

3R: Retention, Recharge, Reuse

3R consortium







Therefore.....Storage!!

There is a need for small scale, low tech, low cost, sustainable solutions!



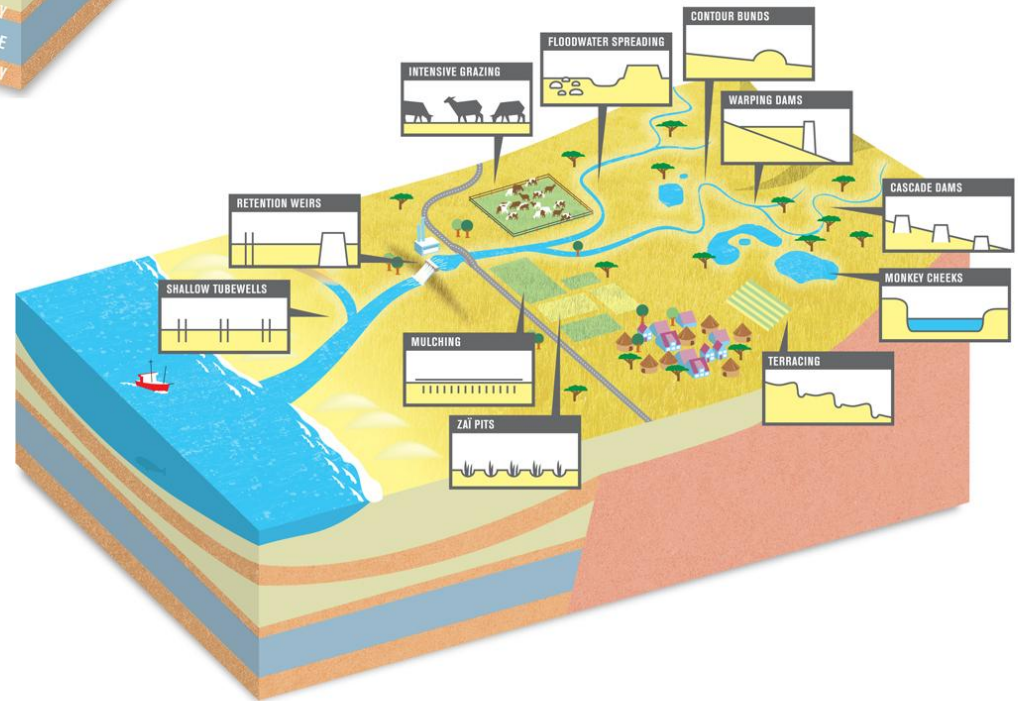
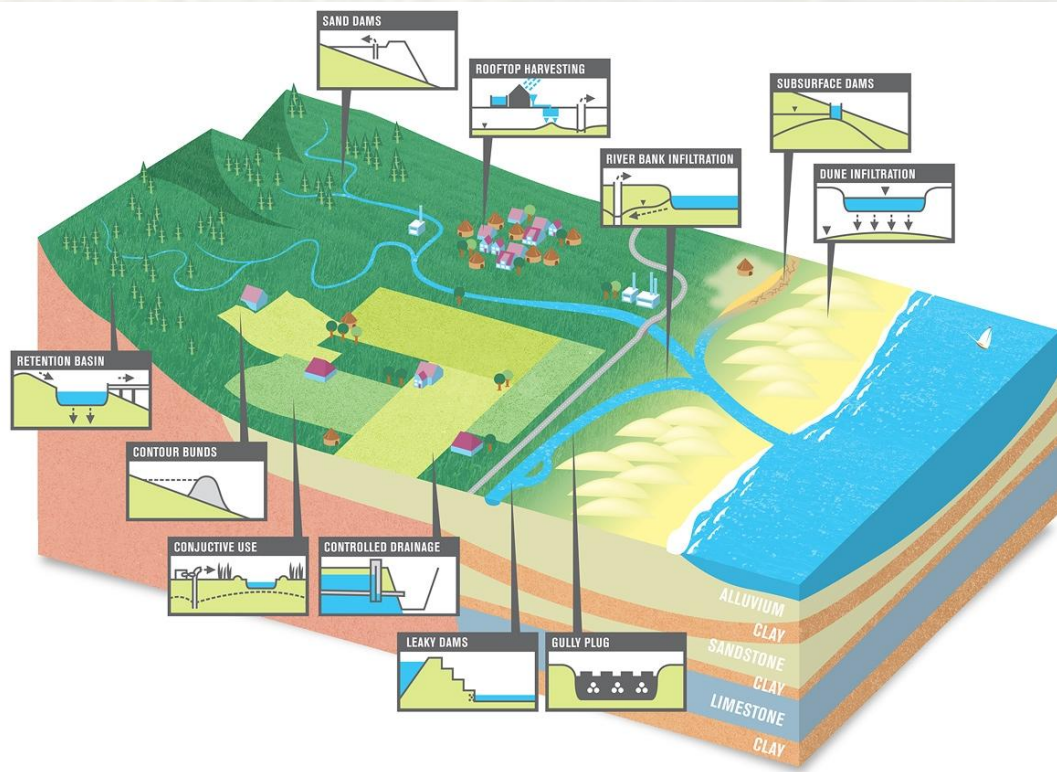


