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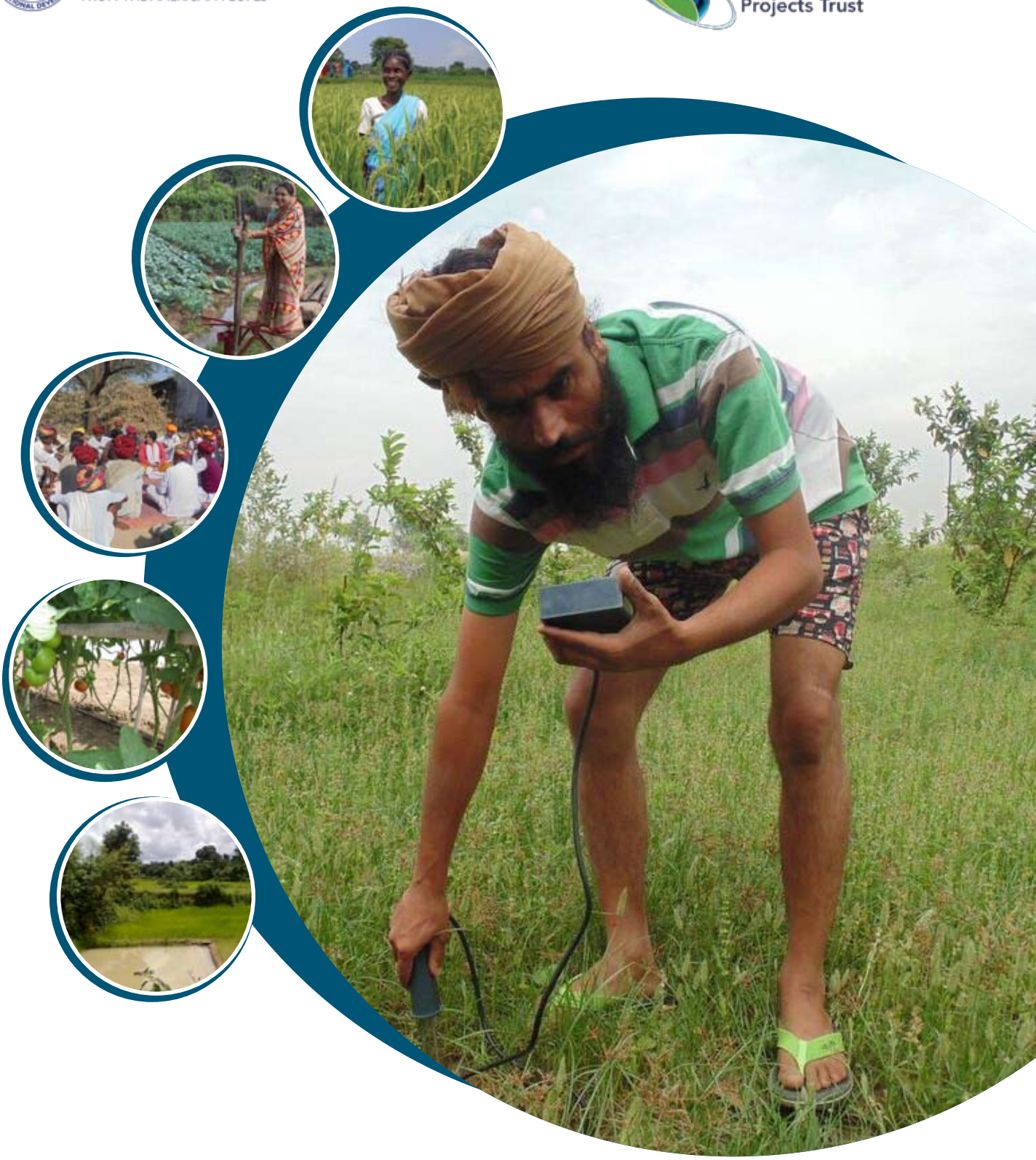
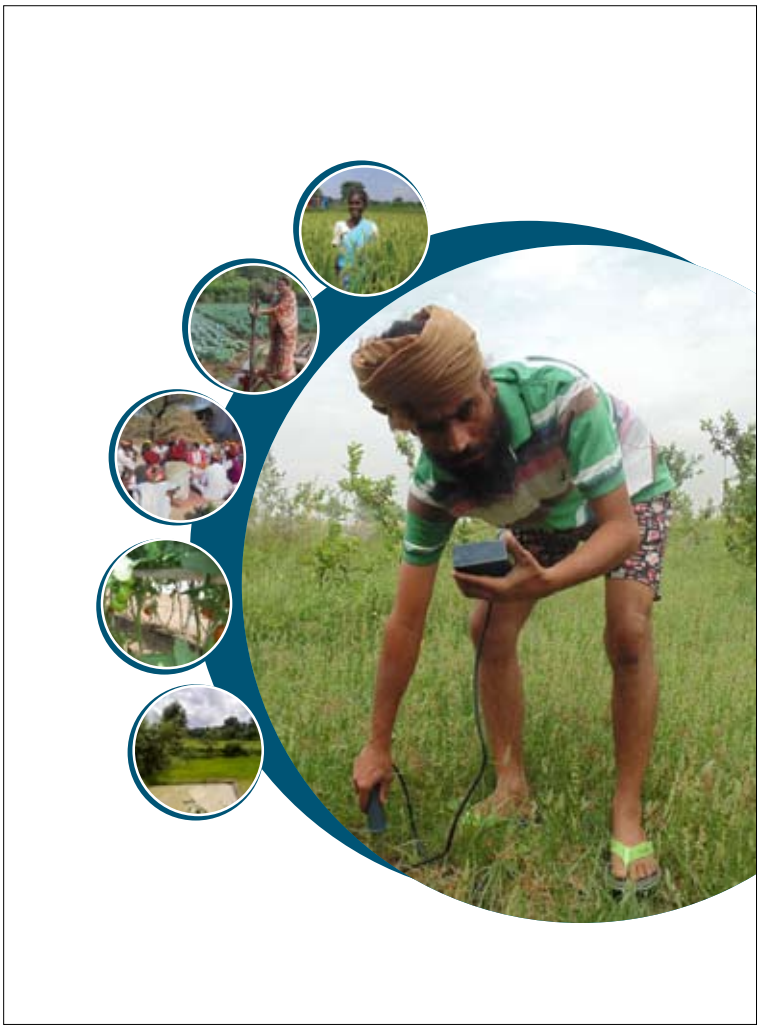


