

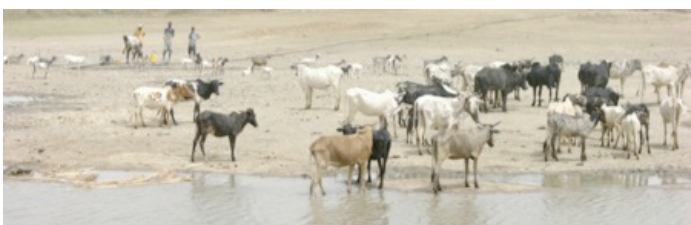
# SMALL RESERVOIRS

## WATER STORAGE TO COPE WITH INCREASING RAINFALL VARIABILITY

Climate change is one of global drivers challenging agriculture production, beside land use changes and demographic pressure, with local consequences: it is likely to exacerbate rainfall variability (scarcity as excess), which already contributes strongly to food insecurity and poverty in dry areas. For millions of smallholder farmers, reliable access to water is the difference between self-sufficiency and hunger.

### Why is it a climate smart practice?

Small reservoirs can support adaptation to climate change by storing water during the rainy season to be used further during the dry season in areas with erratic rainfalls. Small but numerous and largely scattered, they allow targeting a largely scattered rural population and represent thousands of kilometers of shoreline.



### Triggers and constraints

Efficiency of small reservoirs is tightly linked to coordinated institutional arrangements for decision making (from national to community levels), and to the ability of local governance to cope with managerial and organization capacities of stakeholders (mainly through Water Users Associations).

Small reservoirs are already used in many sub-tropical countries, but there is still potential to increase much their number, without impacting significantly the hydrology of hydrographic networks.

### Impact

1 reservoir ≈ 2500 rural people with secure water access all year long.

### Benefits

The multiple uses characteristic of small reservoirs is the main reason for successful adoption by local communities:

- agriculture: off-season crops, vegetable garden
- livestock watering, fisheries, fish farming
- domestic uses: laundry, dishes, bath,...
- groundwater recharge for alimentation of deep and shallow wells
- gender: equity in risks and benefit sharing
- different ecological services providing diversification and incomes

More efforts should be undertaken to promote the high potential of small reservoirs for most dry environments by increasing their numbers and improving their management, and therefore giving to smallholder rural farmers an efficient strategy to increase their resilience against global changes.



*Prepared for Agriculture Rural Development Day Learning Event on How can rainwater management help support food production and smallholder farmers' ability to adapt to climate variability and change?*