A Case Study of Innovation in Water Diplomacy: The World Bank

With the support of the international community governments have made significant progress toward achieving the Millennium Development Goal (MDG) of halving the proportion of people without sustainable access to safe drinking water and basic sanitation by 2015. Between 1990 and 2010 more than two billion people gained access to water and 1.8 billion people gained access to sanitation. Currently, 89% of the global population has access to safe drinking water. Unfortunately, this global progress masks regional inequalities. In Sub-Saharan Africa only 61% of the population has access to improved water sources. In some countries, such as the Democratic Republic of the Congo, access levels to improved water sources are as low as 50%. As governments, communities, and civil society struggle to improve access gaps, stress on the world’s water is growing. Increasing urbanization, climate change, and competing uses of water are critical challenges that we all face while trying to manage global water resources.

51% of the world’s population, or 3.3 billion people, now live in cities or towns. By 2030 that number is expected to grow to almost 5 billion. Unplanned urbanization has meant that local governments and service providers have often been unprepared for the scale and location of urbanization and are faced with an increased demand for water services.

Climate change is also putting stress on global water resources in ways that we do not yet fully understand. What we do know is that the impacts of climate change are being manifested locally as a consequence of extreme weather and that developing countries have the least resources to manage water variability.

This is a serious problem. As a result of the drought in the Horn of Africa in 2011, 13.3 million people in Somalia, Ethiopia, Kenya, and Djibouti are in urgent need of humanitarian aid. 40% of Somalia’s population is affected and living as internally-displaced people or at refugee camps. There are also challenges involving excess water. The floods in Pakistan in 2010 caused more than 20 million people to become homeless. The Government of Pakistan has estimated that US$1.7 billion is needed for reconstruction. The fund have to be diverted from essential development problems.

Lastly, competing uses of water also pose challenges for global water management. In 2000, per capita water consumption in India was about 90 liters a day. This will almost double by 2050 with most of the growth coming from industry. The demand for additional water comes from 3 sources: increased water intensification of agriculture, industrialization, and urbanization.

Developing countries must manage this resource better if they are to grow sustainably. The World Bank understands the urgency associated with water; it is the largest external financier of water projects. With active commitments reaching US$25 billion in FY11, water is a significant part of the World Bank’s overall lending portfolio which includes all aspects of water management: water and sanitation, water resource management, irrigation, and others.

However, we cannot hope to reach billions of people one community at a time. We need some game changing strategies that will allow governments to approach water related issues differently. This requires us to reach out to non-traditional problem solvers and engage with civil society, youth, and technical experts outside the sector. We need to move away from an era during which water policy was developed exclusively by high-level government officials working behind closed doors. A more globalized world has demanded that public diplomacy become more open and engaging. The same can be said for the water sector.
In the water sector we have begun to capitalize on the extensive reach of technology as a way to engage with new partners to find innovative solutions to water and sanitation development challenges. The World Bank and the Water and Sanitation Program developed the first ever Water Hackathon, which brought together computer programmers, designers, and other information technology specialists to compete simultaneously for 48 hours in 10 cities around the world. Their aim: to create the easily deployable, scalable, and sustainable technological tools that respond to specific water and sanitation challenges in developing countries.

The Water Hackathon followed the model set by Random Hacks of Kindness (RHoK), a partnership involving NASA, Google, Microsoft, Yahoo!, HP, and the World Bank, in which subject matter experts and local stakeholders submit actual water problems, which are then tackled by volunteer technology specialists at Hackathon events around the world. While the concept of the Hackathon is not new, for the first time it was held mostly in developing countries.

Much effort and resources went into identifying the actual water challenges people face. For example, more than 100 problems were collected from citizens, communities, World Bank staff, and other experts. One of the challenges came from Botswana, where the water utility’s customer service center is often overwhelmed by calls requesting bill status updates. Customers encounter busy signals, become frustrated and sometimes abandon payment efforts altogether. Others have to travel to the service center to have basic questions about their bills answered.

A solution to that challenge was developed by two students from George Mason University at the Washington, DC Water Hackathon. The team built a functional prototype that simulated how a customer in Botswana could send an SMS message inquiring, “What is my bill?” and instantly receive billing information on his or her mobile phone from the utility’s database. In addition to saving customers time, this simple technological solution can potentially improve the utility’s revenue collections and operating efficiency.

That application was one of more than 50 submitted at the conclusion of the 48 hour hacking marathon. Nearly 1000 participants, 73% of whom were under the age of 30 and 20% of whom were women, with support from over 40 local civil society partners and private sector sponsors, found mobile technology solutions to the problems identified.

Some of the other winning applications included a prototype for a mobile-to-web complaint system in Kenya, a location codification system that allows Tanzanians to report water related problems through SMS and a winning app in Lima that integrated hydrological data from the Ministry of Education on an open street map.

As a result of this event we learned that much remains to be gained from the opportunity provided by the mobile technology industry. We also learned that identifying, articulating and broadly publicizing the many barriers preventing people from accessing safe water and sanitation is of great value in identifying solutions, since the solutions can come from unexpected places. Lastly, we learned there is an opportunity for scaling-up many of these exciting solutions if we effectively connect them to policy makers.

Today approximately one third of the world’s people live in countries with moderate to high water stress. Experts predict that Yemen may become the first country in modern history to run out of water. We can now firmly establish the urgency of global water challenges as central issues facing our world this century. The time is now for governments to face water challenges differently by engaging in a new type of water diplomacy, one that encourages diverse partnerships and invests in innovation.
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Prior to joining WSP, Ms. So was the Lead Infrastructure Specialist in the South Asia Regional Infrastructure Department working primarily on Bangladesh and Pakistan on urban water and sanitation sector programs. Ms. So has also worked on the World Bank’s corporate strategy and risk management development, leading the team preparing the World Bank Group’s Sustainable Infrastructure Action Plan and the World Bank’s response to the global economic crisis.

Prior to joining the Bank, Ms. So was with Monitor Company in Cambridge, Massachusetts, where she advised Fortune 100 level companies on corporate strategy issues in the United States, Canada, Europe, and Japan. She is a Korean national, and holds an MBA and a BA in Economics from Stanford University.