Compendium

Best Practices on Water and Agricultural Sustainability



Compendium

Best Practices on Water and Agricultural Sustainability

Centers for International Projects trust (CIPT)

The Centers for International Projects Trust (CIPT)is a non – profit organisation based in New Delhi and is India affiliate of Columbia Water Center, New York. CIPT works on developing and piloting new models for effective water and energy management across different regions in India. It works towards performing applied research in the areas of agriculture, water, climate change, energy and related socio – economic perspectives and provide rigorous research based knowledge as the foundation for various field based initiatives.

With its strong institutional mechanisms and innovative approach CIPT aims at holistically addressing the issues of water and agriculture in the country through different low-cost precision technologies, nexus modeling and extension methods.

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DISCLAIMER

This compendium is an outcome of the information shared by various organisations pertaining to their work on water and agricultural sustainability. While utmost care has been taken to present accurate information, CIPT makes no representation towards the contents of the case studies profiled here. Also, this compendium is presented for informational use only and is not intended to be a substitute for professional, legal or technical advice or reference. Maps represented in this compendium are not to scale.

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Community led resource efficient agriculture in Bundelkhand

Enabling farmer community for collective local planning and resource management

BACKGROUND

Bundelkhand, a semi-arid region in Central India, is characterised by poor human development indicators and degraded natural resources. Agriculture is the mainstay of the economy, with 90 per cent of the population being dependent on agriculture and 75 per cent of agriculture being rain-fed.

