



Australian Government  
Aid Program



# Water: the heart of development in the Mekong

Australian Mekong Water  
Resources Program

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Cover photo: River transport is essential to move people and goods in the Mekong Region

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Australia supports improving Mekong waterways navigation

# Overview

Water resources lie at the heart of development in the Mekong Region. Quality of life in the region will be further improved with wise choices about sharing, developing and managing water—to produce food and energy and to maintain vital ecosystems.

The Mekong Region faces rapid geopolitical, economic, social and environmental change—creating positive results in some areas and challenges to be resolved in others.

Planned hydropower dams and other water projects will transform the Mekong Region's rivers, wetlands and lakes. Substantial economic benefit could flow from these initiatives if the social, environment and economic impacts are fully assessed and only the best options are pursued.

Australia is committed to helping Mekong governments to manage effectively their water resources. Managed by the Australian Agency for International Development (AusAID), the *Australian Mekong Water Resources Program* seeks to assist the countries of the Mekong Region to reduce poverty and achieve sustainable development through the equitable and efficient use and management of water resources.

Australia's support to better managing water is one element of a large and effective aid program in the Mekong Region. This year, Australia will provide more than A\$230 million in assistance in the Mekong Region. All of Australia's assistance is in the form of grant aid and does not need to be repaid.

To increase its effectiveness the *Australian Mekong Water Resources Program* now emphasises the importance of establishing partnerships with 'non-state actors' from the private sector, civil society and the science sector. These actors are critical to meeting program objectives.

The *Australian Mekong Water Resources Program* is managed by the AusAID Mekong Water Unit at the Australian Embassy, Vientiane, Laos. This in-region presence strengthens Australia's ability to respond effectively to water-related development challenges in the Mekong and make informed decisions about future support.

Australia's support to better managing water is one element of a large and effective aid program in the Mekong Region



Wild fisheries underpin food security and nutrition for many Mekong people

# Introduction

The program supports priorities identified by Mekong country governments...

The *Australian Mekong Water Resources Program* is centred on the Mekong Region, with a particular focus on the iconic Mekong River and its many tributaries. This publication outlines:

- > the Mekong regional context in relation to water resources
- > the goals and objectives of Australian support
- > activities the Australian Government supports and the results it hopes to achieve.

The program supports priorities identified by Mekong country governments, and is implemented in partnership with the Mekong River Commission (MRC), the World Bank and the Asian Development Bank (ADB). It also reflects Australia's new direct engagement with, and support for, the non-state actors<sup>1</sup> who are critical to achieving development results on water issues in the Mekong Region.

With these partners the Australian Government seeks to assist the countries of the Mekong Region to reduce poverty and achieve sustainable development through the equitable and efficient use and management of water resources.

Seasonal rain means rice planting time



<sup>1</sup> In this context, non-state actors are defined as private sector, civil society and science sector organisations active in water resource development and management issues.

# Context

In the Mekong Region many water resource projects have been completed, are underway, or are being planned. These projects serve many purposes, including to: control floods; expand food production; supply clean water for people to consume; improve navigation; and, boost energy production through hydropower. While some projects have been celebrated, others have led to disputes and protests, particularly those that disrupt, disturb or destroy existing river systems. Projects involving altering sediment and nutrient loads, using groundwater, and diverting water (inter-state, intra-state, inter-basin and intra-basin), for example, are often hotly contested.

Numerous hydropower dams and other water resource projects are being planned by private and quasi-public sector developers, transnational capital providers and the six governments of the region. A recent count by water resource experts found 82 existing and 179 planned hydropower projects in the region, many on Mekong River tributaries. If completed, these developments will transform the region's rivers, wetlands and lakes—as well as national and regional economies, societies and ecosystems.

The Mekong Region is also beginning to deal with the challenges of climate change. Experts project that changes in rainfall patterns, rising sea levels and more frequent and severe tropical storms will have an acute effect on the region's water resources. Experts also predict that delta areas, and especially the highly productive Mekong Delta in Vietnam and Cambodia, will be severely affected by climate change.

Extensive discussions continue about surface water and the way it should be best used. As increased exploitation of surface water leads to greater scarcity and more pollution, ground water utilisation also looms as an important issue.

