

# URAdapt

Managing Water at the Urban-Rural Interface: The key to  
climate change resilient cities

## MEETING REPORT

URAdapt Accra Policy Round Table  
Meeting.

Friday, November 30<sup>th</sup>, 2012



**URAdapt Accra Re-SAP Policy Round Table Meeting**  
**Friday November 30<sup>th</sup>, 2012**  
**Coconut Grove Regency Hotel, Accra**

**1. Prayer and Opening Session**

The meeting formally opened at 9:30am with an opening prayer by Kwesi Asante of Ministry of Finance and Economic Planning (MOFEP). Opening remarks were given by the Project Leader, Dr. Liqa Raschid-Sally. She asked that the proceedings be informal as the meeting was marking the closing of the project. She expressed to all stakeholders present that the purpose of the meeting was to propose ways of jointly implementing the strategic agenda that has been laid before participants. She explained that the force behind the project was the collaboration between IWMI, Water Research Institute (WRI) of the Council for Scientific and Industrial Research (CSIR), and a dedicated platform of Ghanaian policy makers and scientists. The URAdapt project was implemented from 2009 to 2012 and was aimed at understanding the potential consequences of climate change on urban water systems, and to develop strategies for their resilience, which would account for urban-rural and cross-sectoral interactions. The work was sponsored by the International Development Research Centre of Canada.

She then gave a quick overview of the agenda for the day. She indicated that, for the purposes of this meeting, the presentations to be given would highlight only the important features and interesting results of the project. After the presentations, there would be deliberations on key strategies and decisions on the way forward. She added that, earlier in the week there had been discussions with chief officials within the water and environment ministries and the Water company to advice on the progress of this agenda. She hoped that after the session there will be a roadmap on how to move forward.

**2. Chairman's Introduction and Remarks**

The Chairman, Edward Osei Nsenkyire, was introduced by Edmund Kyei Akoto-Danso. In his remarks the Chairman, noted that there is evidence showing rising regional temperatures, falling rainfall levels and weather patterns are becoming more erratic. He added that "disasters are giving Metropolitan, Municipal and District Assemblies (MMDAs) increasing challenges. The incidence and severity of climate change is increasing within the country but climate change adaptation efforts are most often adhoc and made as emergency measures. This is because long-term plans for climate change adaptation have not been made so far". He indicated that the meeting will review the findings of research from the project on adaptation to climate change in Accra linking urban-rural interactions and change. He believed that these recommendations will influence an agenda for proper climate change adaptation that will be approved by parliament. He ended his remarks by suggesting that, as a nation, we need to create a country and people that are prepared for climate change impacts and not constantly responding to emergencies. He wished all meeting attendees fruitful deliberations.

### 3. Research Presentations

#### ***Factoring climate change into urban water management.***

The purpose of the presentation was to put the entire project into context. Dr. Liqa Raschid-Sally presented the problem that the project sought to address, the process that was followed, the challenges faced and some findings. Referring to the UN habitat report, she said Africa's cities are experiencing exponential growth and by 2013, 50% of Africa's population will live in urban areas. The population growth rate within Accra Metropolitan Assembly (AMA) and Tema Metropolitan Assembly (TMA) was currently at 6.4 and 9.2% respectively. The Greater Accra Metropolitan Area (GAMA) population is also estimated at 3.8 million. The impact of this on the urban landscape is the inability of infrastructure to keep up with urban growth resulting in inadequate sanitation, intermittent water supply, flooding and human health risks (particularly to children). Dr. Raschid-Sally indicated that the findings show climate change aggravates these effects. It is therefore important that we consider the complexity of the urban water system. Water in Greater Accra is sourced from two basins, the Densu basin and the Volta basin. Wastewater is discharged into the Odaw basin. There are complications because water and wastewater management has to deal with three basins and all the agencies and authorities involved with these basins. Adding the implications of climate change increases the extent of the problem. The purpose of this project was to help cities adapt to impacts of climate change. The Global agenda has moved from climate change mitigation research to climate change adaptation research. There is an innovative aspect to the project, of looking beyond the city boundaries to the upstream and downstream rural impact.

Dr. Raschid-Sally indicated that the simple questions that the project tried to address were: What impact has climate change on water resource availability? And what influences urban growth and how does it affect resource use? What are the consequences of climate change on storm drainage and wastewater disposal?

