Incentives that work for farmers and wetlands

Problem statement

Balancing agricultural growth and environmental conservation is of growing policy importance. A common problem involves upstream land use practices reducing water quality for downstream water users. For example, agro-chemical farm use can lead to higher pollution loads in water bodies as a result of leaching or runoff from upstream agricultural land. This can result in environmental damage and increasing water treatment costs. Policy action needs to find a balance between maintaining livelihoods dependent on agriculture whilst protecting drinking water supply and ecosystems that may be damaged by agro-chemical runoff.

In India, the Bhoj wetland is a site of international ecological significance that is negatively impacted by upstream farmers' use of agro-chemical inputs. Organic agriculture offers a demonstrated approach which prevents environmental damage from pesticide or herbicide use and may reduce nitrate concentrations in water courses. A growing organic international market offers price incentives for small-scale farmers who are able to overcome information, certification and institutional constraints to access these markets. Research has investigated different organic farm management scenarios to determine which incentives influence farmers to change to organic farming. Results provide policy guidance in objectively evaluating land management change opportunities for small-scale upland farmers.

Research results

- Incentives are critical as farmers will not switch to organic farming independently.
- Crop price incentives are central to influence farm management change.
- Farmer responses to price incentives vary by farm location, farm size and preference grouping.
- Farmers are more likely to work together to certify their land if there is a differential between group and individual land certification costs.
- Increased labour effort is a significant constraint for organic farm adoption.

- A majority group of farmers in the watershed respond positively to organic farming scenarios with a smaller group of farmers more resistant to farm management change.

Developmental implications

1. Urban drinking water resources will be protected.
2. Pollution of rural groundwater drinking sources will be reduced.
3. Improved soil fertility, soil stability and water retention will contribute to sustained productive benefits for farmers.
4. Inorganic input expenditure will be reduced.
5. Farmer income and food security may be improved.

Policy action required to achieve developmental benefits

Developmental benefits are premised on farmers accessing premium price organic markets. This requires Government of Madhya Pradesh, non-government organisations and donors to continue cooperation to support:

i. an institutional body formed from wetland stakeholder groups to:
   a) increase awareness and policy support for organic farming,
   b) further corporate and business sector support;
   c) negotiate incentives for farmers to change to organic farm practices until farm certification is approved;
   d) represent marginal and small-scale farmers; and,
   e) assist formation of village-level farmer groups.

ii. technical assistance. This will include:
   a) refine incentive mechanisms;
   b) identify feasible and acceptable certification alternatives;
   c) train farmers in organic crop rotation options, soil management and other appropriate organic farm management practices; and,
   d) design and test a monitoring and evaluation programme of social and biophysical impacts of organic land use change.

For further information.
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