THE ACTORS WHO MAKE DRIP IRRIGATION

Jean-Philippe Venot (jean-philippe.venot@wur.nl)

Saskia van der Kooij, Jonas Wanvoeke, Lisa Bossenbroek, Harm Boesveld, Margreet Zwartveen, Maya Benouniche, Marcel Kuper, Mostapha Errahj, Charlotte de Fraiture, and Shilp Verma
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.

Modern
Increased income
Desert farming
Input optimization
Efficient
Intensification
Improved yields
Water Saving

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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

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

**Smallholder drip: Promotion efforts**
- NGOs, social enterprise, donors
- Low cost/pressure drip irrigation systems
- Smallholder farmers
- Food security/increase income
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

Use level

Time

Absolute potential

Trigger

Expectation

Disillusion

Low-cost drip?

Traditional drip?

“Enlightenment”/realization

Use level
Actors, institutions and technologies

Technology development and use level

Time

Socially Contingent potential 1

Socially Contingent potential 2

Socially Contingent potential 3
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