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Water within your reach: Upscaling Roof Rainwater harvesting in Ghana

The implementation of Ghana's National Rainwater Harvesting Strategy would be given a massive shot in the arm if a project focusing on roof rainwater can be designed on a bigger scale. And, the benefits of rainwater harvesting can be optimised with continued capacity building through international and public-private partnerships.

This is a major recommendation from the fifty-first edition of the National Level Learning Alliance Platform (NLLAP 51) which hosted CSIR-Water Research Institute, CSIR – STEPRI, the Water Resources Commission (WRC) and Sintef Technology of Norway. These institutions collectively shared the research outcome of their study on "Rainwater harvesting (RWH) for resilience to climate change impact on water availability in Ghana." The stakeholders at the meeting emphasised the need to promote the use of the National Rain Water harvesting Strategy, incorporate it into the building code and also find ways of making the systems affordable and accessible to all.

The NLLAP 51 took place on Thursday, 30th July, 2015 at Erata Hotel in Accra under the chairmanship of Dr. Philip Gyau-Appiah, a senior research scientist at CSIR-WRI. This edition of NLLAP, which was on the theme: "Water within your reach: Upscaling Roof Rainwater Harvesting for Institutional and Domestic water supply in Ghana," had Mr. Ben Y. Ampomah, the Executive Secretary of WRC, Dr. Barnabas Amisigo of CSIR-WRI and MR. Roland Asare of CSIR-WRI as the presenters. This communiqué has been put together as a means to share with the wider WASH sector fraternity stakeholder key highlights of NLLAP 51.

How Ghana views RWH

Undoubtedly, many Ghanaians live everyday fighting to get water because it is outside their reach instead of being within their reach. Besides, the effort to curb water shortages and mitigate the impact of climate change is on.

This presents a wakeup call to start developing new systems that put water within the reach of people. Not further away is the Rain Water Harvesting (RWH) concept which can be promoted for subsistence, domestic and industrial purposes.

In spite of the overwhelming view that rainwater is a blessing, in Ghana a lot of it is allowed to runoff and cause floods.

However, technologies are being developed to help harvest and utilize rain water especially because rainwater harvesting really can make a difference as a climate adaptation strategy.

There is also now a responsive policy environment in the form of the National Rainwater Harvesting Strategy, which is provided for by the National Water Policy. Presenting an overview of the Strategy at NLLAP 51, Mr. B. Y. Ampomah, the Executive Secretary of WRC, said the rationale for the Strategy include meeting the increasing demands on water availability and limited delivery of water and sanitation services for the rural sector.

Unavailability of domestic water in major cities coupled with technical inefficiencies in coping with increasing urbanization also necessitated design of the strategy. Achieving equity in access to water supply for peri-urban and urban poor to meet basic needs at affordable cost was also a reason.

Mr Ampomah noted that many missionary and government agencies set up during the colonial era used and are still practising rain water harvesting. Besides, there is now a new trend where schools and other institutions also harvest rain for domestic purposes.

But rainwater has not been popularized and there is the need to do that, he indicated.

Piloting Roof RWH

Initiatives aimed at popularising RWH have included a pilot project on RWH for resilience to climate change impact on water availability in Ghana undertaken by Sintef, CSIR-WRI and CSIR-STEPRI. The pilot, which was funded by the Nordic Development Fund through the Nordic Climate Facility, and administered through NEFCO, was dubbed: "Water Within Your Reach!"

In a presentation on Water Within your reach: Upscaling Roof Rainwater harvesting for institutional and domestic water supply in Ghana, Dr. Barnabas Amisigo shared with NLLAP 51 participants the results of a study on Rainwater harvesting in Accra.

According to Dr. Amisigo, 20 rainwater harvesting systems have successfully been installed in domestic apartments and two systems have been installed in institutions – one at the Ministry of Water Resources, Works and Housing and the other at a school in Dzorwulu.

He reported that beneficiaries of the systems testified that the water "looks" fine, has no smell or sliminess, and lathers normally with soap. Others said it had helped them cut cost on water supply by tanker services which cost between 35 cedis and 360 cedis per month.

As well, the project assessed the sustainability of alternative roof RWH designs, ran a one-year part-time RWH business and technical training programme for 30 artisans, while engaging in stakeholder dialogue for promotion and capacity building in relevant public and private institutions.

The results from the pilot systems show that when properly designed, rainwater harvesting may function as a main water source for households and institutions in Greater Accra Metropolitan Area (GAMA).

Bottlenecks

Notwithstanding the success with the pilot, there are challenges confronting RWH that must be overcome, according to Mr. Roland Asare of CSIR-WRI, who presented on "Upscaling challenges of RWH and Way forward."

He identified finance, gap between policy and practice, technical inefficiency, procurement bureaucracy and socio-cultural issues as the main hurdles that need to be overcome.

Mr. Asare said the objective for upscaling the challenges of RWH should be a move away from water outside people's reach to water within their reach. As well, the RWH should be seen as a tool for bridging the wide gap between demand and supply of water.

The Way forward

Participants reached consensus on the following recommendations for carrying forward the RWH agenda:

- The technology should be made cheaper through targeting of the private sector.
- There is the need to look at how the technology can be promoted to create the market for companies to start manufacturing raw materials in Ghana.
- In modelling the public education information to get public buy – in, it will be good to emphasize on the long term benefit in relation to cost and not just on only the initial cost which appears to be high and not affordable.
- The RWH campaign should be concentrated around roof rainwater harvesting
- Architects should be lobbied to include rainwater harvesting technology in building plans.
- The amendment to building code should be backed with awareness creation to ensure buy-in.
- Policies can be drafted to state that, buildings of certain sizes (normally big industries with wide roof area) should install a rainwater harvesting system.
- More artisans should be trained in the area of installation of the technology.
- Coastal areas should be targeted to make a special case for awareness creation.
- To target the finance and political challenges, there is need to consider taxes targeted at industry/private institutions for capturing rainwater. Taxes captured can be used to promote scale up.

The NLLAP is a WASH sector multi stakeholder platform with the overall goal of improving sector learning and dialogue. It is hosted by the Ghana WASH Resource Centre Network (RCN). The platform offers learning and sharing opportunity for sector players as one of the practical approaches to improving sector engagements/sharing with the long term aim of achieving a knowledge driven WASH sector that delivers quality and sustainable services in Ghana. NLLAP meetings take place on the last Thursday of every month and opened to all interested parties. The discussions of each NLLAP meeting are summarized and shared with the wider WASH community. The topics of upcoming meetings are decided on by the RCN secretariat and a list of upcoming meetings can be found on the RCN website **www.washghana.net**.

If you are interested to propose a topic for a meeting please contact us on,
Tel. (233-0302) 797473/4
Email: **rcn@washghana.net**