

## Comments

1. **Title:** The highlighted option is fine, but I would propose to be slightly modified to read “Science-based Solutions for a Water Secure World in a Changing Environment”
2. **Global Water Challenge:** Other challenges that are still not adequately addressed include water use efficiency and wastewater management that further compromise water availability.
3. Going forward the Strategic Plan should also promote a “Circular economy in wastewater management” not only a water scarce countries and throughout the globe. The 4R’s (Reducing, Removing, Reusing and Recovering) under WWAP 2017 should be followed up and promoted. In fact UNESCO programmes should be designed with a follow-up mechanism rather than abandoning initiatives without seeing them through or capturing lessons learnt.
4. New Water Conservation Technologies: The set-back here is the investment costs that is prohibitive in some instances, particularly in our region. A recent technology of Atmospheric Water Technology is very appropriate in remote arid areas, but the investment cost is prohibitive. Therefore IHP-IX should advocate for cost-effective technologies available for the various regions. Further, rainwater harvesting has proved to be very effective and a recent software (ICT-based) that was being promoted by UNESCO (at least in Region Va-Africa) illustrating efficacy and efficiency in rainwater harvesting has not been escalated or replicated as expected. Every innovation that promotes the harnessing of H<sub>2</sub>O in whatever state should be promoted.
5. Water Governance: The participation of the youth in water governance should be enhanced as they come with innovative ways of management as they get to understand challenges while on the job
6. IHP-IX Mission: Some member states will also require (under d) to be supported to ‘reverse’ (rehabilitate) deteriorating water resources.
7. **Strategic Objective 1 (SO1):** Improve Evidence-Based Water **Resources** Management and Governance; in order to satisfy the requirements of Integrated Water Resources Management (IWRM) and consider the other linkages to water
8. Innovative Techniques in Addressing Water Quality, involving Social Sciences: This resonates so well with our region and an emphasis should therefore be included for Region Va-Africa where populations should be able to relate their activities to deteriorating water quality. It is every ones responsibility to ensure that whatever they do on water resources impacts on the quality of water.
9. Accurate and adequate monitoring: UNESCO should take a lead role in this regard otherwise other (UN) institutions are supporting member states with acquiring and analyzing information from ‘telemetric stations’ that relay real-time data from remote areas that are not accessible for human recording of data.
10. Inclusive Water Management under Conditions of Global Change: Under output 4.8 is very appropriate for our region especially in the arid areas with no surface water and limited groundwater potential, but with opportunity for Atmospheric Water that require promotion and affordable investment costs.

11. Increasing inclusive water management: Our region has implemented the model of Water Resources Users Associations (WRUAs) that brings aboard communities and other stakeholders in water resources management at the sub-basin level with limited success (they do monitoring of water resources and catchment management, among other activities). Whereas the process is inclusive and participatory, the challenge has been to sustain these WRUAs which operates without financial support from central governments, and therefore are fatigued doing 'voluntary work'. Water resources management is considered a public responsibility, but how do communities sustain themselves. UNESCO may wish to help our region modify this model to make it sustainable.
12. Enhancing Water Cycle Management: Atmospheric Water should be considered part of the water cycle in the illustrations, but also its quality given the various pollutants in the air.
13. Water Governance Based on Science for Mitigation, Adaptation and Resilience: A challenge faced in our region is that fact that water resources management does not attract much attention and therefore funding compared to water services (supply) that generates returns on investment. A clear relation needs to be developed between water resources availability through sustainable management of catchment areas with the sustainability of water services infrastructure and supply. Therefore a model needs to be developed that requires part of revenue generated from services be re-invested in the sustainable management of catchment areas.
14. Comparative Advantage of UNESCO and its IHP: UNESCO-IHP needs to (re)act with speed in supporting member states during water related disasters, not necessarily through financial support but through scientific information. Case in example is the current phenomenon in our region of the rising water levels in the lakes especially in the Rift Valley. The phenomenon has persisted for almost a year, and the support that was received came from UNEP and not UNESCO! To date it has not been scientifically proven what are the causes of these rise of water levels in the Rift Valley lakes, although it is attributed to the persistent rains in the catchment areas, land degradation, global climatic change or tectonic activities in the rift. UNESCO needs to employ its comparative advantage in this area and support member states.