A New Paradigm for Sustainable Adoption of Advanced Irrigation in LDCs

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OBJECTIVE: propose a new paradigm for the sustainable implementation of climate-smart agriculture in Least Developed countries

BACKGROUND: between 2011 and 2100 populations of high-fertility countries projected to triple from 1.2 billion to 4.2 billion (UNFPA, 2013), and, in that period, agricultural production needs to increase by 70% overall, and by 100% in LDCs (FAO, 2009). But rainfed crop yields are declining and the number of extremely poor people increased by 3 million from 2002-2007 (UNCTFD, 2010). The majority of agricultural GHG emissions -74% originate in low and middle-income countries (Wollenberg, et al, 2012). Two-thirds of all LDCs will be living in water-stressed conditions by 2030.

PURPOSE: identify a paradigm that is sustainable over time and space, adaptive, reliable, replicable, cost-effective and proven to provide generalizable organizational and institutional methodologies for the successful implementation of climate-smart agriculture,

THE DEVELOPMENT MODEL HAS FAILED
“Dis-adoption” of drip irrigation kits in African LDCs is at 84% (Burney)

The “Irrigation Distribution” Model

Assumptions:

- In order to provide sufficient production in a sustainable manner, farming needs to be professionally managed and supported
- Irrigation systems have to be highly efficient and have adequate distribution uniformity

75% of all jobs in agriculture are non-farming.
The “Irrigation Distribution” model provides:
1. Professional local support and manufacturing
2. Employment
3. Credit
4. Supplies
5. Deliveries
6. Training