THE ACTORS WHO MAKE DRIP IRRIGATION

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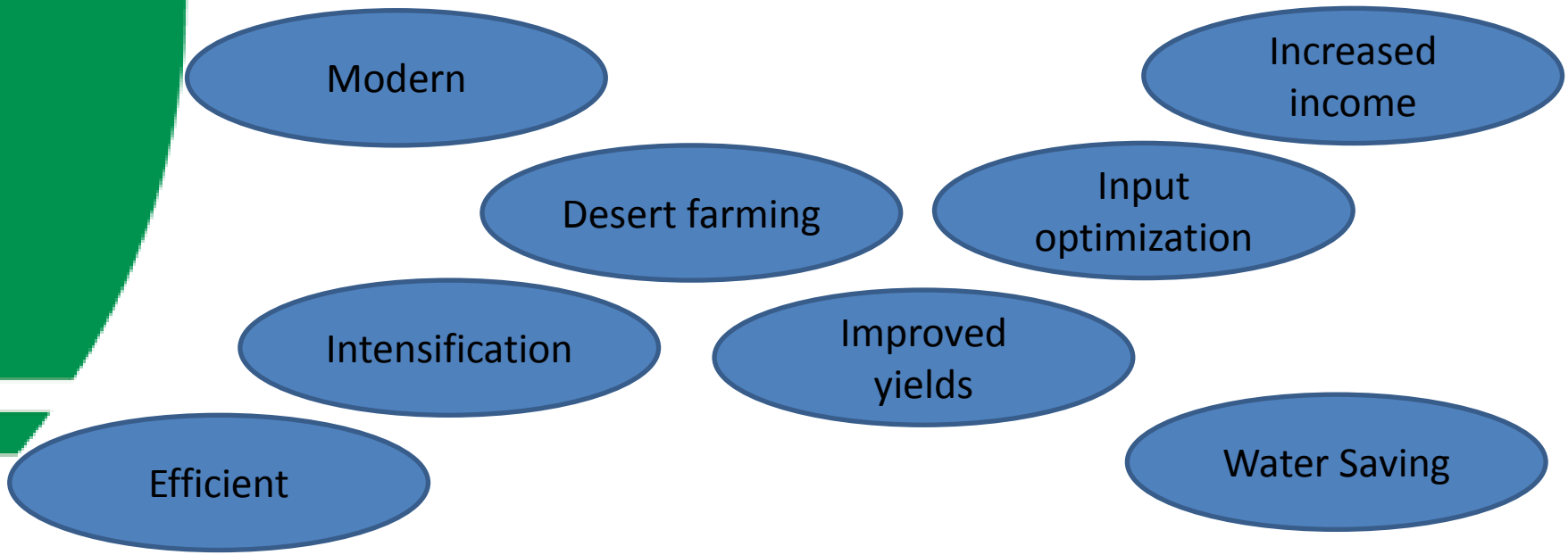
What is, and why, drip irrigation?

Irrigation method using a system of perforated plastic pipes (and ancillary equipment) located on the ground (or below) that delivers water, very slowly, in small amounts, directly to the root zone of crops at a very high frequency



