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Workshop on water security and the 100 million initiative
Led by Professor Rob Hope

The Water Programme at the Smith School of Enterprise and the Environment aims to make 10 million poor people in Africa and Asia water-secure by 2024, and advance thinking on rural water finance to provide reliable water services ***for 100 million people*** *by 2030.[1] The Programme's work has focused largely on Kenya, Ethiopia and Bangladesh. The initiative aims to scale water services further through the widespread deployment of results-based contracts, supported by innovative public and private sector partnerships.*

Background and context

- **Water security sits at the confluence of multiple issues, sectors, and actors.** There is interest in understanding and addressing water security from different lenses; examples include water-use efficiency in factories (using water-intensive operations), regenerative agriculture, climate risk forecasting (drought, flood risk, deforestation), climate migration, river pollution, wider social and community impacts, and water-related supply chain risks for corporates.

- **In the corporate sector, it is a central issue within sustainable business practice and ESG,** particularly in relation to the private sector and water stewardship. Corporations with complex supply chains in Africa and Asia (e.g. which source their products from factories located within communities, in these countries) have found it difficult to engage in the space, as they often do not own the factories, nor do they have book orders – and there are concerns over assuming liability over unclear rules and/or enforcement (e.g. for river pollution – for instance, in some areas as much as 80% of sewage might be released into rivers).

REACH and the 100 million initiative

- **The scale of the water security challenge is immense and enduring**: globally, 2 billion people do not have drinking water supplies. Specific challenges in Africa and Asia include river pollution, climate risks for groundwater, and the sustainable use of aquifers in the context of urbanisation and growth of satellite townships.

- **The 100 million initiative combines three elements in its approach** to studying and addressing water security: first, it adopts the 'language of risk' (finance and attribution) as its **conceptual approach**. Second, it is based on equitable science-practitioner **partnerships.** And third, it builds on

[1] See REACH.

alignments between water security and wider socioeconomic and environmental issues (for example, in Bangladesh, it draws on alignments between river pollution in Dhaka, and the garment industry which generates 90% of earnings).

- **The initiative works with governments to identify the highest impact policy interventions** on water security. For e.g. the government of Bangladesh has a $8 billion investment programme to address water security. It uses a large hydrological model to understand the pollution risks in the system and impact on communities and households, and to determine which bit of the system yields the best social return on investment.

Innovative partnerships between the public and private sector

- **An infusion of funding into professional services maintenance in the water sector** is one area which has been seen to deliver high social returns on investment in targeted contexts. Cash flow issues have been a key problem among professional services maintenance providers and the provision of fungible mechanisms to resolve this and enable water services through cross-sectoral innovative business partnerships has yielded results.

- **For example**, a maintenance model adopted in Kenya provides a reliability standard wherein handpump failures are resolved within a fixed time period (e.g. a number of hours). Maintenance providers are given a subsidy tied to the delivery of the service. The subsidy is funded (funds are disbursed in arrears based on results) by innovative consortiums such as trust fund donors (e.g. a trust fund formed by an agricultural company, a mining company, and an ethical retailer in Europe). This reliability-based (or results-based contract) model guarantees some cost recovery and improves water services in the region concerned.[2]

- **Uptime** is an example of a facility that supports a results-based model through innovative public-private partnerships, aiming to scale up water security to 3 million people, including in India and Latin America. Scaling this model also requires standardising water data, designing innovative contracts such as the above, and raising funds to operationalise the model.

Accelerants and impediments to scale

- **A key issue pertains to water-related data, and how it can better inform decision making** for corporates in relation to wider issues that impact the communities that form a part of their supply chains. This was a fundamental starting point for REACH which considered geospatial data through a climate

[2] Other sectoral precedents exist. For e.g. an innovative partnership between GSK and Barclays that aims to supply low-cost pharmaceuticals in Africa.

science lens (e.g. variability in temperatures; satellite data; inflows and outflows of toxicity from factories).

- **Three specific data challenges are:** the difficulty of mapping locally observed (e.g. catchment) data; the availability of data; and, the asymmetry of data. Data work is siloed, as there is no incentive for sharing information. This is inefficient, if one considers multiple stakeholders in a catchment for whom data has equivalent value. There are dynamic data tools being developed such as WRI Dynamic World that classifies every pixel in a geospatial image against one of 9 land use classifiers. The analytical capabilities of data aggregation engines (e.g. Google) could be unlocked to address these challenges.

- **Rights-based frameworks, litigation and responsibility.** There is some debate/discussion around rights-based frameworks and litigation. For example in 2019 Bangladesh became the first country to declare 'rights of rivers'.[3] India briefly promoted this as well.[4] Kenya declared the human right to water as a constitutional right in 2010. However, rights-based approaches have not been seen applied or executed to deliver results in a reasonable timeframe in Asia and Africa. There is a need for other clarifying and enforcement frameworks.

- **There is increased focus by 'risk' departments within large corporations on the compliance with laws in their supply base.** One approach adopted by corporations is to identify within a given sourcing location, what are the rights that might be infringed upon, and how might any related systemic issues be resolved. There needs to be a clearer definition and understanding of the role of the private sector (in addition to spelling out the role of government, non-profits, civil society and academic partnerships) within that setting. A lack of clarity inhibits corporations and companies from engaging more closely in the space to improve water outcomes.

- **Greater efforts at knowledge-building** on successful outcomes, gap assessments, and grievance mechanisms, among other things (i.e. 'making the bits and pieces more cohesive') could act as an accelerant for corporate engagement in the space, and ultimately support the scaling of water security.

[3] Rivers are treated as human entities in Courts of Law. See https://www.npr.org/2019/08/03/740604142/should-rivers-have-same-legal-rights-as-humans-a-growing-number-of-voices-say-ye .

[4] See https://www.theguardian.com/world/2017/mar/21/ganges-and-yamuna-rivers-granted-same-legal-rights-as-human-beings