She said that changes outside the city boundaries affect the basin and the city water supply. The current storm drainage system is inadequate and needs to be redesigned to better accommodate urban runoff from the expansion of built area. Furthermore it is important to separate the consequences of climate change from those occurring due to other non-climatic drivers like urban population growth.

She mentioned data collection as one of the challenges the project faced. Original studies that were planned had to be shelved because primary data necessary for these projects was not available and gathering of primary data was not always a part of the project mandate due to lack of resources and expertise. She added that Institutional arrangements for dealing with issues and problems were also not clear. Decision and planning processes were fuzzy and the lack of strategic plans at organisational levels makes it difficult to fit in recommendations from the URAdapt project. At the time that the URAdapt project was beginning, the climate change policy framework had not been made and so it was not easy to know where exactly to fit the planning in. Vulnerable groups dwell in areas that are considered illegal settlements and so institutional arrangements aren't structured to address their problem even when solutions are drafted by URAdapt.

Dr. Raschid-Sally ended her presentation by acknowledging the consolidated effort of IWMI, WRI and all the other ministries and institutions that were represented in making the research possible.

***Water supply–demand management for Accra in the light of climatic and non-climatic drivers***

Dr. Barnabas Amisigo Akurigo indicated that GAMA has a problem with adequacy of water supply. The city takes its water supply from two basins. 43% of the supply is derived from the lower Volta basin and 57% from the Densu basin. He said, the study aimed to assess the supply-demand gap and propose how to address it within the context of the two basins when subject to climate change conditions. He acknowledged that the study did not consider groundwater.

The study assessed only the Densu basin because a previous project had assessed the impacts of climate change on the water flows in the Volta basin and found that the impact would be negligible in terms of availability for water supply. For the Densu basin, downscaled climate data (from REGCM4) was used as input into HEC-HMS hydrological model to assess the flows in the basin as has been done for the lower Volta in another study.

He described the existing supply demand gap, and explained that sourcing water from the Densu to bridge the gap was not possible because the abstraction in the basin exceeds 30 % indicating that the basin was already under water stress conditions. Furthermore most of the water in the basin is generated in the upper reaches of the Densu basin above Nsawam, which is mostly agricultural. Any decrease in rainfall would have to be compensated for by irrigation, for which purpose sufficient water has to be reserved, to avoid future conflicts. With this in view he outlined the strategies including water conservation and water harvesting at the city level, that would contribute to meeting the supply-demand gap, but he advised that more has to be done as a nation to increase the water supply. He added that there is a need for a holistic approach to water management.

***Discussion***

Mr. Wisdom Bortier, indicated that many studies have shown that most ground water is saline within GAMA, but that ground water use is occurring in Adenta specially by sachet. He enquired about plans for further abstraction from Volta basin and for rehabilitation in the Weija area.

Edith Adera added to the suggestion of a groundwater study, and proposed consideration of quality in addition to the quantity especially with salinity being cited as an issue. Dr. Amisigo indicated that there is data available that needs to be assessed to determine what the salinity impact would be. Quality would also be taken into consideration.

A participant asked whether result of the study showed that Accra doesn't have a water scarcity but that infrastructure is the problem causing the shortages. Dr. Amisigo indicated, GAMA is only using 0.3% of the Volta basin water but its infrastructure that prevents adequate supply.

### ***Flood vulnerability: methods of adaptation and health risks***

Dr. Philip Amoah began his presentation with a pictorial view of the community (Gbegbeyise) where the study took place. Children were observed as the most vulnerable groups. The community public toilet is built beside a large open drain. The public toilet is a bucket latrine so certainly there is human excreta in the community drains in addition to the obvious household waste. It was observed that wastewaters generated during domestic activities are washed straight back into the Gbegbe which serves as a domestic water source at certain times of the year.

Dr. Amoah indicated that samples for the study were picked from three main locations indicated in the presentation, the location A which always floods whenever it rains, and two others B and C, which do not flood regularly. Samples of soil, drinking and drain water were collected during dry periods and just after rains when it is flooded, from the three locations.

