

Water in an Urbanising World

A continuous and rapid urbanisation is a significant driver of change at local, national, regional as well as on a global scale. By 2050 the urban population is estimated to be of the same size as the total global population today. Around 95 per cent of the global population increase will be in urban areas. Huge urban conglomerates will also expand. More profoundly, the urbanising world is characterised by rapid economic growth, social mobility but also by modified consumption patterns and glaring socioeconomic differences. As a whole, these changes are associated with growing urban footprints, physically, economically and politically far beyond the city borders. Change is multidimensional with various facets interwoven in a complex web. Differences and inequalities between and within cities are likely to become more pronounced. To create liveable cities for a turbulent future, considerable investments are required in infrastructure and in institutional and governance arrangements. Two dimensions must be considered in the governance strategy. One concerns issues that refer to the urban centres and systems per se. The other relates to policies and management systems for the urban dynamics in a wider geographical context.

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Water and Environmental Sanitation Improvement in Coastal Communities in Karachi, Pakistan

Kakapir and Soomer Gothe are very poor coastal fishing communities, situated 15 km southwest of Karachi, Pakistan. It has a total population of 3,000 with 300 households. This settlement has a 200 year old history, yet developmentally it has not progressed far. Since its existence, its appalling situation of water scarcity and unhygienic sanitation has not been attended to. Only 30 % of the population has access to water supply and even that is inadequate and unsafe for drinking and personal hygiene. As a result, regular outbreaks of water borne diseases have become a common phenomenon in the settlement.

In Pakistan, about 1.2 million people die each year due to water borne disease. To minimize this mortality rate, UN-HABITAT along with the partnership of WWF-Pakistan and the Coca-Cola Company is initiating its project **Water and Environmental Sanitation Improvement in Coastal Communities in Karachi** with an objective to improve the living standard of selected coastal communities of Karachi by reducing water borne and water washed diseases through a sustainable supply of clean drinking water, hygiene education, provision of improved sanitation and waste management system.

The overriding thrust of the WAC Programme is to enhance capacity at city, country and regional level(s) and to create an enabling environment for new flows of investment in the urban water and sanitation sector, with a view to meet the water and sanitation related MDGs in Asian Cities.

Specifically this project aims to provide adequate and safe drinking water, improve environmental sanitation situations in the coastal communities for 3,000 people and enhance their livelihood opportunities. Solid waste management systems will be set up and supported with health and hygiene education. To improve water and sanitation in poor communities, public, private and community managed systems will be demonstrated. Lastly, steps will be taken to build local capacities, and strengthen existing institutions responsible for water and sanitation for sustainable service delivery.

Under these objectives, through discussions with Fisher Development Organization Kakapir (FDOK) and Karachi Water and Sewerage Board (KWSB, the community has agreed to procure a water tanker of 3000 gallons for which they will contribute 50% of the cost.) KSWB will provide water free of cost from its hydrant. In Kakapir, the existing underground storage tanks and distribution networks will be rehabilitated for safe water distribution. In Soomer, water will be stored in the existing underground tank and an overhead tank will be constructed for water distribution. Water will be disinfected prior to distribution.

A Solid waste management component, focused on the 3R principal, (reduce, reuse and recycle) will be linked with their livelihood. Awareness on health hygiene and an environmental sanitation programme will be conducted through training, orientation, demonstration, school education and door-to-door visits. Information material will also be developed and disseminated to support the awareness process. A mechanism for the direct access of the community to the WWF Wetland Centre will be developed thus enabling them for the provision of technical assistance. The project will also strengthen the capacity of the Wetland Centre for regular monitoring, supervision and guidance during and after the implementation phase.

The expected outcomes foresee safe drinking water available for less privileged and neglected coastal communities and establishment of improved sanitation and solid waste management systems. Strengthened capacity of the community on WATSAN service delivery and mass awareness on water, sanitation and hygiene improvement are also expected with the help of a learning centre in the settlement.

