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Pollution management in urban watersheds of developing countries

Conveners: International Water Management Institute (IWMI); International Development Research Centre (IDRC)

The issue of pollution management is of growing concern, in low and mid-income countries with rapid urbanisation. There is little realism in the solutions proposed. This interactive session will start with a short video, in which different stakeholders pose questions based on the real problems they face in these situations. A panel of experts will provide their views on these, with additional comments from session participants who can also vote to support or oppose the views of the panel.

Background
In low and middle-income countries, urban surface water is often of a very low quality, being contaminated by inadequate systems for waste disposal, open defecation from low-income areas, and runoff containing large amounts of silt from unbound roads, construction sites and urban agriculture. Drainage channels also suffer from poor solid waste management.

In industrialized countries, as the ecological and visual value of urban rivers started being recognized, management of surface water is undergoing a major change in philosophy, moving from prescriptive to preventive. The ‘rapid drainage and no treatment approach’ is being replaced by a ‘source control’ approach, with local control at or near the source of the runoff, preventing flooding and pollution from occurring in the first place. Opportunities for integrated actions are being exploited that benefit one or more aspect of urban water management. An example is urban drainage, which is currently treated as a wastewater to be disposed of quickly; however it can form a valuable water resource for consumption or environmental enhancement, which would in turn reduce the load on sewerage systems. This recognizes the water cycle, which is a key component of IWRM, also applies to urban water management.

In spite of lessons learned from Europe, North America and Australia, most cities in developing countries appear to be unable to cope with the infrastructure and capacity requirements needed to simultaneously face the (i) water supply and (ii) sanitation needs of growing urban populations, and (iii) to protect the urban and peri-urban environment including its water resources that are increasingly being used immediately downstream of cities for agricultural and other uses. Lack of resources and capacities (institutional and technical) may explain this, compounded by external assistance which often fails or only supports an unsustainable patchwork of improvements. What are the reason and what can be done? Is there a lack of holistic IWRM planning or of dialogue or are development (support) strategies outdated?

Objective and approach
The session aims at an interactive discussion to outline realistic ways out of the dilemma by answering up to 8 typical questions (see below) provided by farmers and other stakeholder from a 3 min video. Each question will first be addressed by a small panel (each by max 2-3 member, 2-3 minutes statements max.), then the audience will vote with cards if they agree with the panel or not. If not, they can offer short alternative answers.

A bottom-up approach was used, to allow members of the audience to form the panel.

Questions from the video
Q1: We invested in our cities in larger and smaller treatment plants. In Ghana we have in total 44, but only 6 or 7 – mostly of hotels - actually work. And in other countries here, it looks similar. Why? And why do we not learn from this for new investments, or do we?
Q2: Are there other approaches possible? We hear of Decentralising, Participation, Low-cost technology, Wetlands, EcoSan. There are success stories, I hope, but at which scale? How does all this work in big city context in Africa or India? And who should pay for this?

Q3: Even where treatment plants work, they only treat a small part of the wastewater. What does it take to give complete coverage? Will I still be alive to see it?

Q4: Some say that in this situation “Dilution is the Solution of Pollution” and accept if cities at the coast dump their wastewater and excreta in the ocean. In Accra, 60-90% of all excreta go this way, not to speak about the wastewater. What do you think about this?

Q5: Some projects tell us to use “ecological” toilets and to use or sell our urine. But if I would have the 70 Dollars it takes to build the cheapest toilet, I would first use it for school fees, food, clothes or a bicycle. Why do they think we would invest first in a shithouse?

Q6: I am growing vegetables near the city and my stream is dirty. Vegetables are my life and there is a big demand in the city, but the municipality tries to stop me. So what should I do and what are you doing to help us? The bad water is not my fault.

Q7: In Kano, we have a lot of small industrial outflow mixed with domestic wastewater. There are tanneries which release something like chromium. If farmers use the water, do we need to worry about our vegetables? How could we control the situation of heavy metals in general?

Q8: In China we have big cities and big pollution problems. Whole rivers are polluted from domestic and industrial sources. I believe India is similar. We know about pollution control regulations but they don’t work. And maybe the polluters are too poor to pay? How should we handle this?

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