From the findings, he said, there was an increase in pathogen numbers after flooding which was significant in area A. The whole community is a critical zone for cholera outbreaks and children use the soil and stagnant water for playing and can even accidentally ingest them. He added that, future studies in the area, should focus on calculating the health risk involved. He indicated that for this purpose the sample size would have to be expanded and health implications of various risk prone activities like children playing in sand, etc. measured.

### ***Discussion***

Mr. Graham asked whether the study took into consideration the topography of the area and the fact that people use garbage to fill the land to put up their houses? Dr. Amoah indicated that before the study, there was conversation with the assembly member of the community. He had said that the main concern of the people was the extensive flooding. Due to the effect of the delta, he said that the height of the tide may also have an impact on the flooding. The problem of garbage was indeed an issue documented within the findings of the study.

Mr. Kambozie queried about the change in time series of pathogen loads, and what advice could be given to the community. He also wanted to know if the quality of the water sachets used for drinking was checked. Dr. Amoah indicated that some aspects were beyond the scope of the current study, but that this particular community will be used as a pilot when funding has been secured for further studies, based on the data that had been gathered.

Jonas Jabulo suggested that the results were obvious and wanted to know if the flooding infrastructure absent or present were considered. Dr. Amoah indicated that we are aware that the area is badly affected but it was necessary to quantify the risk to the populations in order to come up with the right solutions for mitigating whatever effects that they may be experiencing, not just to conclude that it's a bad situation.

Felix Nyamedor stated that it seems all studies were based on biological factors in the water, and queried if any of the physio-chemical properties were considered? Dr. Amoah noted that the study was not able to consider that in this phase as that would have expanded the scope.

A participant asked about the plans of AMA to improve the Gbebeyise infrastructure. Mr. Graham indicated that Gbebeyise was originally demarcated for drainage and the best thing that the city authority can do is to evacuate all the habitants. Improvements have been made in similar places like Mamponse with respect to roads and other infrastructure but Gbebeyise is not even meant for human dwelling. It's a wetland and for grazing of animals. Drainage systems of estates such as Dansoman and the rest direct all of their drainage there which adds to the problem of flooding.

Dr. Liqa Raschid-Sally commented that the fact that they have been able to generate data and get results is what facilitates the issue becoming a talking point and a starting point for problem solving. Again about the obviousness of results, she noted that when looking at the supply-demand gap, we know that there is a gap because we experience the water problem but quantifying it is what gives us the capacity to plan better to address it and prevent future issues.

***Roundtable Discussion: moderated by Dr. Liqa Raschid-Sally***

A presentation on the development of the strategic agenda for climate change adaptation was given by Dr. Liqa Raschid-Sally. She said that using the findings from case studies, the project outlined an agenda for climate change adaptation that has gone through at least three reviews already. It was developed by Ghanaian stakeholders who guided the research team through the process. The studies are not exhaustive due to some constraints experienced but future research and information needed have also been outlined in the document.

Each of the attendees was given the document containing the strategic objectives proposed by the URAdapt project. For each objective a set of sub-issues had been identified relevant to the objective. The three main objectives are:

- a. Enhancing the adaptive capacity of the city and its communities to flood impact of climate change.
- b. Adopting integrated climate resilient water supply and demand management in the Densu.
- c. Strengthening institutional capacity to address water-related climate change impacts.

These are the objectives that the project have been able to address in relation to Accra. The project outlined what was recognised as an enabling environment for these objectives to be carried out. Also underlined are potential lead agencies to carry out that particular objective. Dr. Liqa Raschid-Sally asked the participants to take some time to read through the document and see if there are any oversights that need to be addressed.

Mr. E. O. Nsenkyire commented that he noticed the mention of indigenous knowledge in the strategic agenda. He said, before colonization, responsibilities were much clearer than they are now. He cited Ho as being the cleanest municipality in Ghana. This was because the community members feared that if you drop trash behind someone's house a misfortune might befall you. He suggested that Traditional Authorities could play a key role in moving the climate agenda forward at community level, through using festival themes to highlight issues and solutions. He used the example of water, sanitation and climate change, as a possible theme, that could be utilised to effect behaviour changes within local communities.

Dr. B. K. Kortasti felt that in urban areas, most of these festivals are not celebrated on a significant scale. He believed that, some people use fetishes at the intake of rivers and hence it is out of fear that people abide by the rules but, not necessarily because of festivals.