These challenges of rapid hydropower development, climate change, surface water use and greater exploitation of groundwater are not uncommon in the water resources management arena. However, the transboundary nature of Mekong waters adds the critical dimension: to be fair, decision making needs to be based on regional evaluation of benefits and costs, rather than only concentrating on national interests.

...the transboundary nature of Mekong waters adds the critical dimension....

Growing energy demands are a driver of hydropower expansion



# The Mekong Region



The word 'Mekong' means many things. It can refer to the river itself, to the river basin or to the diverse region through which the river flows.

The Mekong Region is sometimes also called the 'Greater Mekong Subregion' or the 'Mekong Subregion'.

The Mekong is the longest river in Southeast Asia, running for an estimated 4 900 km. It is the epicentre of contemporary debates about 'water resources development' in the region.

Most commonly, the region is taken to encompass the territory, ecosystems, people, economies and politics of Burma, Cambodia, China's Yunnan Province, Laos, Thailand and Vietnam. It covers 2.3 million km<sup>2</sup> and is home to more than 240 million people.

The Mekong River Basin (watershed or catchment) is 795 000 km<sup>2</sup> and comprises 4% of Burma, 86% of Cambodia, a very small percentage of the territory of China, 97% of Laos, 36% of Thailand and 20% of Vietnam. About 70 million people live in the basin, but strikingly only nine cities have more than 100 000 people.

Increasing in profile is the Greater Mekong Subregion Cooperation, initiated in 1992 with support of the ADB and including a focus on a 7th economy, China's Guangxi Zhuang Autonomous Region.

Source: Map No. 4112, Rev. 2. January 2004. The United Nations Cartographic Section, New York, US



# Australia's goal

Australia's aim is to promote regional cooperation to achieve sustainable development through better use and management of the Mekong Region's water resources.

The program goal reflects the importance of water as a vital resource in the Mekong Region—essential to produce food, grow industry, generate energy (through hydropower), and conserve ecosystems. With effective regional cooperation, water resources can be more wisely used and managed. This, in turn, can help reduce poverty and achieve sustainable development for the millions of people who depend on Mekong Region water resources for their livelihood.

## Australia's three objectives

The *Australian Mekong Water Resources Program* is founded on three strategic objectives: strengthening institutions; building reliable knowledge; and, making more informed decisions on the region's water resources.

### Strengthening institutions

*Strengthening institutions to improve integrated water resource management (IWRM) in the region.*

Equitable and efficient management and use of water resources contributes to improved regional cooperation, poverty reduction and sustainable development. IWRM, however, needs effective institutions to back it up—institutions that are willing and able to support the more efficient use and management of water and related resources.

## Supporting the MRC and cooperation with the Murray-Darling Basin Authority

Australia has been an active supporter of improved water resource management in the Mekong Region for more than 15 years. In the past ten years the focus of this support has been the Mekong River Commission (MRC). During this time Australia has provided more than A\$10 million to the MRC to improve basin planning and river data.

An enduring element of this support has been the twinning relationship between the Mekong River Commission and the Australian Murray-Darling Basin Authority since 1996. This allowed for joint learning between the two organisations on issues such as basin planning and IWRM and fostered linkages between Australian and Mekong water resource professionals. A third phase of this relationship is planned under the MRC's Integrated Capacity Building Program.

### **Building reliable knowledge**

*Improving the availability of reliable knowledge about water resources.*

A reliable knowledge base is essential if informed decisions are to be made on current and future water resource management in the Mekong. This requires credible scientific and technical information and data. Currently, there is not enough sound information available on the region and data that exists is often not shared, integrated or synthesised.

## Increasing knowledge of river flows to protect communities

Informed decisions about water resources are founded on accurate, credible and accessible information.

The Appropriate Hydrological Network Improvement Project (AHNIP) supported the establishment of 18 measuring stations along the Mekong River, including two within China. The project built technical capacity to gather and analyse river flow data. In 2005, AHNIP helped strike a landmark agreement between the MRC and China to share data during the wet season. This agreement continues to be renewed annually.

