives. In this regard, the Summit emphasised the fundamental importance of sound national governance to ensure these resources are generated and used effectively to meet the international development goals.

2 Australian and international experience



Many poor communities are forced to fetch water from distant sources. This burden typically falls on women and girls, often depriving girls of the opportunity to attend school.

Investments in water infrastructure driven by narrow sectoral interests do not lead to efficient water use. Water is a social, economic and environmental resource. Planning needs to reflect the integration of water with other natural and socio-economic systems. This requires capacity and cooperation between governments, the private sector and communities.

Implementing an integrated approach to water takes time. The demands of industrial, agricultural, environmental and household groups need to be reconciled. This can be contentious and complex. Moreover, experience suggests access for the poor must be an explicit aim if they are to benefit from reforms.

Australia has learned many lessons from managing its own water resources. Reforms being implemented in Australia, such as the right to use and trade water, and environmental management techniques, have the potential for adaptation and application in developing countries. Lessons on approaches to catchment management, public participation and inter-government coordination arrangements are also relevant.

Decades of aid program experience of implementing water assistance in the Pacific and Asia indicates that while activities must be tailored to individual country circumstances, there are common challenges. These include the need for:

- ensuring access for the poor;
- maintenance of existing infrastructure; and
- participation of user groups in the development and operation of water services.

Australia's Major Water Activities

The Bangalore Water Supply and Environmental Sanitation Project (India, \$8 million) is helping the Bangalore Water Supply and Sewerage Board (BWSSB) to prepare a water supply and environmental sanitation master plan. The plan will provide a blueprint for supplying essential water and sanitation services for the city's 6 million inhabitants. This will be instrumental in assisting the BWSSB to attract capital investment from multilateral or private sector sources to rehabilitate and build infrastructure needed to extend access for the poor.

The Cuu Long Delta Rural Water Supply and Sanitation Project (Vietnam, \$26 million) will bring water supply and sanitation services to 600,000 people living in poor rural communes. Australian support will provide safe drinking water and improved sanitation services, drainage facilities and solid waste disposal. The project will provide support for local communities to plan, manage and maintain these facilities.

The India/ South Asia Water Supply and Environmental Sanitation Program (India and South Asia region, \$43 million) will help improve water and sanitation policy implementation and service delivery, benefiting 400,000

people in North East India. Collaboration with the World Bank's regional water program will help meet water policy reform needs across South Asia.

The Water and Agricultural Management Project in Hebei (China, \$16.6 million) will demonstrate technologies and practices that can help poor farmers increase agricultural production and reduce water use and negative impacts on the environment. Nine hundred thousand poor farmers will benefit from Australia's assistance through savings on water, energy and fertiliser, and through increased production and quality of agricultural outputs.

The Kiritimati Water Supply and Sanitation Project (Kiribati, \$6 million) aims to provide Kiritimati Island with safe water supply and environmentally friendly sanitation. Our assistance is supporting civil works to extract and deliver water from underground sources and to construct composting toilets, which will help reduce contamination of groundwater supplies from septic tanks and pit latrines. The composting toilets are being built where people live and work so human waste can be dealt with on site without the use of water.

3 Future directions



Access to safe drinking water and sanitation facilities are vital to the healthy development of children. A lack of these services helps spread diarrhoeal diseases, which kill a child every 15 seconds.

The aim of Australia's water assistance is to:

help reduce poverty and raise living standards in developing countries through promoting the efficient, equitable and sustainable use of water resources.

Australian assistance will reflect the principle that water is subject to many economic and social demands. It will build on lessons learned from domestic and international experience and tailor activities to individual country circumstances. It will also build on existing policies on gender and development, poverty reduction and governance. As the scale of the region's water challenges is immense, we will identify strategic interventions that maximise our impact.

Australia's water assistance will focus on two central planks:

- Water governance; and
- Delivery systems.

3.1 Water governance

Better water planning will help generate long-term economic growth and poverty reduction by fostering productive, equitable and sustainable allocation and use of water resources. Improving institutions, stakeholder participation and policies will improve sustainability and help ensure benefits are shared with the poor.

3.1.1 Strengthening water policy, institutional arrangements and legal frameworks

The right policy settings are critical in managing water resources and services in a sustainable way. Australian assistance will promote an integrated approach, recognising the need to manage water and related land resources together and to balance interests for finite water resources.



The Mekong River is a critical resource for countries in South East and East Asia. Strengthening the cooperative and effective management of this transboundary resource will help promote growth and stability in the Mekong region.