Dr. Liqa Raschid-Sally agreed with the idea of looking into how the older traditions could inspire us to implement the strategies because no matter how modernized Ghanaians become they all respect traditional authorities.

Mr. Farouk Braimah was of the view that some of the recommendations are really not concrete strategies but more in the line of actions. The meeting agreed to change strategic recommendations to strategic recommendations/actions.

In explaining why the document was still labelled as draft, Dr. Liqa Raschid-Sally informed the meeting that although the project is almost over, the reason for this was to allow for higher level decision makers at the meeting to have their final input. Additionally, there is a need for a host institution to uptake the recommendations of the document for implementation.

In response to the query about a host institution, Dr. Ohene Sarfoh suggested that if there were a metropolitan setup that could handle this then that would be great. Without such a setup, he indicated that the Regional Coordinating Council (RCC) would be the next best fit, but he added that the RCC would unfortunately not have the capacity to carry out these recommendations. He finally recommended that, all the nine municipalities of GAMA should integrate the findings into the next stage of their planning so that their value can be realistically seen. He added that that ILGS could also play a facilitating role through their various programs for supporting local authorities in good governance.

Mrs. Charlotte Engmann indicated that sometimes when municipalities give out contracts they are implemented at district levels and so she feels that these strategies should be given at the district level also since that is where implementation takes place instead of at the higher ministerial level.

Dr. Liqa Raschid-Sally indicated there is the need to find an organization to facilitate (as Community Water and Sanitation Agency has done for their projects in the past) so that the municipalities and district assemblies can pick up the implementation. As suggested, ILGS might be able to play this role at the local government level.

Mr. Farouk Braimah suggested that even though all the second level arrangements are good and necessary, the document has to be placed in the hands of some agency with sufficient powers to push it forward. What would be a possible IWMI exit strategy? Would the NDPC be a good option. Also for policy uptake a budget would be needed.

Mr. Nsenkyire opined that this is a huge project and to ask a Ministry to implement it may not be feasible. He said that the priorities of ministries change with change in governments, hence it will be good to have it placed as a project within a ministry. He said that development partners are usually prepared to fund such projects. In such situations, they can track their financial support and see to its successful conclusion. He also suggested that there should be discussions with the National Development Planning Commission (NDPC) and the ministries on how best this can be put together because districts cannot take out of their budgets to house this.

Mr Wellens-Mensah queried the time frame for pull out, and whether a host institution was ready for the responsibility. His suggestion was that since water and climate change are the topical areas, the EPA/MEST, and WRC/MWRWH might jointly host the agenda. Since the WRC has all agencies represented in its coordinating mechanism, this would facilitate uptake. Eventually the MMDAs would be included, but quick uptake of recommendations was necessary.

Dr. Liqa Raschid-Sally felt that while parcelling out of actions according to the roles of the respective involved organisation was a good option, she felt it was still necessary to identify an institution with strong political backing to host the entirety of the agenda to move it forward. She said that usually what happens with a lot of projects is that people get comfortable with knowing there is a strategy but actions are not taken. This project is trying very hard to get local buy-in and ensure success of implementation. Even if we source funding, the local institution should be identified and integrated into the funding proposal.

Edith Adera indicated that not all of the suggestions and recommendations need funding. Some of them are improvements on things that are already being done and can be added to the plans of the MMDAs. The window of opportunity for planning has come and that should also be taken into consideration.

Farouk Braimah reminded the meeting that many of the partners that have been present from the beginning of the project. He was of the view that these partners would be incorporating the findings into their portfolios for planning and investments and into their policies. Even without a host, in the interim, all involved partners should be able to use it to raise funds to get action done on the ground. A cooperative model was suggested.

In concluding the discussion, Dr. Liqa Raschid-Sally indicated that it appeared that there should be more deliberations on which institution can be hosting this document. From now till 31<sup>st</sup>



January, the project team will be tying up loose ends and will continue to pursue finalizing the plan.