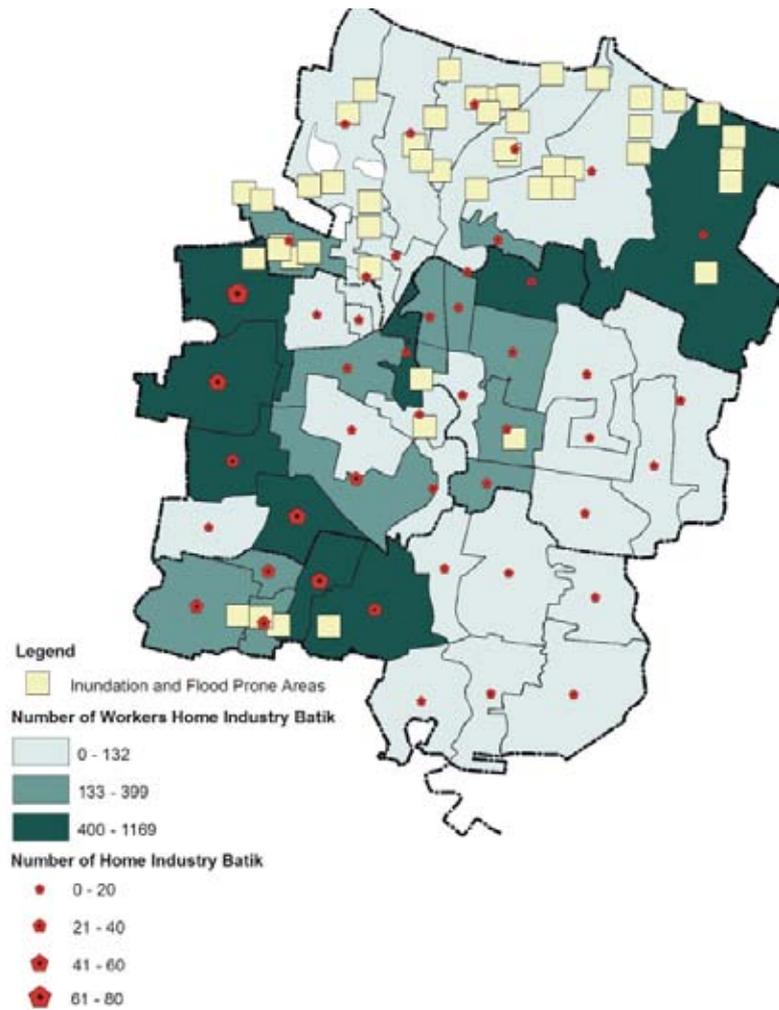


Indonesia's Batik City Pekalongan responding to Water Problems

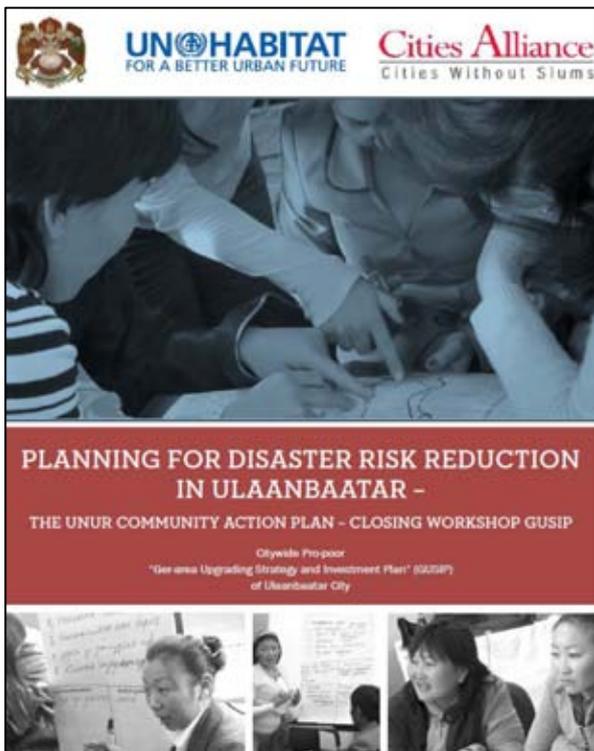
Climate Change and immediate urban environmental pressures threaten vital jobs in the industrious city of coastal Java. The Cities and Climate Change programme invested in strategic planning to bring the problems and the outline of necessary actions to the attention of local and national leaders. Pekalongan makes the famous *batik* and millions of jobs are at stake if urban economic clusters like Pekalongan cannot be kept safe, dry but with access to clean industrial water.

The coastal city of Pekalongan is small, but its reputation as a leading *batik* producing centre is considerable. However, seashore abrasion, salt water intrusion, the decay of the drainage systems and overcrowding all make the cottage workshops and small workshops producing *batik* a cluster economy under threat. UN-HABITAT undertook a variety of surveys and mapping activities to chart out the risks: mini-atlases were produced of neighbourhoods where *batik* is a key livelihood; a value chain analysis was done to see where environmental hazards pose the largest threats; and action plans were discussed both at the neighbourhood level and the city level, to see how communities and city officials measure up the threats and prefer to respond.

