

UN HABITAT CITIES AND CLIMATE CHANGE INITIATIVE NEWSLETTER

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UN-Habitat Supports Two Municipalities in Mexico in Adapting to Climate Change in the Water Sector

From the droughts in the north-central part of the country to the intense rains and flooding that Chiapas experienced in 2007, water-related natural disasters are a critical issue in many parts of Mexico. And water may well be the sector most threatened by climate change in the future. By mid-century, projected temperature increases may well reduce water availability by up to 30 percent, due primarily to evapotranspiration; meanwhile managers must anticipate spikes in demand for water during heat waves.

UN-Habitat, through its Water for Cities Programme in Latin America and the Caribbean (WatSan-LAC), is helping two medium-sized cities in Mexico, Tuxtla Gutiérrez in the State of Chiapas and Xalapa in Veracruz, to address adaptation to climate change in the water sector.

Both cities face pressing water-related challenges. In Tuxtla Gutiérrez (pop. 500,000), much recent growth has occurred in an unregulated fashion on land that lacks basic infrastructure. Some 14,600 houses on the urban periphery depend upon water from tankers. Furthermore a number of families have built on lands susceptible to flooding as well as land- and mudslides. The distribution system that does exist for potable water has partially deteriorated, while 15 out of every 100 connections are clandestine.

Veracruz has a high incidence of flooding: between 1950 and 1994, officials recorded 475 floods. People living in the urban periphery of Xalapa (pop. 425,000) are vulnerable to such natural disasters. Risk is exacerbated by a number of factors: unplanned settlement on river banks and in flood prone areas; the clogging of drainage channels



Cañón del Sumidero ©UN-Habitat/Tuxtla Gutiérrez

from rubbish and debris; bridges and crossings designed with insufficient clearance for flood waters; deforestation and insufficient soil conservation measures in various parts of the basin; inadequate flood management infrastructure, and so on.

In both cities, UN-Habitat supported a step-by-step process that sought to improve urban water management. The team: (1) Assessed the water sector, along with urban water and sanitation services, from a risk management and climate change adaptation perspective. (2) Reviewed a century of data to uncover climate tendencies, and analyzed climate change scenarios for the period 2010-2060, with an eye to impacts on the urban water sector. (3) Mapped 29 stakeholders according to factors such as their specific responsibilities and data needs, and interviewed them regarding urban wa-

ter resource management practices and related topics. (4) Developed preliminary proposals based on the previous assessments. (5) Carried out participatory dialogue workshops to raise awareness, validate findings, frame multi-sectorial agreements and build support for action. (6) Supported the integration or mainstreaming of policy recommendations into key planning documents at both the municipal and state levels.

Based on those experiences, the team formulated a set of 'Guidelines for the Management of Water and Sanitation Service Provision in Peri-Urban Areas of Cities Under Climate Change Conditions'. These guidelines address four topics. Firstly, planning processes need to integrate scientific knowledge such as regarding risk areas, while at the same time providing for consultations with stakeholders and the forging of multi-

sectorial agreements. Secondly, water managers need to consider alternative solutions such as in-situ water supply, along with technologies that do not require traditional infrastructure – particularly when extending basic services to peri-urban settlements. Thirdly, urban basins and aquifer recharge areas should be protected and restored. Finally, climate change adaptation needs to address a range of areas: buildings including houses, hospitals and schools; health attention plans; civil protection measures; and the responsibilities of various governmental institutions regarding attention to peri-urban and highly vulnerable areas.

For more information visit <http://www.unhabitat.org/pmss/listItemDetails.aspx?publicationID=3208>.

The UN-Habitat-ARCADIS Partnership Supports the Cities and Climate Change Initiative in Asia

The UN-Habitat Cities and Climate Change Initiative (CCCI), active in more than 20 countries as well as engaged in normative work, carries out its activities in collaboration with a series of partners. One of the most productive and unusual of our partnerships is with the Netherlands-based international engineering company ARCADIS. Last year UN-Habitat and ARCADIS signed an agreement of cooperation, one element of which provides for ARCADIS to extend pro-bono expertise to UN-Habitat for field projects. This partnership, named the Shelter Programme, is the main corporate social responsibility programme of ARCADIS. Actively engaged in climate adaptation programs in the Netherlands, Belgium, Brazil, the US and elsewhere, ARCADIS possesses extensive knowledge that has proven to be of use to CCCI in various regions. Recently CCCI has put this know-how to work in city-level work in Asia; specifically in cities in Mongolia, the Philippines and Sri Lanka.