Objective

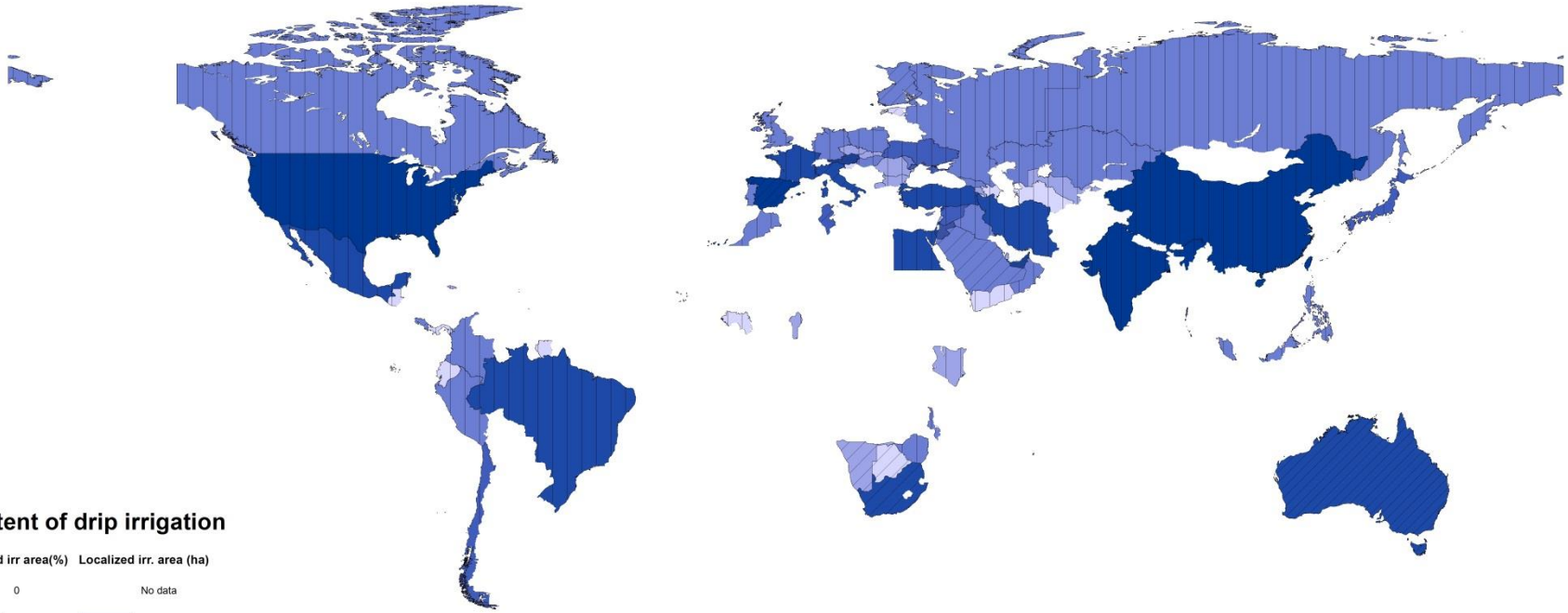
To provide alternative perspectives to the widespread perception of drip irrigation as a solution to global water-and-food challenges





In search of information...

- Incomplete and uncertain data
- ICID Survey (2012): 45 countries
- FAO Aquastat (2003-2007): 19 countries (85, if latest data available chosen)



Extent of drip irrigation

localized irr area(%)	Localized irr. area (ha)
0	No data
1 - 10	< 1,000 ha
11 - 25	1,000-5,000 ha
26 - 50	5000-50,000 ha
51 - 100	50,000-100,000 ha
	100,000-1,000,000 ha
	> 1,000,000 ha

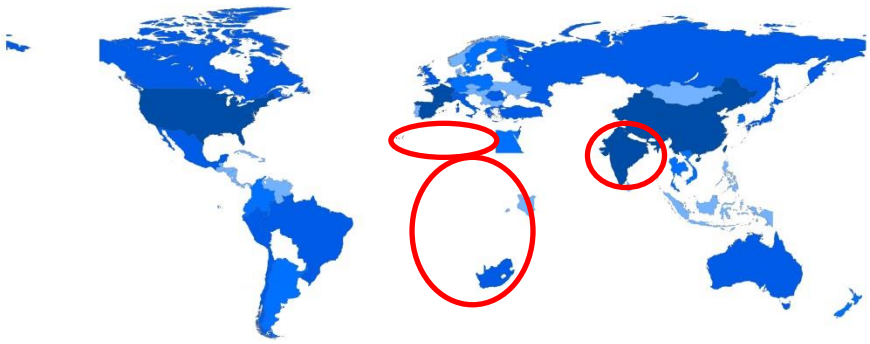
0 550 1,100 2,200 3,300 4,400 Miles

Based on:
ICID and FAO Aquastat and the following specific publications:
FAO (2000): Irrigation in Latin America and the Carribean in figures
FAO (2005): Irrigation in Africa in figures
FAO (2008): Irrigation in the Middle East Region in figures
FAO (2011): Irrigation in Southern and Eastern Asia in figures

Promotion and use of drip irrigation is often beyond the public sector and multifaceted

Different drip worlds

Traditional drip: Manufacturing & sales efforts



- Large manufacturing companies
- Traditional drip irrigation systems
- “Engineering marvel”: hi-tech, automation