The evaluation of spatial information of this cluster economy was important: charting out where livelihoods, including those of the poorest *batik* workers producing the cheaper low-end cloth, are under threat because of an urban environment that regularly floods proved useful. Neighbourhood mini-atlases are unconventional means which compliment conventional government statistics. They empower communities to discuss programming and budgeting priorities, which is now possible in the way decentralization has progressed in Indonesia, but which is often lacking adequate tools to support community-based prioritization decisions. Mini-atlases proved a tool that fostered clarity and transparency. During a national workshop in December 2010, 6 mayors and a variety of government officials took notice. More action planning will be undertaken in 2011, especially in the estuary town of Banjarmasin, a large trading city and the only population centre in the forest rich South Kalimantan province. The key question for the city is how to strategically invest in better infrastructure and amenities in a city with hundreds of rivers and canals.



Planning for Slum Upgrading to prevent flash Floods to undo Slum Improvements in Ulaanbaatar, Mongolia



Flash floods in the slum areas of Ulaanbaatar are making the upgrading of these spontaneously grown neighbourhoods vulnerable to being wasted. UN-HABITAT introduced action planning to pool local knowledge in order to protect people and their homes. A guideline was produced in December 2010, with Cities Alliance support, allowing replication throughout the city.

Ulaanbaatar has grown dramatically in the past 15 years, with nomadic herders settling down in the wide vicinity of the old modernist city. Their tents or gers spread out over the undulating and dusty grasslands of the valley where Mongolia's capital is set. Infrastructure and services are virtually non-existent in the ger areas.

UN-HABITAT, the Cities Alliance and the City have collaborated since 2005 to formulate community-based strategies for ger area upgrading. As of 2009, with generous support of the Japanese Government, five pilot investment programmes are underway to make a number of neighbourhoods more liveable and safer. Community Development Councils undertake the planning and implement a range of works.

Flash floods during summer have become increasingly a threat to assets and lives in various neighbourhoods. In 2010, UN-HABITAT brought together the Unur Community Development Council and city officials to discuss an action plan to protect the neighbourhood against flash floods. It was evident that the community had sufficient local and practical knowledge to propose a range of useful small wins preventing floods becoming destructive flash floods.

All agreed that these measures were more immediately useful than the macro downstream drainage works planned by the city. They also agreed that small wins are not necessarily quick wins: community education and training was listed as an important need.

World Water Day stresses to provide better WATSAN facilities to Poor

World Water Day 2011 convened in Cape Town, South Africa, on 22 March 2011. Under the theme of *"Water for Cities: Responding to the Urban Challenge"* participants gathered to hear addresses from dignitaries, as well as take part in panel discussions on water and sanitation infrastructure, and the role of local government in bridging the water and sanitation gap.

Freshwater is a finite resource that is imperative for sustainable development, economic growth, political and social stability, human and ecosystem health, and poverty eradication. While water issues have long been on the international agenda, the debate over how to meet the growing global demand for freshwater has intensified in recent years, over 850 million people currently lack access to safe drinking water, while about 2.6 billion lack access to adequate sanitation.

The keynote speakers at the United Nations World Water Day 2011 convention warned that greater efforts had to be made to provide better water and sanitation for cities, and especially for the urban poor. The meeting in Cape Town, drew 1,000 delegates from around the world, to discuss this year's theme, Water and Urbanization.

In the keynote speech, Joan Clos, Under-Secretary General, United Nations and Executive Director, UN-HABITAT, expressing concern about the increase in informal settlements, called on participants to address the lack of decent water provision to these communities. He stressed the importance of planning for future growth and development, and called on governments to provide capacity to small- and medium-sized cities to tackle these issues. He underscored the need for political will when developing these policies.

Bert Diphooorn, UN-HABITAT, provided an overview of the activities undertaken prior to WWDD 2011, highlighting the five issues that were addressed: urbanization; urban water and waste management; environment and climate change; leadership and governance in the water sector; and investment. He said recommendations include: increasing the profile and understanding of urban water issues; honoring global water sector commitments; good governance and clear institutional roles and policies for sustainability in the sector; preparation for water disasters; and addressing water monitoring and data challenges.

Joan Clos also delivered an address from the UN Secretary General Ban Ki-moon, stating that without water there is no dignity and no escape from poverty. However, he underscored that the achievement of the MDGs on water and sanitation lags behind, with an increase of 140 million more people with-



His Royal Highness, Willem-Alexander, Prince of Orange, the Netherlands at the World Water Day Convention 2011 in Cape Town, 22 March 2011. Photo © UNWater website

out access to water and 134 million more people without sanitation over the intervening 10 years.

