



Saving Water On Large Scales: Evaluating the Ramthal Irrigation Project in Karnataka, India

Yoav Rothler
May 2017

Funding by:

Boris Mints Institute for Strategic Policy Solutions to
Global Challenges

Manna Center Program for Food Safety & Security
New York University, Abu Dhabi

Background

Growing water scarcity is threatening the livelihoods of hundreds of millions of smallholder farmers in the semi arid tropics.

Large centralized public irrigation projects are performing poorly, inefficient, and fail to generate gains that can justify the large public expenses (Duflo and Pande, 2007).

Can a new approach achieve efficient and productive use of water by smallholder on large scales?

Central Irrigation Projects in India



Investment in Irrigation Projects 1961-2001	US\$ 65,556 Million
Area Irrigated	18 Million Hectares
Fees Collected as % of Investments	0.2%
Value of Crops as % of Investments	18.3%

Source: Infrastructure Development Finance Company, 2011

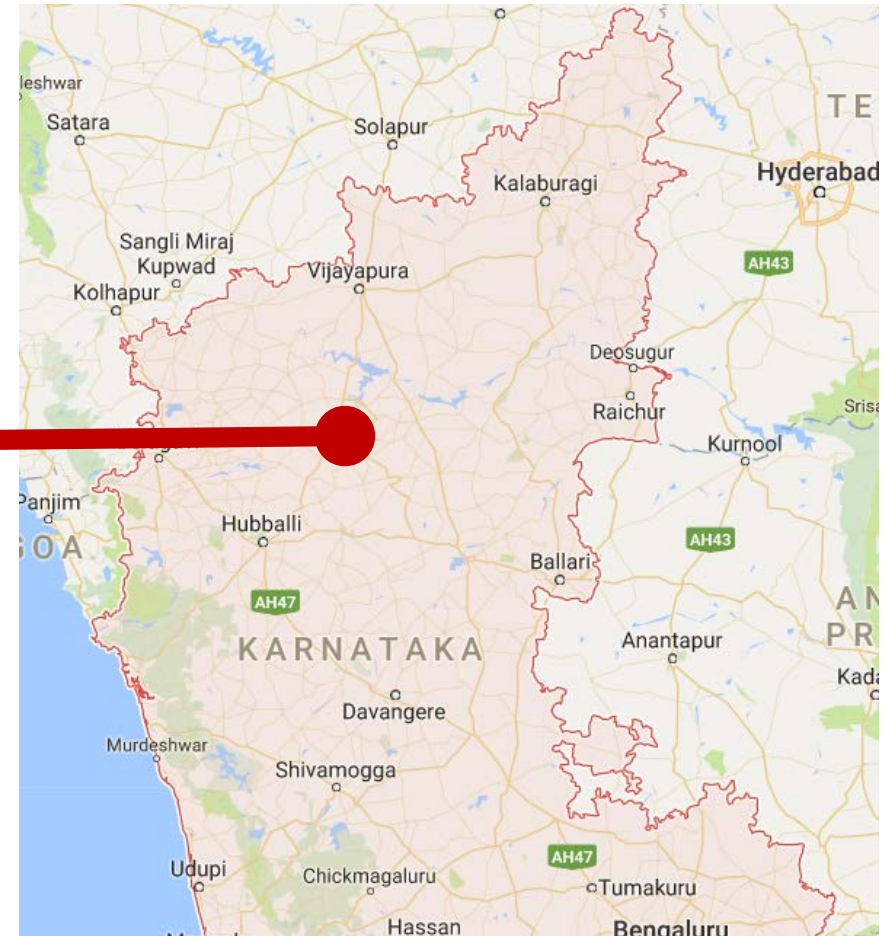
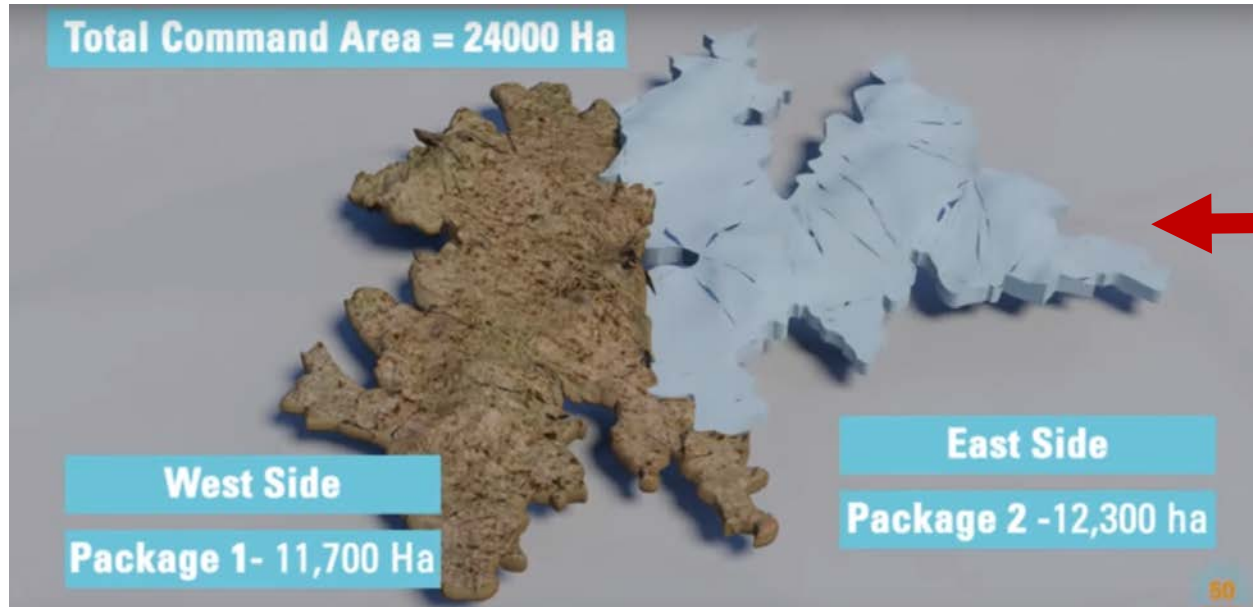
Poor
Management and
Maintenance