Australia will also help strengthen institutional arrangements governing water management, particularly as it relates to transboundary water resources issues. This will build on our experience working with countries involved with the Mekong River Commission. We will also focus on

strengthening legal frameworks to help establish enabling environments and regulatory regimes for private investment in water supply and sanitation services.

3.1.2 Building water resource planning and management capacities

Australia is helping many countries build their water management capacities, including strengthening Vietnam's planning and management of water resources, and enhancing management of agricultural water in China's Hebei province.

We will build on these activities to strengthen capacity at all levels of partner governments to manage water resources. This will include assistance for river basin development and management plans. We will also improve the capacity of partner governments to use hydro-meteorological and other data needed for water resources planning and monitoring. Building local level management capacities, particularly to strengthen participation by all water users in planning processes, including poor and under-served communities, will be emphasised.



Providing water and sanitation services for the rapidly growing urban population in Asia is an urgent challenge.

3.1.3 Promoting better allocation of water

Supporting a more equitable, efficient and sustainable allocation of water is critical.

The use of pricing to reflect water's true cost will be promoted as an effective means to reduce demand and to encourage more efficient allocation and use.

A central priority for Australian assistance will be to ensure pricing reforms take account of the capacity of the poor to pay connection and user costs. This could include assistance in setting appropriate tariffs and water service standards, and advice on cross-subsidisation.

3.2 Delivery systems

Access to water supply and sanitation generates growth and improves the health and economic well being of the poor. All developing countries face a major challenge in developing and maintaining appropriate water infrastructure to deliver these essential services and in promoting and improving water quality and efficiency. But improving these services requires more than simply providing more money for wells, taps and toilets. Strong governance frameworks are also needed to ensure sustainable management and operation of water infrastructure.

3.2.1 Financing and improving delivery of water supply and sanitation infrastructure

More water supply and sanitation infrastructure is required to meet the essential needs of the poor. The Global Water Partnership estimates that an additional US\$9 to 30 billion is required annually. To meet these basic needs, finance from all sources - domestic savings, foreign investment, multilateral lending and development assistance - will need to be mobilised.



Australia is well placed to share water-related knowledge, skills and technologies with our partners in the Asia Pacific. In Vietnam, Australia is supporting technical training for workers at Vinh Long's water treatment plant.

As a provider of grant aid, Australia is not well placed to fund large-scale water infrastructure, particularly in urban areas. Australia's role is to help partner governments create the enabling environment and regulatory frameworks necessary to facilitate private sector and multilateral investment. This can be done, for instance, by supporting the production of water supply and sanitation master plans, as we have done in Bangalore India, and by assisting to establish robust regulatory regimes.

In rural areas, where the scope for attracting private finance and the provision of government services are limited, grant-funded small-scale infrastructure can serve as an important demonstration effect. Building on our experience from activities such as the community water supply project in East Timor, Australia will work with community organisations and local authorities to deliver essential services in rural areas, with a strong focus on community participation.

3.2.2 Improving operation and maintenance of water supply and sanitation infrastructure

Securing sustainable operation and maintenance of water supply and sanitation infrastructure has been a consistent problem in the past. Australia will build on the experience gained from activities such as the Samoa Water Authority Strengthening Project to help partner governments and local communities develop asset maintenance and management plans. We will also provide assistance in areas such as budgeting, revenue collection, and technical training to undertake routine operation and maintenance.

3.2.3 Improving water quality



A focus on water quality is an essential component of water resource management. Australian and Vietnamese project staff undertake water testing as part of the Cuu Long Delta Rural Water Supply Project, Vietnam.

Poor water quality poses a major threat to human health. Many people are forced to drink contaminated well water because their surfacewater is polluted with sewerage and agricultural wastes. Without careful management overall water quality will continue to decline, posing significant future health threats.

Protecting and restoring water quality is a central aspect of ensuring access to safe water. Our experience from activities such as the Hikkaduwa Sewerage and Waste Management project in Sri Lanka demonstrates that effective sanitation, wastewater treatment and solid waste management are integral to preventing pollution of water resources and protecting the natural environment on which these resources depend. Our focus on water quality will continue, including through support to reduce and recycle

agricultural run off and industrial pollution and to reduce siltation through better catchment management. Australia will also assist with development of financial incentives such as polluter-pays systems to decrease water pollution. Opportunities to promote water purification technology and to strengthen capacities to monitor and control water quality will be pursued.

3.2.4 Improving water efficiencies

Agriculture accounts for 70 per cent of water use. Promoting water-efficient agriculture is central to effective water management. Pricing policies play an important role in encouraging more water-efficient agriculture.



