



# IN ACTION

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## Addressing the water and sanitation challenges of Vietnam's development

Vietnam has been experiencing rapid economic growth and over the last 10 years 20 million people have been lifted out of poverty. With a 2006 GDP growth rate of 8.2% it ranks third to China and India.

Despite this achievement many people still do not have access to safe water and adequate sanitation. Many of the country's water pipes are old and leaking, and a recent survey showed that only 18% of rural communities had sanitation facilities that met the government's hygiene standards. Moreover, only 12% of schools had acceptable toilet facilities.

To aid change, Borouge is working with the Vietnamese Water Supply Association and universities to improve training and education in water and sanitation.



*Vietnam has been growing fast over the last decade and has made some progress in meeting the U.N. Millennium Development Goal of halving, by 2015, the number of people without access to safe drinking water and proper sanitation. However there are many challenges left, particularly in rural areas where sanitation still lags well behind the water supply situation.*

The current population of Vietnam is 84 million people with an average GDP per capita of USD 618. Although a one-party state, the government introduced liberal market policies as long ago as 1986. There is currently a plan to privatise the water companies by 2010. Under this plan the government will still retain a 51 % share but will allow private capital investment.

## The water landscape

There are 66 water supply companies in Vietnam and 78 % of urban households have piped water. However, only 44 % of rural households can be considered to have ready access to safe drinking water.

During the last decade the Vietnamese Government and the donor/NGO community have been actively investing in water supply. Currently there are over 170 urban water projects underway (valued at close to USD 1 billion) with a target to provide clean water nationwide by 2020.

This expenditure is having an effect on water leakage reduction, bringing it down from the level of 70 % in 1994 to 15-35 % today. But there are some poor areas, for example in Ho Chi Minh City, where leakage is around 40 % and at times of very low pressure, the water becomes contaminated with corrosion deposits from the old iron pipe systems.

## Sanitation and health

Poor sanitation is one of the three major factors contributing to water-related death and disease. And, only about half of the populations in developing countries have access to improved sanitation facilities, compared to almost 100 % for developed countries.

In Vietnam a recent survey revealed that 52 % of the rural population have some form of sanitation facilities but only 18 % meet the government's hygiene standards, and only 12 % of schools have acceptable toilet facilities.

Although there has been a dramatic decline in child mortality in Vietnam, water and sanitation related diseases remain a major health problem according to UNICEF. The instances of diarrhoea remain very high with 250,000 hospitalisations each year, and worm infections in children are very common.

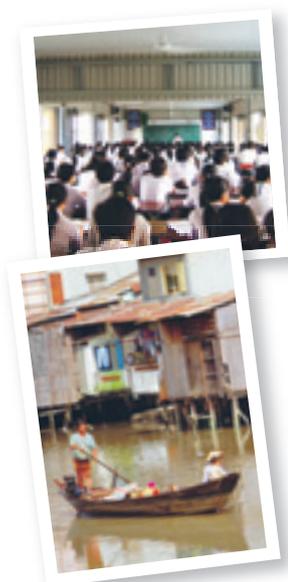
Despite many re-housing projects, there are still slum areas along the Thi Nge canal that run through the middle of Ho Chi Minh City. Raw sewage from this settlement still goes straight into the river and in the rainy season when the canal floods, the mud spreads disease.

## Water for the World training support

One major need identified by the Vietnamese Water Supply Association (WWSA) is the improvement of training within the water industry and the WWSA is in the process of setting up a training school in Vietnam with support from the Dutch water industry. Their programme 'Train the Trainers' is aimed at producing highly motivated trainers who will then go on to train water engineers around the country.

Although they do not yet have a permanent venue, the training modules have already started, and Borouge participated in one of them during May 2008. In this session Borouge provided basic market information on water distribution systems around the world, as well as some initial training on polyethylene pipe systems. The class was particularly interested in all aspects of no-dig technology, which has special importance in city infrastructure renewal and expansion.

Borouge provides educational material on the use of plastics pipe systems in water supply and sanitation. Technical diaries have been produced, and books will be distributed to universities and colleges.



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