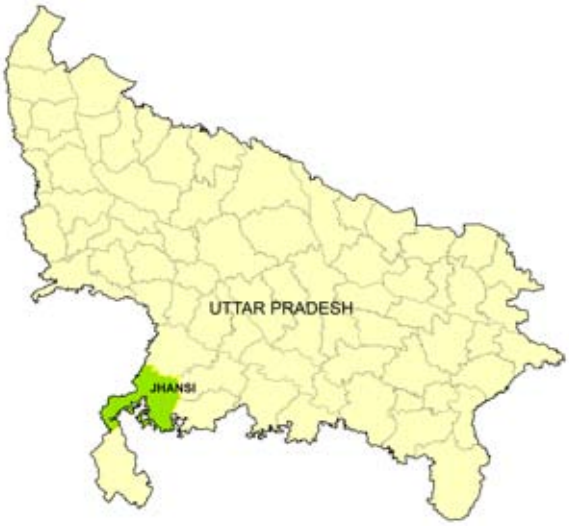
Poor productivity and adherence to obsolete and resource inefficient farming practices has proved to be a bane for the farming community in the region. Farmers have inadequate knowledge and capacity of sustainable and scientific farming systems. Increasing populations have led to further decrease in landholding size contributing to decrease in productivity levels and farm profitability. This has led to high distress in the farming sector, leading to a vicious cycle of livelihood insecurity, poverty and debt.

The project focused on mainstreaming a culture of participatory planning and management of natural resources and farm assets for sustainable agricultural growth and equitable development at the village level. The project was implemented in Dhikoli, Nayakheda and Domagor villages in the Pahuj watershed of Jhansi district in the Bundelkhand region of Uttar Pradesh.

STAKEHOLDERS

The intervention was built on an existing project funded by the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). The farmers were the key stakeholders. They participated in village level agricultural planning and took collective and rationalised decisions based on the availability of resources. Farmers were trained on improved and resource efficient practices and also encouraged to spread awareness amongst their peers.

The role of the Panchayat was to facilitate processes of participatory local governance and planning for bringing about desired changes in practice through convergence with government programmes.



APPROACH AND METHODOLOGY

This intervention was built on an existing project for developing model watersheds that was funded by ICRISAT. It aimed to instill a culture of participatory planning and efficient management of natural resources for sustainable agricultural growth through the following activity components:

- Improving water and energy use efficiencies at village level by adoption of appropriate agricultural technologies and practices;
- Training village level community institutions to undertake sustainable management and equitable use of water resources in agriculture through collective decision making;
- Promoting crop diversification specifically focusing on less water intensive crops like barley; and,
- Establishment of seed banks and nurseries to ensure sustained availability of good quality planting material.

Implemented between 2013 and 2015, the project was based on a holistic approach consisting of planning, technological, institutional and capacity building measures like –

a) Water budgeting exercises to sensitise stakeholders towards management of limited water resources and thereby influencing appropriate cropping decisions and creation of water harvesting potential;

b) Demonstration of resource efficient technologies such as drip and sprinkler irrigation and the use of solar pumps. An enterprise model was developed around solar pumps, wherein irrigation water was provided as a paid service on an hourly basis;

c) Creation of farm ponds and micro-ponds;

d) Capacity enhancement of the existing village watershed committees through trainings and demonstrations;

e) Participatory planning processes involving all villagers and the local government for sustainable management of natural resources and its integration with mainstream local development process;

f) Mobilisation of Farmers' Clubs for sharing of farm machinery and equipment; and,

g) Provision of loans by SHGs for the purchase of micro-irrigation equipment.

RESULTS AND OUTCOMES

Approximately 250 farmers benefitted from this intervention where farmers reported an average of 20 per cent increase in the farm productivity. An annual increase in net returns by INR 10,000 – 15,000 per hectare was also reported. This initiative also led to some other positive results including:

(a) Adoption of water and energy efficient farming systems;

(b) Enhanced water harvesting potential, soil moisture and biomass;

(c) Improved resilience within livelihood system of people against changing climate;

(d) Building collaborations between different sections of the village community thus strengthening the local government system;

(e) Leveraging 400 per cent of government funding through convergence; and,

(f) Increased participation of women in decision making.

This pilot intervention in three villages has scope to be replicated elsewhere across the country by integrating this unique approach in the existing government programmes for watershed and agricultural development.

By
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