Storage = buffering



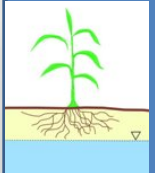
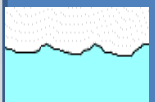
- **3R** concept – Recharge, Retention and Reuse
- A different way of thinking
- Local (cisterns) and subsurface storage (active use of aquifer) of surface water for both water- and food security
- Its not about allocation scarce water but to catch and retain water and extend the chain of use and reuse as possible within a basin
- Introduce buffer management at scale – basin by basin. Not piecemeal/scattered
- Subsurface storage largest potential in terms of m^3



Buffer management at scale



3R techniques

	Retention method	Recharge method	Measures
	A. Closed tank storage	1. Rainwater interception 2. Fog harvesting	Rooftop harvesting
			Fog shield and tank
	B. Groundwater storage	1. Run-off reduction: riverbed infiltration	River bed modification
			Gully plugging
			Sand dams
			Recharge dams
		2. Land surface infiltration	Infiltration ponds
			Spate irrigation
Ditches and drains/furrows			
3. Direct aquifer infiltration	Wells		
Riverbank infiltration			
	C. Soil moisture storage	1. Run-off reduction	Terracing
			Contour bunds
		2. Land surface infiltration	Deep ploughing
Spate irrigation			
3. Evaporation reduction	Mulching		
	D. Open water storage	1. In the riverbed 2. Outside the riverbed	Checkdam
			Storage pond