His Royal Highness, Willem-Alexander, Prince of Orange, and Chair of the UN Secretary-General's Advisory Board on Water and Sanitation (UNSGAB), said sanitation is often forgotten quoting a participant who said water and sanitation are "Siamese twins and if you separate them, one may die but you don't know which one." He appealed to the World Bank to feature water and sanitation prominently in the infrastructure report they are preparing for the G20, in addition to looking for innovative financial mechanisms.

At the closing, Joan Clos, Executive Director of UN-HABITAT said: *"In the slums of Nairobi, the favelas of Rio de Janeiro, the bustees of Kolkata, and even right here in Cape Town's townships, the provision of safe water and basic sanitation to the urban poor is a critical challenge facing the world today."*

He added that it is a sad reality that there are more people without access to water, as urbanization outpaces infrastructure provision. He called for a strategy to face this crisis, which will require sound urban planning, legislation and implementation.

Rolf Stahlhofen, UN-HABITAT Messenger of Truth announced the donation to UN-HABITAT of water treatment systems for 60,000 people.

UN-HABITAT and Project WET Seminar focuses on Interactive Education and Best Practices

Water champions from around the globe joined forces to explore how water, sanitation and hygiene (WASH) education can be made sustainable through the incorporation of basic human values in a seminar convened by UN-HABITAT and Project WET on March 20th, 2011 in Cape Town.

A lead-in event to international observances of World Water Day, the Human-Values-Based Water, Sanitation and Hygiene Education: Best Practices for Sustainable Programs seminar featured interactive discussions for the development of educational resources for addressing current and emerging challenges in the area of urban water and sanitation.

The goal of the seminar was to introduce the concept of human-values-based WASH education, share experiences and success stories around WASH education and discuss best practices for promoting both sustainable WASH projects and water and ethics in the urban setting. John Etgen from the Project WET Foundation served as moderator. The event's key speakers include: Dr. Art-Ong Jumsai from the Water Institute in Thailand, Andre Dzikus, Chief, Water and Sanitation Section II, UN HABITAT, Sagie Naiker of the Africa Institute of Sathya SAI Education in Zambia, Julia Nelson from the Project WET Foundation and Teddy Tindamanyire from the Uganda Ministry of Water.

During one session, the speakers and participants were joined by Rolf Stahlhofen, an internationally acclaimed German musical artist and a UN-HABITAT "Messenger of Truth," who shared his vision for the creation of his new song, "Water is Life," which debuted later that day at the Expo. He based the song on the human connection to water and the right to water for all people.

Participants also visited Khayelitsha, one of South Africa's largest and fastest-growing townships, to open the Water Expo - an interactive theater project modeling proper water behavior and ethics - with music, dancing and a presentation of Project WET water education materials to a local teacher and students.

The key recommendations and conclusions of the seminar were: incorporating the five human values of peace, love, truth, non-violence and right-conduct into educational projects; focusing on behavioral change through institutionalization of school curriculum, political buy-in and diversifying implementation strategies; and incorporating best practices, including monitoring and evaluation, increased local ownership, utilization of local knowledge and traditional practices and enhancing local skills.

UN-HABITAT, Coca-Cola & NDTV launches Support My School Campaign

Coca-Cola India and NDTV in association with UN-HABITAT and their NGO partners, Charities Aid Foundation (CAF) and Sulabh International, embarked upon a unique initiative - 'Support My School'. The campaign aims to develop healthy, active and happy schools in rural and semi-urban towns. This movement aims to improve basic amenities in schools and subsequently generate monetary resources for over 100 schools across 14 states of India.

The campaign started with the Campaign Ambassador, Sachin Tendulkar, along with Mr. Atul Singh, President & CEO, Coca-Cola India and South West Asia, and Dr. Prannoy Roy, Chairman, NDTV. Also present to lend their support were, Kapil Sibal, Union Minister for Telecom and Human Resource Development (HRD), Dr. Kulwant Singh, Advisor, UN-HABITAT, Mr. Subodh Bhargava, Chairman, CAF India, Ms. Abha Bahadur, Senior Vice-President Sulabh International Social Service Organization, Actor and Activist Dia Mirza and CEO, CAF India, Amita Puri, Actor, Raveena Tandon and Members of the Parliament, Priya Dutt and Sanjay Raut.

Lack of basic amenities in schools not only results in increased absenteeism but also in high dropout rate, especially among girls. This six month campaign will not only generate awareness about such issues but will also create 100 model schools in villages and towns with the help of all partners associated with this campaign. Some of the activities undertaken as a part of this campaign will include provision of improved access to water, appropriate sanitation facility for girls and boys, improvement in overall infrastructure and environment, provision for sports and recreation facilities such as cricket, badminton & basket ball courts, swings etc and recharging groundwater through rainwater harvesting.