Water treatment system in Xalapa ©UN-Habitat

Preventing flash floods in Ulaanbaatar, Mongolia

Despite its dry climate, Ulaanbaatar occasionally suffers from flash floods due to extreme rainstorms, a problem which will grow with climate change. Flash floods are especially a problem for the former nomads who live in tents (gers) in the hills surrounding the capital. UN-Habitat is providing support through the project "Community-Led Ger Upgrading in Ulaanbaatar City" Project. An ARCADIS water manager provided technical support for this project during a recent field visit. In a workshop with the local residents a community action plan was drawn up to tackle problems, including the creation of special corridors for rainwater discharge and a programme to maintain these corridors even in the dry season.

Combating typhoons and climate change in Manila and Sorsogon, Philippines

Metro Manila is the 14th most populated city in the world, with more than 16 million inhabitants. In search of work and a place to live, people who refer to themselves as scavengers settled on the main waste dump in Patayas. Disaster struck in July 2000 when a landslide of garbage, triggered by rains from tropical storms killed 218 people and left 300 families homeless. In the following years several typhoons made many other scavengers homeless. With the help of the NGO People's Federation of the Philippines, these families are rebuilding their homes in safer locations. But flooding and sanitation remain problems. An ARCADIS team consisting of water managers, urban planners and a



The Shelter team of ARCADIS and UN-Habitat working together with the Homeless People's Federation of the Philippines ©Bert Smolders

sanitation expert, acting under UN-Habitat auspices, worked together with stakeholders to find solutions. With sufficient retention areas and green corridors a natural water discharge system can be created, preventing flooding and creating healthier living conditions. Sanitation can also be improved by proper location of wells.

A second activity was undertaken in Sorsogon, on the southern coast of the island of Luzon. Sorsogon is known for its susceptibility to typhoons, tsunamis and flooding due to its heavily populated coastline and exposure to the ocean. Together with UN-Habitat, local officials and residents discussed alternative solutions. Focusing primarily on land use, landscape planning and water and sanitation issues the team presented suggestions on methods for integrating consideration of the effects of climate change into future planning efforts by the Sorsogon mayor and the community.

Support for communities in Batticaloa and Negombo, Sri Lanka

Batticaloa and Negombo are located on coast of Sri Lanka; both are highly

vulnerable to the impacts of climate change, including sea-level rise. In 2004, approximately one third of the coastal area of the city of Batticaloa was severely damaged by a tsunami. The city and its environs are also highly vulnerable to cyclones, and floods are increasing in frequency. These climate disasters negatively impact on the economy, especially in the important sectors of agriculture, fishing and tourism.

In June 2011 a team of ARCADIS specialists (a social geography/urban and port planner, coastal engineer, ecologist and water sanitation specialist) supported preparation of a work plan for adaptation to recurrent flooding and management of water resources at the city level. (The mission to Batticaloa was part of a larger process, started by the University of Mortuwa some years ago.) The ARCADIS team first analyzed the vulnerability of Batticaloa and Negombo. Experts then discussed findings with local and national stakeholders during a workshop. This work produced an action plan for adaptation to flood risk and management of water resources.

veloped and adopted in March 2011 at the local climate solutions congress held in Cape Town. This follows the recognition of local governments as stakeholders in international climate change action at the CoP 16 that was held in Cancun.

Cllr AM Kafula, President of ALAN and Cllr Derek Klazen, Mayor, Walvis Bay City, lead the thirty one (31) Mayors present in signing the declaration. Hon. Cleophas Mutjavikua, the Governor of Erongo region of Namibia in his strong speech at the occasion emphasized on the severity and intensity of climate change and called on local authorities to make climate change an active agenda in their monthly and weekly meetings. The event also doubled up as the Namibia Mayors Forum Annual General meeting.

The event, supported by UN-Habitat, ICLEI and the Namibia Coastal Management Authority (NACOMA) was held in August 2011 in the Namibian port city of Walvis Bay which is vulnerable to sea level rise and flooding. Walvis Bay is one of the 20 cities benefiting from the UN-Habitat Cities and climate change Initiative and is now developing its climate change strategy with the involvement of its recently formed multi-stakeholder group – the

Expertise and 'building with nature' through new forms of cooperation

Flooding and erosion are serious problems in urban areas, and these problems are growing due to climate change. Often the most vulnerable groups in society are hit the hardest as they tend to live in low lying areas, river beds and coastal zones. With proper planning the worst problems can be alleviated and settlements can be adapted to changing situations. Retention areas and green corridors can act as natural water discharge systems, which are cheaper than concrete drainage. Instead of hard seawalls, natural elements like sand dunes can act as coastal protection. Such approaches can be cost effective and incremental, with natural features expanded to match rising sea levels.