Head-Tail Inequity

Decentralized
Groundwater
Irrigation

No Fee Collection

RAMTHAL: A New Approach of Central Irrigation Development Schemes

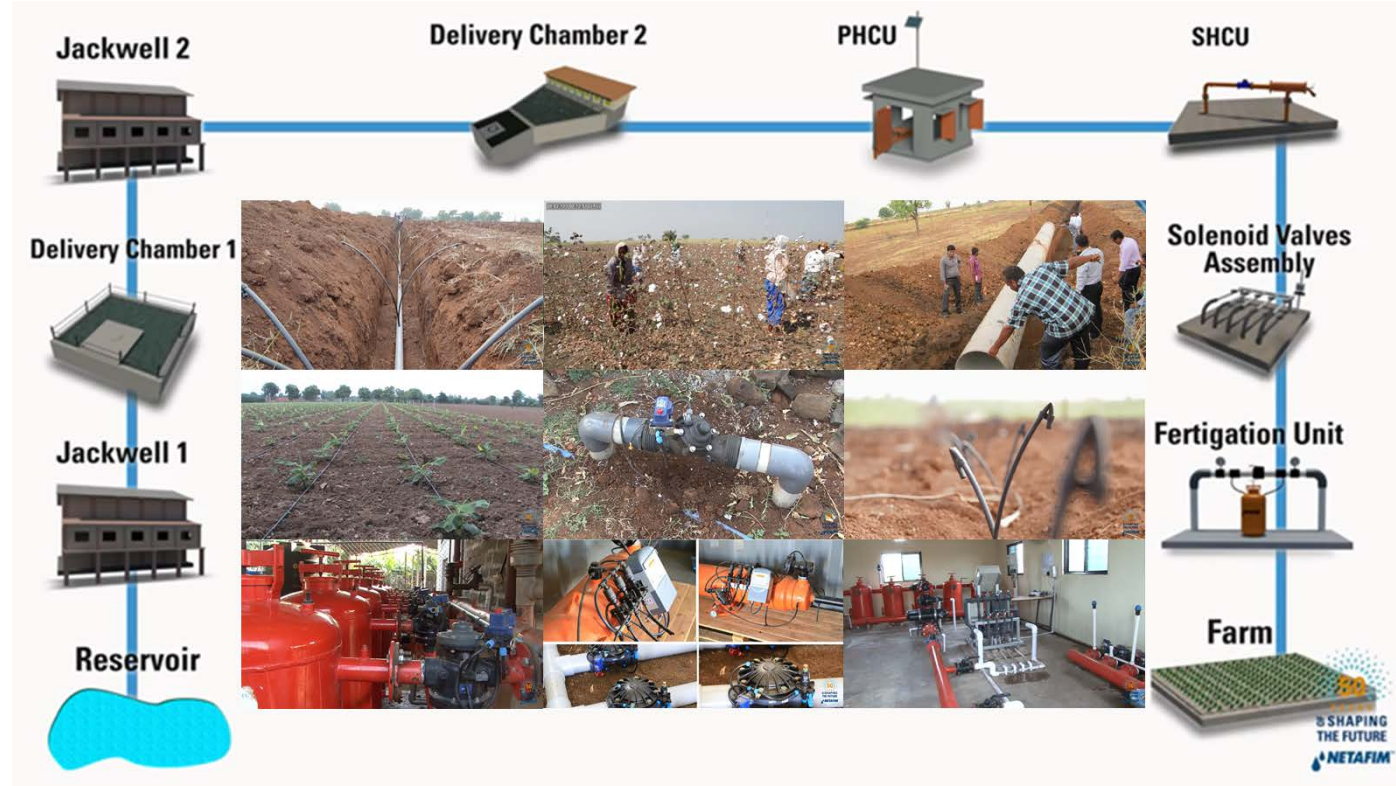


RAMTHAL: A New Approach of Central Irrigation Development Schemes

12,000 farmers
Over 50 villages
24,000 hectares

US\$ 180 Million
Investment;
Funded by State
Government

Built and
operated by
Netafim and Jain
Irrigation



Commence
operation in
2017

accompanied by
Extension and
training Services

farmers will be
organized into
Water User
Associations

Netafim to Build Largest India's Drip-Irrigation Project

Business Standard

Asia's biggest micro-irrigation project in Ramthal

The project when completed, will cover 24,000 hectares in Hungund taluk

THE TIMES OF INDIA

World's largest drip irrigation project in Bagalkot

THE ECONOMIC TIMES

RAMTHAL MAROL INTEGRATED IRRIGATION PROJECT



business today in

Digitising Agriculture

Will it work?

- Novel of the approach with implications on policy in the developing world
- The challenges are social:

