Food and Agriculture Organization of the United Nations

CIHEAM IAM BARI

AgWA Partnership for agricultural water for Africa

Emerging practices from Agricultural Water Management in Africa and the Near East

Thematic Workshop

Discussion Theme 3

Water Harvesting/ Three-pronged approach

30 August 2017

Discussion theme 3

Water Harvesting

Group discussion guiding questions

1. What are the leading criteria (biophysical, technical and socio-economic) for the choice and upscaling of water harvesting techniques?

2. Planning for water harvesting requires data: what actions can be taken to enhance the collection and systematization of information for improved planning, operation and maintenance of water harvesting infrastructures?

Discussion theme 3

Water Harvesting

Group discussion guiding questions

1. The governance of water harvesting is critical to ensure a harmonic and sustainable development of water harvesting infrastructure. What makes governance structures for water harvesting fragmented and how can a strong and coherent governance be promoted?

2. The right skills for planning, constructing and managing water harvesting infrastructure are scarce: what are the needs in terms of capacity building for water harvesting? How can these needs be met through collaboration and technologies?

Discussion theme 3

Water Harvesting

Group discussion guiding question

5. In water-scarce realities the conservation of groundwater is paramount. Could the conjunctive use of groundwater and surface harvested water be a viable option to buffer groundwater depletion and rationalize its use?

6. In many countries, the governance of groundwater resources is not fully developed. What are the key governance gaps that hamper the rational use of groundwater? How can the gaps in policy and institutional provisions be overcome?

Discussion theme 3

Water Harvesting

Group discussion guiding question

7. Inter-linkages between water, energy and agriculture mean that increased demand or pressure in any sector has consequences on the others. Do holistic approaches addressing not only water but also energy availability (such as solar in irrigation) prove viable to reduce vulnerability to resource scarcity in rural areas?

8. There is a tension between policies that subsidize the use of solar energy for pumping water and the need to curb the overexploitation of groundwater: What are the right incentives to ensure an economically viable and environmentally sustainable pumping activities?

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OUTCOME OF THE DISCUSSION

Water Harvesting

Conclusions

- A clear distinguish should be made between main types of WH, micro and macro catchments, as some countries mostly consider the employment of micro catchment WH infrastructures.
- These skills already exist at community level. Even if these skills are remaining traditional, there is always room and need for enhancement.
- The adoption of the integrated approach (three dimensions) appears to be relevant and replicable in the African context.
- Shared responsibilities between authorities and communities is key factor for success, methods of it could be extended to payment of services, contributing to maintenance and operation as the socio-economic factor is a key factor of success.

Conclusions

- Valorization, transfer of knowledge/technology, operationalization of extension service are the drivers for successful and sustainable water harvesting techniques
- There is a need for shifting in the process of deciding for new WH structures, and more emphasis should be put on rehabilitation of existing constructions and their monitoring.
- Soil conservation practices are recommended in some sites to stop or at least to decrease the erosion hazard, and preventing from further deterioration

Water Harvesting

Conclusions

- WH should not be considered as a viable stand-alone solution but rather as a supplementary option for crop production combining techniques with resources/inputs (energy, water, soil)
- Cost-viability is a factor, but the social dimension of the water harvesting practice should be prioritized at first in order to complement/ supplement/ substitute irrigation. On piloting, it’s rather important to demonstrate applicability and sustainability of solutions, and ensure community adoption that involves other factors unlike the business case thinking.

Conclusions

- There is paradigm between the NGO-type of WH approach for small micro catchments that may be difficult to scale up, and the business approach that often lacks socio dimension
- Short-term benefits and direct involvement of end users at all stages of water harvesting development are major criteria for adoption of WH techniques.
- The role of WUAs represents a key factor to reduce potential conflicts in shared infrastructures