Greening Agriculture Policies and Laws

What?

Greening agricultural business is introducing environmental measures to result in sustainable economic benefits - reducing overconsumption (losses pollution, ....... ), saving costs (on energy, water and agrochemicals .........). Environmental quality depends on avoiding inappropriate cultivation and irrigation techniques or overuse of chemical inputs.

✓ stressing the relationship between environmental protection and the economics of agricultural practices

- **Agricultural productivity** could be raised through basic resource management practices such as rainfall retention, irrigation water conservation, waste water reuse, dry-land cultivation, and controlling pests and weeds.
- **Environmental measures** in agriculture improves soil quality, nutrient content, moisture holding capacity and reduces soil erosion.
- **Water management** - small-scale water control and improved rural infrastructures, offers high payoffs to public and private green sector investment.
- **climate change adaptation** – agriculture and water resources, which are the most vulnerable to the adverse impacts of climate change, need to be climate proofed.
- **organic agriculture** - low-cost food of higher quality produced.
- **green agro-enterprises** - cornerstone for trade-based growth.

A green agriculture development involves strengthened regulations and standards to ensure that agricultural producers internalize environmental costs to a greater extent.

- shift away from more environmentally harmful actions to environmentally beneficial payments and requirements.
- increases effectiveness of environmental regulations in agriculture due to a decrease in the negative ecological impacts.

How?

This is done by greening agricultural policies¹ and laws². Greening agriculture laws is by strengthening environmental legislation specific to agriculture in laws on water protection, pollution control, nature conservation and protection of rural landscape.

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¹ What are agricultural policies?

² What are agriculture laws?
A. **Regulation** is one of the key levers governments can use to promote green agriculture = use rules governing land and water use, chemical inputs, food safety and quality.

- Requirements on **land use**, including terracing, buffer strips and green coverage requirements, crop rotation, maintenance of water quality, including controls on groundwater, irrigation and silage and slurry operations.
- Regulations are the most common public policy instrument for getting markets and producers to pay for the public costs of harmful “**externalities**” such as pollution and natural resource degradation in agriculture and other sectors.
- Use regulatory requirements to address environmental issues in agriculture. Stricter **health and safety standards** for food commodities can reduce the use of polluting agrochemicals, e.g. nitrogen and phosphorous loading.
- **Organic farming**, which is regulated and legally enforced through certification and labeling in many countries, relies on techniques such as biological pest control, green manure, composting and crop rotation to maintain soil productivity and control pests.
- Supplementary requirements including that at least a % of farmland be used for forest = “ecological compensation areas”, soil protection.
- **Compliance and enforcement measure**: restoration measures, compliance assistance measures, **fines**, penalties.

B. **Policies** - used by government to correct market failures and promote green investments:

- **Economic instruments** – primarily taxes and charges and tradable permit systems – are used to discourage practices that are damaging to the environment by raising the cost of these activities to producers.

**NB**: economic instruments (taxes) do not play a significant role in promoting Green agriculture or dealing with negative environmental externalities due to the nature of property rights systems, difficulties in identifying sources of pollution and tendency of agriculture being location-specific and diffuse in nature.

- Regulations and supports have proved easier to implement than taxes in encouraging greener activities among agricultural producers
- There may be wider scope for the application of taxes and charges to promote the internalization of environmental costs in agricultural production decisions, but this

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*Agricultural law*: laws on agricultural infrastructure, seed, water, fertilizer, pesticide, land use, environmental issues, food production, agricultural finance, agricultural labor; agricultural marketing, agricultural insurance, farming rights, land tenure and tenancy systems, and other aspects of the agricultural processing and rural industries.
depends on clearer definitions of property rights. In the agricultural sector, different types of rights – access and use rights, control rights and transfer rights – co-exist and are attached to various types of land ownership (Table 6). In many countries, farmers have retained broad implicit or customary rights to the use of land, water and other natural resources. These embedded rights plus the fact that agriculture is a non-point source of pollution make it difficult to implement taxes and charges on agricultural inputs and practices. Defining property rights, uses and misuses would help governments determine where farmers should be held liable at their own cost for environmental damage and also facilitate payments for environmental services.

- Governments provide supports or subsidies to farmers and agribusinesses to manage the supply of agricultural commodities, influence their cost, supplement the income of producers and achieve other social and environmental aims
  
  - supports given to farming systems and practices that preserve environmentally sensitive land and biodiversity; maintain flood, drought or soil erosion control; and provide sinks for greenhouse gases and carbon storage.