Project is “top down”
and not drive by
farmers’ demand

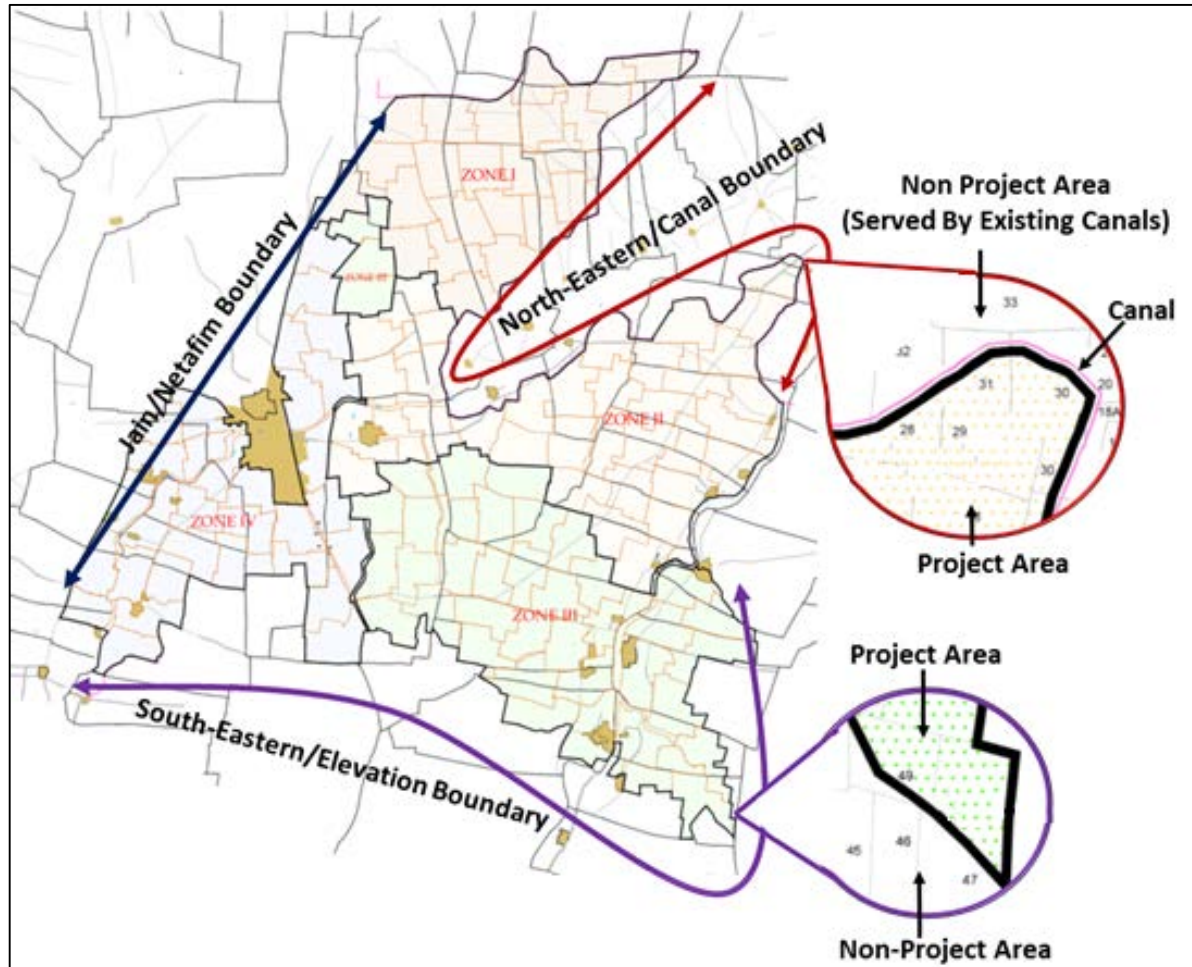
Will growers become
modern, irrigated
cash-crop growers
“overnight?”

Very large
investment (\$180
M); will returns
justify it?

Will water-user-
associations
maintain the
infrastructure?

- This is Why Research is Needed!

Experimental Design



control and
treatment groups
rather than before
and after

Comparing farmers
who are close to
the borders

Farmers today
have similar
characteristics

Baseline Survey Results

	Rainfed Land	Annual Income USD	Annual Expenditures USD	Annual Agricultural Expenditures USD
Farmers Within the Project	93%	1,843	1,124	497
(sd)	(0.25)	(2,296)	(932)	(493)
Farmers Outside the Project	94%	1,731	1,199	471
(sd)	(0.24)	(2,459)	(1,061)	(452)

Additional follow up surveys, one (2018) and three (2020) years after the project is launched will measure short and long term impacts

Thank You