This capacity has proven crucial in providing early warning of floods. During the severe 2008 flood AHNIP stations provided real-time information that helped lower Mekong countries prepare for the rising waters.

### **Making more informed decisions**

*Influencing policies on water resources, and negotiations with public sector, private sector and civil society actors.*

The institutional and knowledge constraints outlined above have resulted in rudimentary decisions being made on water resource management in the region. Indeed, planning and decision making remains disconnected from national water resources development agendas and individual project priorities. And at present significant decisions are being made in national and provincial capitals and company board rooms, not within intergovernmental processes. Urgent work is needed to ensure that more informed decisions are made on water resources in the region.

## Safer and more efficient navigation on the Mekong between Cambodia and Vietnam

Australian support for the MRC's Navigation Program, provided in partnership with Belgium, helped Cambodia and Vietnam to sign the *Treaty on Waterway Transportation* in 2009. This treaty allows freedom of navigation on Mekong waterways between the two countries and increases access to the Mekong River system for foreign vessels.

River transport is more efficient than moving goods by road or rail, and is more environmentally friendly. On average one litre of fuel can move one ton of cargo 182 km by river, compared to 71 km by rail and 21 km by road. Similarly, river freight produces on average about one fifth of the greenhouse gas CO<sub>2</sub> per ton per km that is produced by trucking goods on the road.

The *Treaty on Waterway Transportation* will increase regional and international trade, reduce shipping delays, and make river-based customs and immigration procedures more efficient. It also introduces a range of measures for more efficient and safe transit of vessels that use the more than 60 Cambodian and Vietnamese ports.

### How does Australia pursue its objectives?

To achieve the program's goal and objectives, activities supported by Australia address one or more of the following priority issues:

- > **Capacity building**—technical and social capacity building to enable integrated water resource management, a process referred to in short form as IWRM.
- > **Environmental change**—adapting to climate and other environmental change.
- > **Food security**—ensuring there is enough food for vulnerable and marginalised people.
- > **Hydropower assessment**—comprehensively assessing options, including alternatives.
- > **Transboundary engagement**—engaging more constructively on water-related issues between all six countries of the Mekong Region.
- > **Corporate social responsibility**—encouraging private sector leadership and accountability.

In summary, strengthening institutions, building reliable knowledge and making more informed decisions on the Mekong Region's valuable water resources are fundamental requirements of effective IWRM. This is a major challenge, particularly in any multi-country setting that needs to negotiate on national and transboundary waters. The Mekong Region is no exception.



Australia supports capacity building for water resource management in the Mekong Region

### Flood protection and poverty reduction in the Mekong Delta

Australian support of the North Vam Nao Water Control Project in the Mekong Delta, Vietnam, has allowed about 300 000 people to live without the threat of extreme flooding events.

The project, delivered in close partnership with the An Giang Province, improved the agricultural productivity, health and livelihoods of people living on North Vam Nao Island.

It raised and strengthened the dyke that skirted the island, set sluice gates into the perimeter dyke to control the flow of water through canals and strengthened the island's internal dykes.

The result is a predictable supply and control of water for crop production, as well as protection of assets. Poverty rates in some districts within the project area have fallen by up to 50 per cent.

# What is Australia funding now?

...eight key activities with the Mekong River Commission, national governments and non-state actors

The activities of the *Australian Mekong Water Resources Program* have been carefully chosen to make a constructive contribution to improving the region's water governance and promoting greater cooperation between Mekong countries. The program has eight key activities:

## **Mekong River Commission**

Three activities:

- > The Integrated Capacity Building Program is developing a critical mass of Mekong nationals qualified to improve the capacity of the MRC and other players so they can operate more effectively in the water resource management arena.

## Australia Awards—Scholarships for Mekong water professionals

A key challenge for the region is developing the human resource potential of water experts. Mekong countries need trained and skilled water engineers, hydrological experts, water resource planners and environmental specialists to help make informed decisions.

The MRC is benefiting from Australia Awards.

Mr Lilao Bouapao, for example, is at the forefront of work on the development of social impact monitoring, vulnerability assessment and integrated basin flow management at the MRC. A senior social science specialist in the Environment Programme, Mr Bouapao earned his Master of Science at the University of Sydney in 2001 with an Australian Development Scholarship (ADS). He now contributes directly to the MRC's strategic goals and says: 'We are developing understanding of the issues concerned, as well as indicators and other measures to monitor and assess the changes we are seeing and will see in the future.'