- Commercial and entrepreneurial farmers
- Input optimization

Source: The authors; for illustration purposes -- do not reproduce

- NGOs, social enterprise, donors
- Low cost/pressure drip irrigation systems

- Smallholder farmers
- Food security/increase income

Smallholder drip: Promotion efforts

Source: The authors; for illustration purposes -- do not reproduce

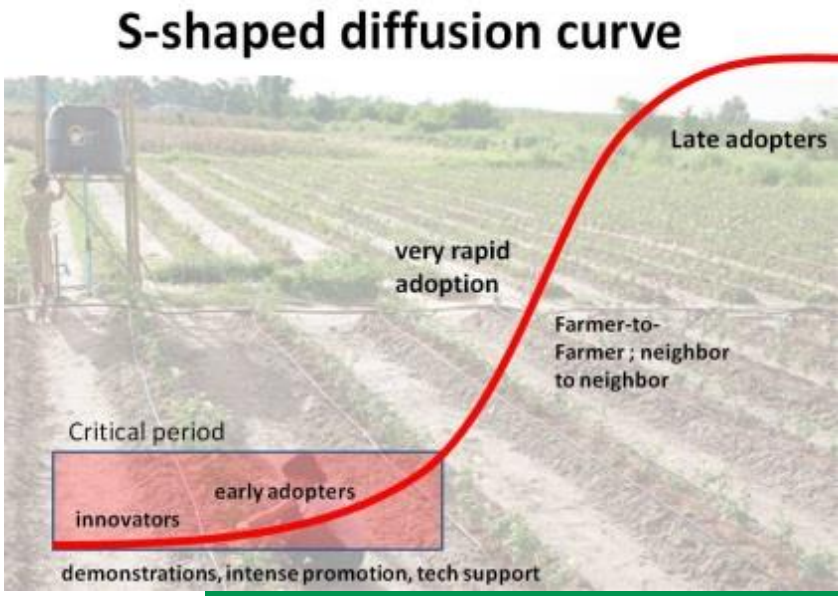
High-profile political support

- *Green Morocco Plan* for the modernization of agriculture, professionalization and water saving
- *National Mission on Micro Irrigation (India)* for increased productivity and water saving
- Irrigation Technologies Promotion Department for poverty alleviation and food security

To specific transitions

- State-driven large irrigation schemes (*reconversion*)
- Promotion of agribusinesses
- Low-cost/pressure systems for poverty alleviation

- Subsidies on standardized & certified material
- External support (ONG, social ent., donors)
- Premised on S-Curve diffusion pattern

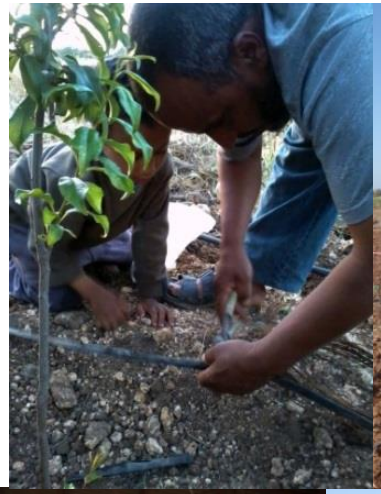


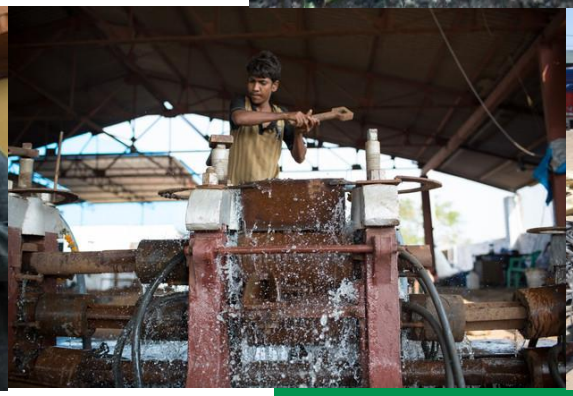
that have limitations

- Subsidies hinder both hi/low tech innovation
- Public- led programmes often cumbersome; beyond the reach of most small family farmers
- Reconversion projects are challenging due to opposition of entrepreneurial and bureaucratic logic
- Pro-poor interventions face targeting and scaling up challenges (esp. Africa)
- Agribusiness can have negative impacts on equity/environment