- Taxes and charges on farm inputs have been levied in a few countries to address environmental issues in agriculture. These have mostly been applied to environmentally-damaging chemicals; Denmark, France, Italy, Norway, Sweden have taxed fertilizer and pesticide use. Carbon taxes in agriculture have not been seriously considered even though farming can be very energy intensive. Farmers use carbon-based fuels directly in vehicles and machinery (about 30%) and indirectly in the form of carbon-based fertilizers and pesticides and fuel-intensive inputs (70%). While a tax could move farmers to shift to more energy-efficient systems of production, proponents of carbon taxes have generally sought to exclude the agricultural sector since emitters are not easily identifiable.

- Promoting development of new green services, technologies and industries offers opportunities to the agricultural sector

Results

I. Environmental regulations and standards raise farmer livelihoods by improving productivity and eco-efficiency through cleaner production processes and enhanced resource management techniques.

II. Food labeling regulations benefit farmers by helping to internalize environmental values in commodity prices. Where labeled and certified as eco-friendly, farm products receive marketing premiums contributing to farm incomes.
<table>
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<th>Regulation</th>
<th>Purpose</th>
<th>Form</th>
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<td>Green Agricultural productivity</td>
<td>‧ Promotion and maintenance of sustainable and good husbandry agriculture = linking economic and environmental interests</td>
<td>‧ utilisation of land or water to promote or increase food production</td>
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| Environmental measures          | ‧ Maintain or restore the natural habitats and populations of species of wild fauna and flora | ‧ Land/soil conservation/fertility rules  
|                                 |                                                                          | ‧ Conservation of soil on ridges, or slopes, or in valleys and prevention of formation of gullies; rules  
|                                 |                                                                          | ‧ afforestation or re-afforestation of land;  
|                                 |                                                                          | ‧ protection of slopes, catchment areas or areas rules  
|                                 |                                                                          | ‧ firing, clearing or destruction of vegetation  
|                                 |                                                                          | ‧ protection of slopes, of banks of streams and rivers and of dams  |
| Water management                | ‧ Irrigation  
|                                 | ‧ Water harvesting  
|                                 | ‧ Maintain chemical, physical and biological integrity of water by addressing point and non-point sources of pollution | ‧ maintenance of better functions of irrigation and drainage facilities  
|                                 |                                                                          | ‧ Rules on maintenance of water in a body of water  
|                                 |                                                                          | ‧ community owned water supply organizations  
|                                 |                                                                          | ‧ Maintain chemical, physical and biological integrity of water by addressing point and non-point sources of pollution  |
| Land use                        | ‧ Enhance property rights in agriculture  
|                                 | ‧ Access and use rights to land and natural resources  
|                                 | ‧ Regulate production intensity and overuse of chemicals  
|                                 | ‧ Soil management practices | ‧ preserving land, reclaiming land and protecting water resources,  
|                                 |                                                                          | ‧ rules of good husbandry  
|                                 |                                                                          | ‧ Control rights to make decisions on how the land and its natural resources should be used  
|                                 |                                                                          | ‧ Preserve quality of land through limiting production intensity and overuse of chemicals  |
| Renewable energy                | ‧ promote development, utilization and commercialization of reviewable energy resources  
|                                 | ‧ to create an enabling environment to attract investment in renewable energy sources;  
|                                 | ‧ SME investments in renewable energy  
|                                 | ‧ install and use solar water heating systems for example commercial buildings, educational institutions, health institutions,  | ‧ Off-grid and on-grid (tariff) policy and rules  
<p>|                                 |                                                                          | ‧ minimal annual solar contribution to the premises hot water demand  |
| Climate adaptation in agriculture | ‧ adopt different varieties or species, modify farming methods |                                                                          |</p>
<table>
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<tr>
<th>Chemicals and Pesticides</th>
<th>• Control use of chemicals which may pose a risk to human health and the environment</th>
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| Pollution of land and air | • Maintain farm machinery and equipment in good working order and prevent environmental damage and pollution  
• Maintain and improve the quality of air to protect human health and the environment by controlling emissions |
| Green agro-enterprises | • Safeguard the health and well-being of consumers  
• organic and green products and eco-services  
• product traceability, crops, volumes, markets, and exports.  
• measures for sustainable management and production of fish farmed from aquaculture and sport fishing  
• Storage and handling rules  
• Food labeling requirements  
• Food safety & quality |
| Compliance and enforcement | • Remove barriers to increasing agricultural productivity |