The solutions proposed in these communities emerged from the cooperation of UN-Habitat, the consultants of the ARCADIS/UN-Habitat Shelter Programme and the local population. It shows that innovative modalities of cooperation with the private sector can provide high-level expertise for those who need it most.

Walvis Bay Environmental Management Forum (WEMAF).

National Climate Change Policy has recently been approved by Cabinet and passed by parliament. As such, a strategy for its implementation is currently being developed with inputs from stakeholders. One such stakeholder is the Ministry of local Government. UN-Habitat under its climate change and decentralization thematic area intends to support efforts in developing, finalizing and implementing this strategy to ensure inclusivity of the local authorities.

Namibia Will Strengthen the Voice of African Mayors at COP17 In Durban

Nearly 200 participants, including mayors, city officials, national ministries of environment and climate change, officials of the Association of Namibia Association of Local Authorities of Namibia (ALAN) and Namibia Mayors National forum, the private sector and NGOs attended the 3 day event on Namibia Mayors Climate Change Declaration. The Africa Mayors Climate Change declaration which was fully endorsed and signed by the Mayors present calls for due recognition of the role of local governments in international climate change debate and implementation. The declaration itself will be presented by the Mayor of Durban, the host City of seventeenth conference of Parties (CoP 17) to the United Nations Framework for Climate Change Convention Conference (UNFCCC) to take place later in the year. The Africa Mayors declaration was de-

Urban Climate Change Adaptation Course

October 2011

Gangwon, Korea

Urban planners and decision-makers from 10 Asian countries concluded a course on cities and climate change adaptation this past October. The course focused on vulnerability assessment and climate change action plans and helped cities improve their planning and response to climate change. Tools developed by UN-Habitat's Cities and Climate Change Initiative such as Developing Local Climate Change Plans, and by the Institute for Housing and Urban Development Studies (IHS) such as Climate PRO,

an Excel based climate change decision making support tool, formed the basis for the course. Participants applied these tools first hand and benefited from concrete case studies from Korea and field visits organized by the International Urban Training Centre (IUTC).

Anwar Hussain, Executive Director for the Local Councils Association of the Punjab (LCAP), commended the course for highlighting the need to incorporate climate change and disaster preparedness in planning. "[G]iven the extreme floods Pakistan experienced last year and again in 2011, better planning with the communities who understood the situation on the ground is essential", he said.

The 10-day course was jointly organized by UN-Habitat, the Institute for Housing and Urban Development Studies (IHS) and the International Urban Training Centre (IUTC). Participating countries included Cambodia, Indonesia, Lao PDR, Mongolia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand and Vietnam.

PUBLICATIONS

CCCI Policy Note Series

As part of its efforts to capture and disseminate normative lessons coming out of the Cities and Climate Change Initiative (CCCI) cities, CCCI recently launched a Policy Note series. The two initial Notes, scheduled to be released just be-

fore the Conference of the Parties to the UN Framework Convention for Climate Change (UNFCCC) in Durban, South Africa (COP-17), will address the important topics of access by cities to adaptation finance and mitigation finance, respectively, with recommendations on how to improve access.

These notes will be available via the CCCI webpage at www.unhabitat.org/ccci.

ABOUT US

Headquartered at UN-Habitat in Nairobi, the Cities and Climate Change Initiative (CCCI) involves the participation of more than 20 cities worldwide. It targets medium-sized cities in developing and least-developed countries and emphasizes good governance and practical initiatives for the municipalities and their citizens. The CCCI team has adapted participatory processes

developed previously by UN-Habitat so as to specifically address climate change issues within the city. A complementary set of tools is being developed to support cities in raising awareness on the impact of climate change and undertaking mitigation and adaptation activities. Since 2008, CCCI has been generously supported by the Government of Norway, the United

Nations Development Account, the Cities Alliance, the Government of Sweden and other sources of global, regional, national and local funding. Newsletters of the Cities and Climate Change Initiative are periodically published electronically. For more information, or to be added to our mailing list, contact uepb@unhabitat.org or visit www.unhabitat.org/ccci.

CCCI Cities and Countries