Globally agriculture accounts for 70% of freshwater usage. Improved irrigation efficiency is essential in the face of competing demands for water and growing food production needs.

Australia will help improve water delivery systems as a practical first step to reduce wastage and encourage conservation. Australia will also promote more efficient irrigation and drainage practices to conserve water and minimize the effects of salinity and waterlogging. Opportunities, including in partnership with the Australian Centre for International Agricultural Research (ACIAR), to demonstrate and assist uptake of more water-efficient irrigated and dry-land crops will be investigated.

3.2.5 Supporting better flood and drought management

Floods and droughts threaten access to safe drinking water and food security. Floods can inflict loss of life and destroy essential infrastructure. Strengthening capacities to plan for and mitigate these natural disasters is an important part of effective water resource management.

Australia is working with China to improve flood management systems in the Yangtze region. In Vietnam, implementation has just been approved for a project on Vam Nao island in southern Vietnam to mitigate flood damage and improve agricultural production. There is further scope to provide our neighbours with technical advice on infrastructure to minimise flooding and to increase rainwater collection and water storage capacities to deal with drought. The aid program will also continue to help mitigate climate change and provide assistance for better adaptation measures to deal with its effects.



Infrastructure assistance is a valuable opportunity to transfer skills and knowledge and to open the dialogue on broader water management issues such as operation, maintenance and budgeting to meet recurrent costs.

4 Making it happen

To implement these new directions we will:

- i) **promote attention to water issues in Australia's aid program by;**
 - integrating consideration of water issues into our country and regional program strategies, and in dialogue with our development partners.
 - drawing out the links between poverty and water in the poverty analyses underpinning our program strategies.
 - adopting long-term planning, recognising that the water reform process requires sustained engagement by key stakeholders, including donors.
 - ensuring active community participation in program design to ensure new water facilities meet community demands and receive local support.

- ii) **enhance access and disseminate Australian knowledge and expertise by;**
 - developing a dedicated water section on the Australian Development Gateway, an internet portal providing developing countries with publications, training courses, research and other water-related resources from Australian government, private sector, civil society and academic sources.
 - funding research to tackle practical and policy level issues in developing countries. This could include analysis of policy options within individual country contexts, such as the impact of pricing reform on the poor.

The aid program will draw on Australia's globally recognised expertise in water management, including:

- Demand management strategies, including pricing reform
- Integrated catchment management
- Natural resource management using watershed or ecosystems approaches
- Transboundary water resources management
- Public participation in planning and management processes
- Urban water supply, sewerage treatment and stormwater management
- Water-efficient crops
- Public-private partnerships
- Salinity
- Erosion management.

Partnerships

Effective partnerships are essential to mobilise the political will and financial and technical resources needed to address freshwater issues in the developing world. Australia has a strong track record of forging partnerships on water issues.

The partnership between the *Murray Darling Basin Commission* and the *Mekong River Commission (MRC)* has drawn on Australian experience in transboundary water management to strengthen the MRC's capacity. The partnership has also strengthened ties between the countries of the Mekong Basin and has assisted in establishing participatory approaches to water management issues.

Australia has a long history of collaboration with the World Bank. This brings Australian expertise to bear on issues that Australia, as a mid-sized donor,

may not otherwise be in a position to tackle. In Indonesia, Australia has worked with the Government and the Bank to develop a national policy framework for water supply and sanitation that focuses on improving access for the poor. The *Australia-World Bank Partnership for Water and Coastal Resource Management* will also facilitate the application of Australian knowledge and expertise to World Bank policy formulation and water-related investments.

In East Timor the *Community Water Supply and Sanitation Project* has built partnerships between Australia and local community groups. Technical assistance, supplies and training provided by Australia are enhancing the capacity of local people to manage and develop their water resources.

iii) build strategic partnerships by;

- selecting and working with partners that complement Australian efforts and help maximise our overall impact. We will focus on strategic alliances to help partner governments secure finance from the World Bank and Asian Development Bank, the region's major water investors, and the private sector as we did in Bangalore (see Box on "Partnerships"). We will extend our successful collaboration with NGOs, which are key partners in the delivery of community-focused rural water supply and sanitation. We will also forge partnerships with global and regional water organisations, the private sector and civil society, each of which have an important role to play in improving management, delivery and utilisation of water resources.
- working in collaboration with ACIAR and, through it, the Consultative Group for International Agricultural Research (CGIAR), in developing more water-efficient agricultural approaches.