Edith Adera gave the closing remarks in which she said she was happy to have sat at the roundtable. She indicated that, this was a flagship project of IDRC, and she is happy with the level of stakeholder involvement. It has been a unique project involving stakeholders from the beginning who question the findings and the way forward for implementation. The findings were interesting particularly those dealing with the supply-demand scenarios at a city level, which gave food for thought. She would like to encourage every institution to think about how the recommendations can be used to influence their work. She added that as much as possible the institution which ends up hosting the document should have the mandate, legitimacy, trust, capacity and strength to convince and influence all areas to ensure greater impact for the uptake of research.

The meeting ended at 12:30PM with a press briefing by the Project Team accompanied by the IDRC project officer, the Chairman Mr Nsenkiyire, and the IWMI Regional Communication Officer.

***List of Participants***

<b>NO</b>	<b>NAME</b>	<b>ORGANIZATION/ADDRESS</b>
1	Kwesi Asante	Ministry of Finance and Economic Planning
2	Harold Clottey	Ministry of Water Resources, Works and Housing
3	E. O. Nsenkyire	National Climate Change Committee
4	Charlotte Engmann	Community Water and Sanitation Agency
5	Jonas Jabulo	Ghana Water Company Limited
6	Cosmos B. Kambozie	Ministry of Local Government and Rural Development
7	W. B. Bortier	Ghana Urban Water Limited
8	Farouk Braimah	People's Dialogue
9	Dr. B. K. Kortasti	Ministry of Environment, Science and Technology
10	George Prah	Ministry of Food and Agriculture
11	Christian Siawor	Ghana Water Company Limited
12	Adwoa Pantstil	Water Resources Commission
13	Dr. Raymond Kasei	University of Development Studies
14	Edith Ofwona Adera	International Development Research Center
15	Senyo T. Amengor	Ghana Urban Water Limited
16	Felix Nyamedor	Regional Institute for Population Studies
17	K. O. Sarfoh	Institute of Local Government Studies
18	Michael Agyeman	Ghana Water Company Limited
19	J. Wellens-Mensah	Ministry of Water Resources, Works and Housing
20	Akua A. Nkrumah	Skyfox Ltd.
21	Edmund Akoto-Danso	International Water Management Institute
22	Emelia E. Abbey	Daily Guide
23	Naa Lamiley Bentil	Daily Graphic
24	Hannah Awadzi	Ghana News Agency
25	Lorrencina Adams	Citi FM
26	Liqa Rashid-Sally	International Water Management Institute
27	Barnabas Amisigo	Water Research Institute
28	Philip Amoah	International Water Management Institute
29	Awokola Abayomi	International Water Management Institute
30	Thor Windham-Wright	International Water Management Institute
31	Graham Sarbah	Accra Metropolitan Assembly
32	Eleanor Swator	Ministry of Food and Agriculture

**Program for Accra URAdapt Policy Round Table Meeting**  
**Friday 30<sup>th</sup> November, 2012**  
**Coconut Grove Regency Hotel, Accra**  
**09:00am – 12:00am**

Theme: Integrating water mediated impacts of climate change into national development policy.

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Introduction	09: <sup>00</sup> AM – 09: <sup>10</sup> AM	<b>Opening remarks and Introduction</b>
	09: <sup>15</sup> AM – 09: <sup>30</sup> AM	<b>Factoring climate change into urban water management – conceptual framework for adaptation</b> <i>Raschid-Sally Liqa</i>
	09: <sup>30</sup> AM – 09: <sup>50</sup> AM	<b>Water supply–demand management for Accra in the light of climatic and non-climatic drivers</b> <i>Amisigo Barnabas Akurigo</i>
	09: <sup>50</sup> AM – 10: <sup>10</sup> AM.	<b>Flood vulnerability: methods of adaptation and health risks.</b> <i>Amoah Philip</i>
<i>Presentations</i>		<b>TEA BREAK</b>
	10: <sup>30</sup> AM – 10: <sup>50</sup> AM	<b>Strategic Agenda for adaptation to urban water mediated impact of Climate Change in Accra.</b> <i>Raschid-Sally Liqa</i>
	10: <sup>50</sup> AM – 11: <sup>20</sup> AM	<b>Way Forward</b>
	11: <sup>20</sup> AM – 11: <sup>30</sup> AM	<b>Chairman’s Closing Remarks</b>
		<b>LUNCH</b>

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**PRESS BRIEFING WITH MEDIA**