### ROTTERDAM, LOUISIANA AND TATABÁNYA GET CITIZENS INVOLVED IN CLIMATE ADAPTATION

# Listening to stakeholders pays!

In the coming years cities will have to take radical decisions to protect their businesses and citizens from the consequences of global warming. This will not be achieved unless they get their inhabitants and local organizations involved. The US State of Louisiana, Tatabánya in Hungary and the Dutch port metropolis of Rotterdam demonstrate how the involvement of stakeholders can be of value.

JACO BOER



Communities are rebuilt after the devastation of Hurricane Katrina.

In the US State of Louisiana, the inhabitants are closely involved in projects that reflect on the future of the Mississippi delta. "The diking of the Mississipi, oil and gas exploration, hurricanes and storm damage over the years have been causing large areas of the delta to disappear. The delta is no longer fed with new sediment and is slowly sinking away. This is causing the swamps, the natural defence against this annually recurring natural disaster, to disappear ", says Steven Slabbers of Bosch Slabbers Landscape + Urban Design, who is involved in various projects in Louisiana.

In the meantime, at a regional level, a coastal protection plan has been set up and, in the immediate surroundings of New Orleans, work is being carried out on the reinforcement and renewal of the existing defence systems. For the settlements outside New Orleans, Bosch Slabbers is currently working on a best practices manual, together with partners from Portland and Louisiana. In close cooperation with the local population, defence concepts are being developed in such a way as to

## Government badly needs the input of stakeholders

ensure the safety of village communities and towns. "Apart from this we are working hard to think up new ideas for restoring delta formation so that sediment will again be deposited. What comes to mind is river tributaries, and swamp regeneration in combination with new living environments. Our planning is helping restore ecosystems, creating a safer and more attractive living environment and consequently an economic perspective."

#### Local warning systems

In the Hungarian city of Tatabánya – about 50 kilometres to the west of Budapest – the involvement of the inhabitants goes a step further. Encouraged by the City Council and under the supervision of researchers from the Hungarian Academy of Sciences, local organizations and citizens wrote a farreaching plan to tackle climate change at a local level and to prepare the city for more

extreme weather conditions. Apart from various measures to limit the emission of greenhouse gases and to stimulate environment-friendly transport, the climate group, together with the most important care organizations, conceived a warning system for high temperatures and UV radiation for Tatabánya. In an accompanying report, the group also stated in detail which measures local government and institutions were expected to take to limit the effects of a heat wave and exposure to an overdose of UV radiation.

The City Council was so impressed by what they had done that it decided to adopt the recommendations of the climate group and to implement the warning system. In addition, this remarkable citizens' initiative meant that Tatabánya was awarded a prize for the best health and climate initiative by the European Regional and Local Health Authorities and the Health and Environment Alliance. Barbara Botos, strategic & environmental manager for the council, is extremely proud of this achievement by her citizens. "Thanks to their efforts, we were the first municipality in Hungary with a local climate programme. Since then, our plan has been adopted by at least a dozen other municipalities and we have established a national alliance of climatefriendly cities with four other cities. Our educational programme on the subject of safe sun-bathing is even used by schools throughout the country."

### Support for drastic measures

In the coming decades Rotterdam and its surrounding area will be faced with major challenges. As a result of climate change, the Dutch port will have to contend with the rising sea level and higher peak water discharge from the Rhine and Meuse rivers. If nothing is done, the likelihood of flooding will increase. In 2008 the Rotterdam Climate Proof Programme was initiated, to determine what Rotterdam can do to protect its businesses and citizens from this. This year the Delta programme 'Rijnmond Drechtsteden' - a regional branch of the national Delta programme - has been affiliated. Obvious solutions, such as closing the harbour entrance or increasing the height of the dikes, have major consequences for the densely built-up metropolis with its easily accessible harbour. In its search for the best approach, the city is happy to call



Along the River Meuse, buildings are not much higher than the high water level. As water levels continue to rise, the chance of flooding increases. PHOTO PETER HILZ

upon the creativity and expertise of knowledge centres and stakeholders.

After two listening and brainstorming sessions, the next meeting focused on four possible solutions. There are several options available to guarantee water safety and fresh water. Each of these options has an effect on spatial planning and the different functions in the city: closeable barriers on all sides of the city, only one barrier on the seaside (as is currently the situation), a completely open situation or a closed system with dams and sluices. The options and the consequences have been mapped and discussed with different stakeholders. Local government needs their input to come up with an acceptable approach to flood management. This way the city hopes to create a greater involvement in the decisions which will soon have to be taken to safeguard the city from higher water levels.

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