Another ADS beneficiary, Mr Phetsamone Southalack, applies his Master's Degree in Natural Resources from the University of New England in his work on the MRC's Basin Development Plan. One reason he chose his study was to add value to his home country. 'Laos is developing rapidly and we need to know how we want it to develop,' Mr Southalack explained. 'Sometimes those involved in water resource planning only take a national perspective, but integrated river basin planning must consider more transboundary impacts. I can help bring a regional perspective into national planning.'

Human resources management is critical to the smooth running of the MRC Secretariat and Ms Bounthanome Mixap is putting her Bachelor of Commerce gained as an ADS at University of Hobart to good use in the Human Resources Section. 'With staff coming from four member countries and international positions this is a busy role,' said Ms Mixap. 'What we do is vital to the smooth running of the Secretariat.'

[www.australiaawards.gov.au](http://www.australiaawards.gov.au)



Rivers and other Mekong waterways provide essential transport services

- > The Mekong Integrated Water Resource Management Project builds on previous MRC work to develop water resource management tools, procedures and guidelines. These measures are essential for making fully informed decisions on the reasonable and equitable use of water across the Mekong Basin (as per Article 5 of the *1995 Mekong Agreement*).
- > The Climate Change Adaptation Initiative is building knowledge and improving the capacity of Mekong governments to adapt to and manage climate change.

### **National governments**

Two activities:

- > Laos IWRM support.

With the World Bank, Australia is supporting the Ministry of Energy and Mines to: improve the mining and hydropower sectors; increase the efficiency and transparency of hydropower governance; and, provide professional training and share information on hydropower development.

In partnership with the ADB, a new program of support for the Water Resources Environment Administration is being developed to: assist it to formulate national policies and strategies and reform legislation; build the technical capacity for hydrological and metrological data handling; and, educate the next generation of Lao water experts.

## Australia Awards—Fellowships for Mekong water professionals

The Australian Leadership Awards (ALA) Fellowship program has supported Mekong water professionals to gain experience in Australia.

The Australian International Centre of Excellence in Water Resources Management (ICEWaRM), with funding from the ALA program, has played an increasing role in recent years to build water management capacity in Mekong countries.

In the last two years, about 70 Fellows from five Mekong countries undertook water management courses organised by ICEWaRM in Australia. This included participants from China funded under the Australia-China Environment Development Program.

ICEWaRM delivered professional specialist short courses, field and industry visits, workshops and planning sessions for the Mekong Fellows. Courses have covered water modelling, catchment management, water policy and planning, water quality and reuse.

ICEWaRM provides an international gateway and a national focus to Australia's education, training and research expertise in water resources management.

- > Cambodia IWRM support.

In partnership with the ADB, Australia is considering a contribution to a new program of assistance to the Ministry of Water Resources and Meteorology. The activity is expected to focus on the Cambodian irrigation sector and will also deal with transboundary water resource management, including the opportunities and risks of water resource development within the Tonle Sap area.

### **Non-state actors**

Three activities:

- > Support of the Cambodia Development Resource Institute (CDRI) allows this independent development research organisation to build water governance research capacity. Australian support also helps educate the next generation of Cambodian water experts through joint CDRI-University of Sydney post-graduate scholarships.
- > As part of the Alliance between AusAID and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Mekong Region Futures project is exploring the nexus between food, water and energy in the Mekong Region to contribute to better planning decisions in and between these sectors.
- > A facility to support the private sector, civil society and the science community active on Mekong Region water issues is under development. An early example of these activities is work with the Challenge Program on Water and Food (CPWF) to support consultations and trials in the Mekong of the draft Hydropower Sustainability Assessment Protocol. Australia is also working with the CPWF to develop a funding window through which non-state actors can receive assistance to study Mekong water governance issues and contribute to policymaking. To be eligible for funding, initiatives will need to demonstrate strong alignment to the goals and objectives of the *Australian Mekong Water Resources Program*.