Speaking at the occasion cricketering legend and campaign ambassador, Sachin Tendulkar, said, "I am honoured to be associated with this Nobel campaign. It is my belief that a multi lateral partnership of this kind is an appropriate initiative to catalyze a movement towards building healthy, active and happy schools. As a firm believer in the cause, I would urge all sections of the society to come forward and contribute to the betterment of schools and overall education system in the country."

A school in Jhundpur village (Sonapat) in Haryana was the first school that benefited under the "Support My School initiative. The project supported the school by aiding infrastructural work such as building hygienic sanitation facilities especially for girls, setting up a rain water harvesting unit, providing improved access to water, renovating the sports grounds to promote healthy and active living and improving the environment.

As a part of the inaugural contribution towards this fund raising initiative, Coca-Cola & UNHABITAT have pledged Rs. 1 Crore to the Support My School campaign. The campaign over the next 6 months will raise further monetary resources from public. The fundraising will peak with a telethon hosted by Sachin Tendulkar in mid 2011.

Speaking at the event, Mr. Atul Singh, President & CEO, Coca-Cola India and South West Asia, said "We believe that the role of business in the 21st century



is not just about creating shareholder value but also promote the sustainability of the environment and local communities. In addition to our focus on environment and water, we have also been focused on education because we believe that education is the basis of social change. Today we are providing infrastructure support to several schools, have instituted scholarships to support needy students and also organize the annual Limca Book of Records Quiz across nearly 3500 schools. We are extremely pleased to be a part of SUPPORT MY SCHOOL campaign and are thankful to all the partners for having believed in this movement and for coming together to launch the initiative today."

According to Dr. Prannoy Roy, Chairman, NDTV, "Numerous research studies have shown that the biggest reason for the high drop-out rate of the girl child in our schools is the lack of facilities, like toilets, for them. One of the several aims of this campaign is to provide these facilities for our girl students. Please join us to help make a difference to our schools all around the country."

Explaining the project and implementation model, Dr. Kulwant Singh, Advisor, UN-HABITAT said, "A child needs holistic nature of education. Hence to help set up such schools with enhanced facilities for holistic education, our primary focus of this campaign will be capacity building, promoting water conservation, sanitation and hygiene education"

According to Subodh Bhargava, Chairman of CAF India Board, "Education is the foundation for a nation to grow and develop and sustain the progress in the long run. This project is our endeavor to empower the underprivileged sections of the society through education by providing the necessary infrastructural aid to the children of the school.

Ms. Abha Bahadur, Senior Vice-President Sulabh International Social Service Organization highlighted the need to set up examples and said, "Access to basic amenities including water and sanitation is a basic necessity for a child to engage in learning at school and absorb the teachings. The initiative will help in focusing the child's attention back in school".



Three Communities Declared ODF in WAC Projects

The Strengthening Water, Air, Sanitation and Hygiene Treasuring Health (SWASHTHA) project declared three communities, one in Tikapur Municipality and two in Gulariya Municipality, as open defecation free (ODF) in February 2011. Practical Action Nepal (PAN), Environment and Public Health Organisation (ENPHO) and Municipal Association of Nepal (MuAN) with support of UN Habitat Water for Asian Cities (WAC) Programme is implementing this project in urban and peri urban settlements of Bharatpur, Butwal, Gularia and Tikapur municipalities to improve the health and well being of poor residents. These WAC partners cooperate with respective municipalities and concerned Village Development Committees (VDCs) for the effective implementation of the project. The project is also receiving support from the European Union and ISLE of Man Government.

After this declaration, Sitapur has become the first community in Tikapur to declare itself as ODF in the Municipality. There are 106 households in the community, where 84 per cent HHs were practicing open defecation before the project intervention. The community with support of the project constructed 89 toilets that helped them to bring their community to this stage.

Likewise, the project helped the local people of Dipendranagar and Kothiya become the second and third ODF communities in Gulariya Municipality. With the construction of 17 toilets in Dipendranagar and 113 toilets in Kothiya, both communities declared ODF in February 2011.

In addition, the project also adopted an integrated approach in order to improve environmental health condition of urban poor communities by focusing on household water treatment, waste management, sanitation, indoor air pollution and hygiene. To improve sanitation, it is promoting low cost improved pit latrine, urine diverting ecosan toilets and biogas attached toilets. Most of the constructions were done using the local materials and local labours to create a sense of ownership and support local livelihoods. To demonstrate the



ODF declaration in Dipendranagar, Gulariya Municipality

low cost toilets and to change the mindset of those people who think toilet construction is expensive, the project used bamboo structures, mud walls and jute bags for superstructures of toilet.