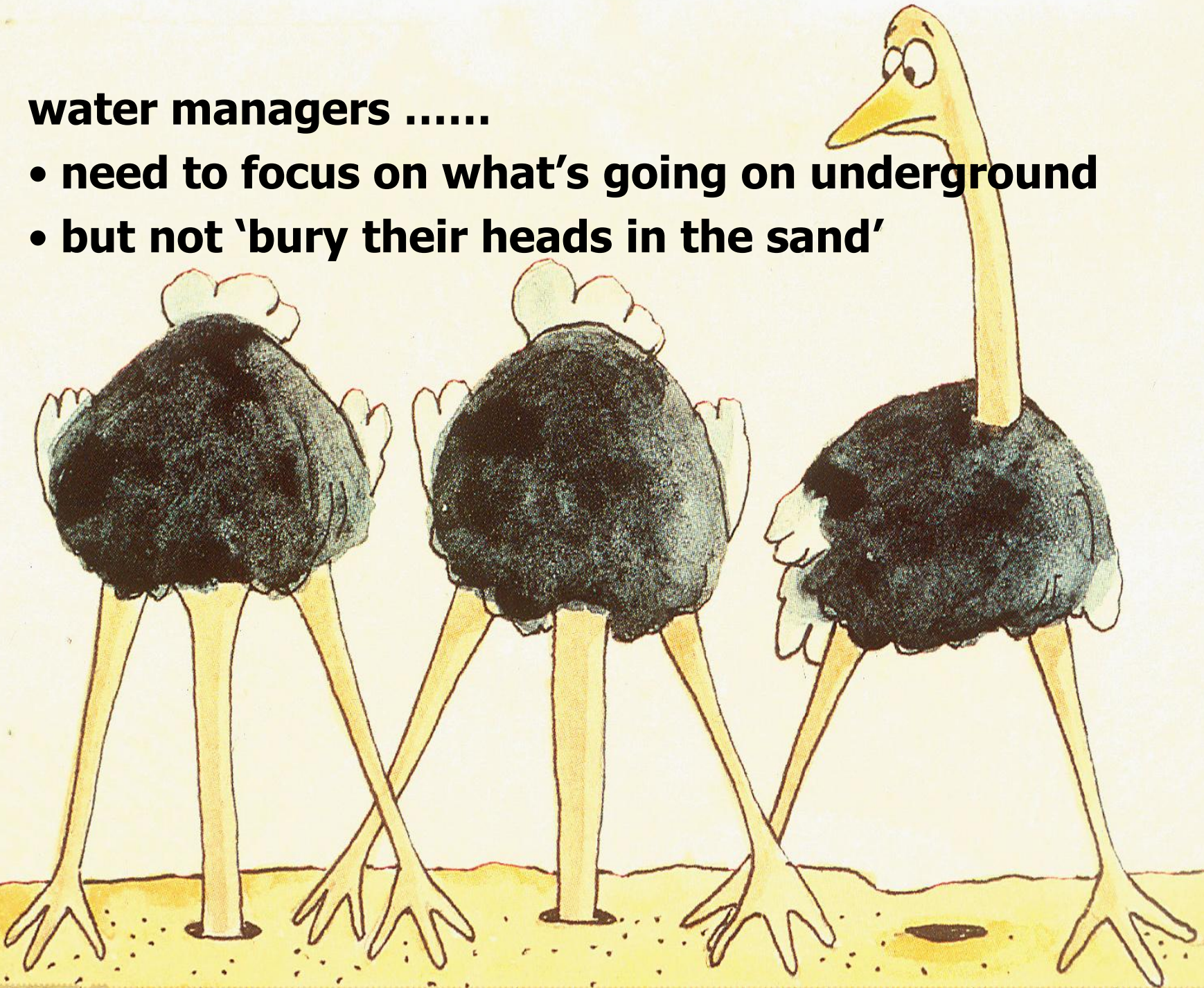


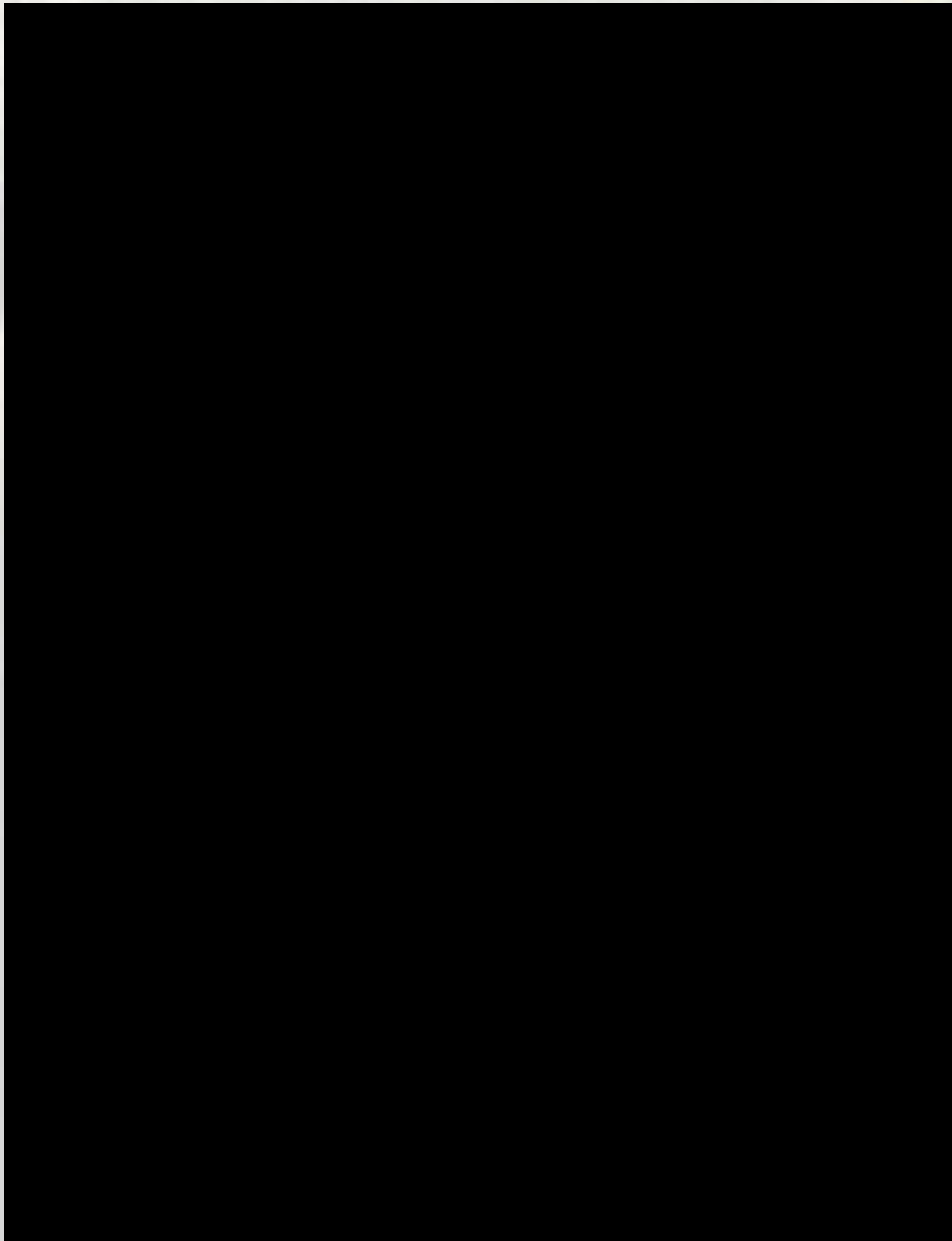




water managers

- need to focus on what's going on underground**
- but not 'bury their heads in the sand'**





Conclusions

- Conventional water resources are not always feasible to supply rural communities.
- Water shortages can for a large part be solved by storing excess water during wet seasons and making it available during dry seasons.
- Water storage in the subsurface has many advantages over surface water storage.
- Everybody has the right to a BUFFER



Contact

Join the 3R family for knowledge sharing,
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you're standing
on a solution
without even
knowing it...

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