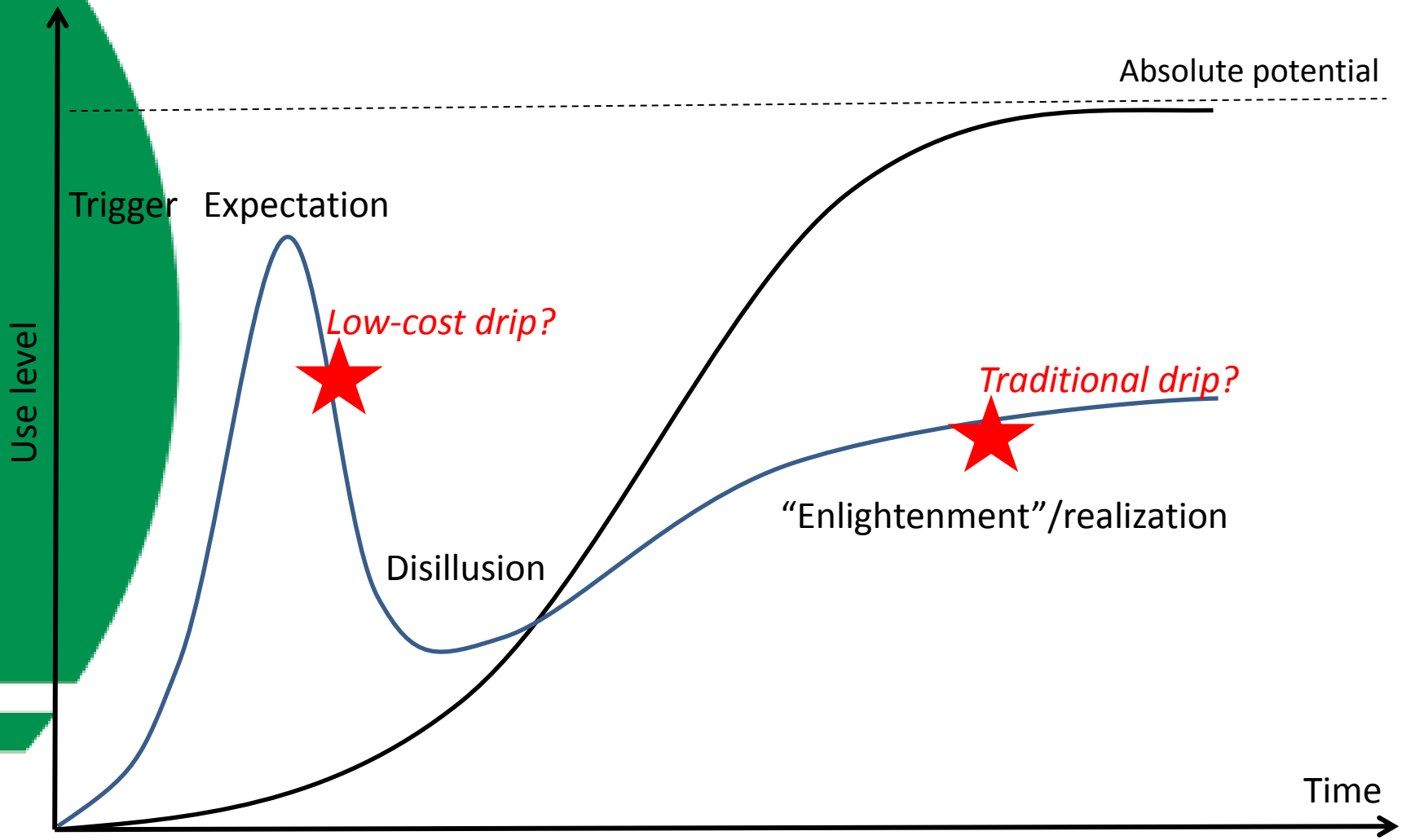
Others trends go almost un-noticed

- Active de- and re-construction of drip irrigation in unintended ways
  - Agricultural merchants
  - Local Manufacturing
  - Informal knowledge network