The project is currently working closely with local authorities, community based organizations, schools and Female Community Health Volunteers (FCHVs) to further improve sustainability and integration, and deliver project activities effectively. The project is also focusing its activities in the municipalities and towns of Ratnagar, Ramgram, Sidharthanagar, Sunawal, Bardaghat, Kawasoti, Sharadanagar and Pattihani.

Nepali Student honoured with Children's Future Award

Miss Cheten Doka Sherpa, winner of the 10th International Children's Future Award at 10th World Habitat Day Children's Drawing Contest organized by UN-HABITAT Regional Office for Asia and Pacific (ROAP), Fukuoka, Japan, was honoured amid an 'Award Distribution and Felicitations Ceremony' organized by UN-HABITAT on 4 March, 2011 in Lalitpur. Ms. Sherpa is a sixth grader student studying at Daffodil Public School of Nepal.

At the felicitations ceremony, Ms. Gillian Mellsop, representative at UNICEF Nepal handed over the award and certificate to Ms. Sherpa, and said that this kind of art competition provided space to the children to express their opinion about urban environment.

Habitat Programme Manager at UN-HABITAT Nepal Mr. Padma Sundar Joshi believed that the contest was successful in presenting the cities through the eyes of children.

A total of 885 students from 10 countries in Asia and the Pacific Region including Far East Russia participated in the contest with the theme "Better City, Better Life", and 12 students were awarded in six categories.

Ms. Sherpa won the Children's Future Award on behalf of Nepal by submitting her drawing of an environmentally sound city. She had tried to present the impact of global warming on the mountain environment in her art.

UN-HABITAT had published all 12 award winning drawings in its 2011 calendar, which had been provided to all participating students and schools.

World Habitat Day is celebrated on first Monday of October every year. UN-HABITAT Regional Office for Asia and Pacific – Fukuoka, Japan organizes the World Habitat Day Children's Drawing Contest every year on this occasion.



Schools Honored for Contribution in WATSAN Sector in Nepal

Stepping Stone with support of UN-HABITAT and International Olympic Committee organized a felicitation programme on 09th January, 2011 in Lalitpur to honour 4 schools of the district for their praiseworthy contribution in water source conservation and environmental sanitation activities.

Vice president of Nepal Olympic Committee Ganga Thapa felicitated Saraswati Higher Secondary School, Chhampi Devi Higher Secondary School, Bajra Barahi Higher Secondary School and Shree Padma Prakash Secondary School, each with a set of sound system at the programme. These, along with six other schools, had conducted various WATSAN activities in different locations of the district in 2010 with support of Stepping Stone and Youth Opportunity Fund, UN-HABITAT. Their initiatives contributed towards conservation of local water sources and environmental sanitation in the area. The schools also sensitized students, who later conducted different awareness raising campaigns including street drama, essay competition, cleaning campaigns and other awareness activities on the importance of safe drinking water and proper sanitation.

At the programme, sports materials were also distributed to 14 schools of the district with support of the International Olympic Committee. Handing over the sport materials, Mr. Thapa told that the distribution of those materials aims to impart extra curricular knowledge to the school students and help them in developing their personality.

Dr. Roshan Raj Shrestha, Chief Technical Advisor for South Asia, UN-HABITAT Water for Asian Cities Programme, appreciated the role played by concerned government agencies and civil society organizations to achieve remarkable improvement in implementing human value based water, sanitation and hygiene education in the last few years in Nepal. He opined that such activities should be continued further to improve water and sanitation sector in Nepal.

During the felicitation programme, students drew and exhibited pictures about the value of safe and adequate drinking water, sanitation and hygiene in human life. Prafulla Man Singh Pradhan informed that UN-HABITAT would select some of these pictures to send in an international art competition that would be organized by UN-HABITAT to commemorate World Habitat Day. Curriculum Officer at Curriculum Development Center (CDC), Ram Prasad Subedi said that piloting of human values-based water, sanitation & hygiene education programmes would help CDC to improve its school level curriculum in future.

Rashmi Kafle, president of Stepping Stone said that similar projects have also been implemented in more than 40 schools of Morang, Sunsari, Bharatpur, Kathmandu and Bhaktapur.

At the programme, the team of students from Padma Prakash S. School performed a drama about importance of safe drinking water and sanitation.

Fukuoka Habitat Institute supports rainwater harvesting in Lao schools

UN-HABITAT in Lao PDR has received contribution from Fukuoka Habitat Institute (FHI) towards a project that aims to raise awareness on rainwater harvesting as a viable method of increasing access to clean water. As part of this project, which is linked to the ongoing Mekong Region Water and Sanitation (MEK-WATSAN) initiative, a total of five schools in two provinces will receive rainwater harvesting systems.

