Leveraging Sectoral Investments for Greening the Agriculture Production System

A Case of Conservation Mainstreaming

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Anupam Joshi

The World Bank

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The Challenge

- **Business as Usual is Unsustainable and Adverse for Biodiversity Conservation**
  - *Increasing use of agrochemicals for boosting soil productivity*
    - *increased pollutant load that is toxic for soil invertebrates and aquatic biodiversity/wetlands*
  - *Continued low-profit and subsistence agriculture for marginal/poor/small farmers*
    - *increased depends on unsustainable extraction of NTFPs*
  - *Insufficient funding realized to increase farmer resilience to climate shocks/vulnerability*
    - *Continued dependence on unproductive cattle – overgrazed pastures*

The "Solution"
2 key elements at 3 levels

- **E1.** Reform the agricultural research and production system – climate smart agriculture
- **E2.** Create multi-stakeholder partnership based on *value proposition*

  – ***(Li) Making agriculture as a platform for socially inclusive growth –*** working in poor areas with up to 50% tribal population

  – ***(Lii) Improving the environmental footprint of agriculture value chains and commodities –*** *r*educing the toxic loads through use of innovative alternatives that replaced agrochemicals

  – ***(Liii) Increasing the environmental and social sustainability of agriculture operations*** – building farmer capacity and utilizing agricultural wastes/ residues into new products

Greening the Agriculture Production Systems – Outcomes (1)

- **Greening the Commodity Value Chain(s)**

National Agriculture Innovation Project (NAIP); 2007 - 2014		
Intervention Details		**Projected Potential**
Over 44,000 ha of plantations were established (Industrial Agro-forestry project)		Can be scaled up to 450,000 ha in similar agroclimatic zones
Conservation of hardy local breeds successfully achieved through reintroduction in local economy		Poultry (Kadaknath), small ruminants (Sirohi goats and Deoni cattle) linkages to create small towns and cities as new markets
A combined reduction of 51% was achieved for insecticides and fungicides using a total of six value added formulations of biopesticides, two each from Melia, Eupatorium and Trichoderma		Reduction of insecticides and fungicides can be doubled within the existing project area

Greening the Agriculture Production Systems – Outcomes (2)

- **Improving the Environmental Footprint**

National Agriculture Innovation Project (NAIP); 2007 – 2014		
Intervention Details		**Projected Potential**
1127 tonnes of urea replaced in 22545 ha; 15,500 tons of vermi-compost produced by over 7,000 individuals		Can be replaced in 900,000 ha; vermi-compost can be adopted by up to 55,000 individuals in project districts
Agricultural waste and crop residues utilized for electricity generation resulting in reduced crop burning in 19 sq.km. area (reduced greenhouse gases by 880 T/Yr.)		Crop burning can be averted in approximately 2 million hectare within project states
mKRISHI benefitted 1430 fishing crafts covering about 8580 fishers; resulted in net savings of 94,000 liters of diesel fuel every year = about 250 Tons of carbon-di-oxide reductions annually.		Up to 10,000 fishing crafts can be covered

Leveraging Sector funds for Conservation Mainstreaming

- Ministries of
  - Agriculture / Science and Technology / Commerce and Industry / Youth Affairs / Power / Tourism / Earth Sciences etc.
  - Approximate peripheral funding of US$ 380 million* that can directly and indirectly mainstream conservation in agriculture production system

* Research conducted by Wildlife Institute of India

Thank you