Actors, institutions and technologies



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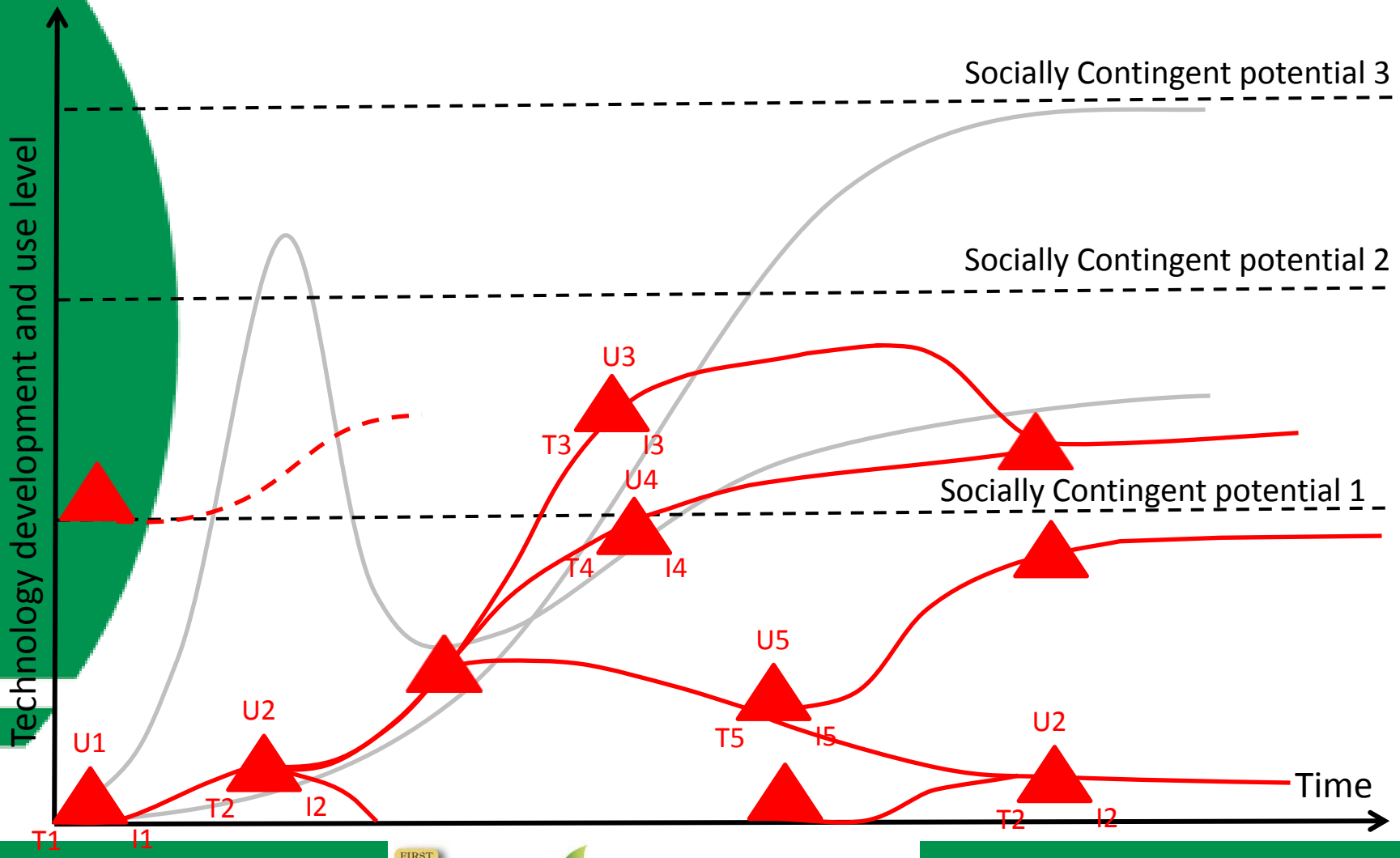
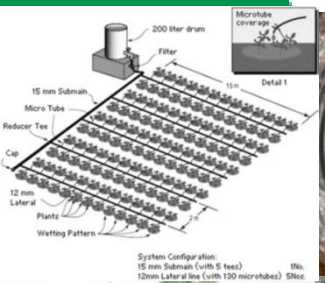
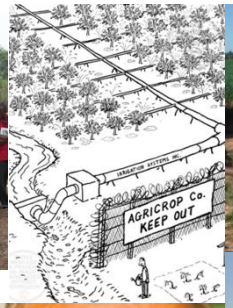


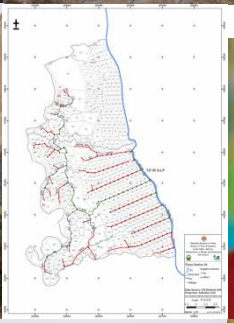
Take home messages...

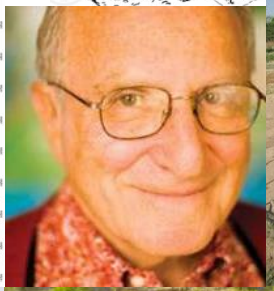
- The promotion and use of drip irrigation is often beyond the public sector and multifaceted
- Support systems and adaptation to context are very essential, yet very often overlooked
- A technology does not exist “by itself” but only through the people who make use of it
  - The potential of a technology is a theoretical construct
  - Technological artefacts are hardly transferable
  - A more balanced view of drip irrigation is needed

Thanks









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