UN-HABITAT has worked on several rainwater harvesting projects in Laos already, including a demonstration project at the national University of Laos in partnership with the Faculty of Environmental Sciences as part of MEK-WATSAN. Laos has a long rainy season typically lasting from May to November, and while rainwater harvesting has been traditionally practiced at household level in certain areas, its potential remains to be fully utilized in a country, where just 57% of population had access to improved water source in 2008.

The new project is due to commence in the summer of 2011 and project documents will be signed with the local water utilities in Khamouane and Savannakhet provinces.



A model of RWHS in Laos from a HVWSHE water classroom in Phine secondary school, Savannakhet province, Lao PDR. Photo © UN-Habitat

Habitat Country Programme Document for Lao PDR

On 1st of December 2010 various stakeholders including participants from the Ministry of Public Works and Transport (MPWT), Association of Lao Architects and Engineers and UN-HABITAT met up in Vientiane to discuss the present urban challenges in Lao PDR. The main purpose of the meeting was to draft a framework for a Habitat Country Programme Document (HCPD), to be prepared for the country following a global template that is based on the UN-

HABITAT's six-year Medium-Term Strategic and Institutional Plan (MTSIP).

Opened by the Director General of MPWT Mr. Khamtavy Chayphanchang and facilitated by an external consultant Mr. Prafulla Pradhan, the meeting used a range of participatory tools and special visualization techniques to help all participants to brainstorm on the various urban issues and challenges. These proved fruitful, as long list of issues and challenges covered by the MTSIP and relevant to Lao PDR were identified in the consultations, many of which are not currently reflected in the work that UN-HABITAT does here.

To date UN-HABITAT's work in the Lao PDR has largely focused on WAC and MEK-WATSAN projects covering a range of water and sanitation-related issues in the country's urban and peri-urban areas. The new HCPD will identify new focus areas in addition to water and sanitation and training and capacity building, including climate change and disaster preparedness/response and urban development and housing. Provided that the appropriate investment and engagement by all concerned parties will be achieved, the portfolio of work by UN-HABITAT Lao PDR can be expected to expand in the coming years.



Human Values-based Water, Sanitation & Hygiene Education in Lao PDR

Almost half of the population in Lao PDR is still lacking access to improved water source and/or sanitation facility. In 2008, just 57% had access to a water source protected from outside contamination ("improved water source") and only 53% had a latrine facility that hygienically separates human excreta from human contact ("improved sanitation"). There is an urgent need not just to improve access to water and sanitation facilities, but also to disseminate information about simple practices that can make a big difference to health and the whole environment. Poor hygienic practices and the prevalence of water-borne diseases are major issues affecting many communities.

UN-HABITAT is working with many communities in Lao PDR to help them gain access to clean water and improved sanitation. With a newly gained water source, it is important that people in target areas become aware of conserving, preventing and managing water resources.

Within its Water for Asian Cities (WAC) and Mekong Region Water and Sanitation (MEK-WATSAN) programmes UN-HABITAT has implemented a number of Human Values based Water Sanitation and Hygiene Education (HVWSHE) related projects and activities with its partners. These include organising capacity building and training workshops with teachers and staff from water utilities, distributing literature to students and teachers, opening 'water classrooms' or educational spaces in target schools, organizing a demonstration on rainwater harvesting and ecological sanitation within a university campus and helping with designing lesson plans on topics such as waste management.

UN-HABITAT's implementing partners in HVWSHE in Lao PDR include: National University of Laos, Department of Higher Education, WREO-Luang Prabang, NPSEs in Sayabouly, Bolikhamsay & Savannakhet and Norwegian Church Aid.

Case study 1: HVWSHE LESSON PLANS AND TEACHING MATERIALS

UN-HABITAT has worked with Norwegian Church Aid (NCA) since 2007 on Human Values-related activities. The main focus of the collaboration has been to integrate HVWSHE into the formal and non-formal education sector in Lao PDR. To achieve this, NCA had UN-HABITAT have worked closely with a teacher training college in Vientiane to develop resource materials and lesson plans for the national curriculum. A number of target schools have been selected for a program where HVWSHE is being taught as part of existing subjects such as science, mathematics and arts.

Sample lesson plans have been developed for different school grades. All materials have been translated into Lao and adapted into the local context. The main topics for the lower grades include "Clean and healthy food", "Water is life", "Clean body", "Toilet" and "Bacteria, virus and sickness". For the older children the scope of these topics will be further expanded. The children have also participated in the development of the teaching materials by drawing pictures for the publications. The methods of teaching and learning include not only books and posters but also songs, poems, stories and special hands-on



Students exploring the HVWSHE classroom at Phine secondary school. Photo © UN-Habitat

materials and equipment to be used in educational research experiments. 11 water classrooms have also been set up.

Case study 2: WATER CLASSROOM FOR A SECONDARY SCHOOL

As part of a joint UN-HABITAT and NPSE Savannakhet community-based water, sanitation and hygiene project implemented Phine, Savannakhet province, a HVWSHE water classroom was established in the Phine Secondary School in May 2010.

A second classroom of this kind to be established in Lao PDR, the permanent educational resource is aimed at students and teachers alike, and is filled with posters, leaflets and publications on various topics related to environment, such as water conservation, rainwater harvesting and wastewater treatment.

The centrepiece of the room is a construction made of two models showing household rainwater harvesting systems in Nepal and Lao PDR. The students can also try doing hands-on activities such as purifying water through an aquifer system, testing water quality with a special kit as well as playing music with bottles with the equipment supplied in the classroom.

The most colourful section of the room is an exhibition put together from works of art made by the students themselves. They are the fruits of a drawing competition that was organised to encourage students to express their thoughts on issues of water, sanitation and the environment.

All students and teachers from the various schools in the area are encouraged to visit the water classroom and learn about issues to do with water and sanitation. In this way, the messages will be able to reach a wider community and hopefully make them more aware of the problems facing the environment as well as achieve a long term and progressive attitude change towards water, sanitation and hygiene.

Case study 3: ETHICAL VALUES AS PART OF A UNIVERSITY COURSE

UN-HABITAT has collaborated with the Faculty for Environmental Sciences at the National University of Laos (NUoL) to develop a HVWSHE component in the university's Environmental Ethics course. The main objective of the course is to raise the students' awareness of water-related environmental and social issues and to offer the tools to apply human-based values into everyday life.

The 32-hour course unit consists of five chapters including water supply management and scenarios of adaptation to the Climate Change. The new course was first introduced in 2010 and is received well by the 4th year students, who are encouraged to pass on the messages to communities outside the lecture room, especially when they enter the working life upon finishing their studies.



A child's drawing highlighting the dangers of pollution at a HVWSHE-themed arts class. Photo © UN-Habitat

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Revolving Fund makes Taps and Toilets Accessible to Everyone

Although Lao PDR is now well underway to achieve its Millennium Development Goals for access to improved water (target: 69%) and sanitation (target: 54%), the reality is that too many people are still deprived of this basic services, particularly in the rural areas and small towns. UN-HABITAT has focused their efforts in delivering water- and sanitation services to small towns since 2006 in order to support the government to attain these MDG targets.

The Mekong Region Water and Sanitation (MEK-WATSAN) programme will deliver access to improved water and sanitation to thousands of urban poor in the small towns around Lao PDR. At the moment there are on-going community-based projects in thirteen provinces around the country. The programme is carried out in close collaboration with the local water utilities, with the aim of creating a permanent, sustainable water and sanitation infrastructure that will benefit the communities and the surrounding areas for decades to come. This includes building water treatment plants and extending the pipe networks to unserved areas, which also opens doors for wider regional development as the areas with a proper infrastructure have been observed to attract more businesses and other services.

To make their water and sanitation programmes accessible to everyone and particularly to the poor households, UN-HABITAT is using innovative schemes in their programme delivery such as the "revolving fund". All households are

eligible for applying for an interest-free loan for a water connection or a latrine from the fund, however the poorest households are given a priority. One of the first households who took advantage of the cheap loan for a latrine was Madame Deng's family in Xieng Ngeun. UN-HABITAT completed a fast-track MEK-WATSAN project there in 2008, and granted a number of loans from the revolving fund each worth 700,000kip (approximately 85 USD).

She heard about the fund in a village meeting, and keen to improve the lives for herself and her children, she applied for the loan. Her son participated in the artisan training and was able to construct the latrine for the family. The family paid back the loan in the agreed 12 months in four separate installments. Mme Deng has no regrets in investing for the latrine: "It was difficult before having to use the forest every time I needed to go to a toilet. I'm very happy with having a private latrine in my backyard".

Despite Mme Deng's positive experience, Buahom Sengkhamyong, the CTA of UN-HABITAT Lao PDR says it is sometimes challenging to convince the poor households to take out a loan for latrine construction or keep up with their payments. "Everyone wants to have their own water tap, so the fund for water connection has been very popular and successful. However, it's more difficult to see the immediate benefits of hygienic sanitation, which is where we have to work hard on our awareness raising activities."



Mme Deng with a latrine that was build with the help of a loan from a revolving fund