

Nature of Problems – Land, Forests and Water

Ecological Footprint

□ What is it?

- Use of land and energy for human survival
 - Spatial depiction of energy use/impact
 - Food, fossil fuels & renewable resources
 - Land needed to clean environments from pollution and degradation
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Lop-sided NRM policies

- Bias in agri. policies towards well-endowed regions
 - Inefficiency in water use due to distorted irrigation policies which have enhanced env. degradation
 - Lack of a proper land-use policy
 - Lack of env. concerns in industrial policies
 - Lack of integrated policies of NRM
 - Lack of coordination between macro policies and ground level realities (comm.instns)
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Land

- Skewed distribution of agricultural land – majority own less land (marginal farmers)**
 - Land consolidation**
 - Land reforms poorly implemented**
 - Degradation of land – salinity, water-logging, erosion and desertification**
 - Populations resettled – receive poor quality lands**
 - Ownership of productive land denied to women**
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Agricultural extension (Govt. initiated)

- ❑ T&V system has proved to be weak**
- ❑ Messages are rigid for the diversity of farming systems on ground, being fixed in timing and content**
- ❑ Fragile environments ignored**
- ❑ Needs of women farmers neglected**
- ❑ Achievements measured in quantity rather than quality**
- ❑ Involvement of other agencies discouraged (NGOs/Private)**
- ❑ Contact Farmer/contact groups mechanism does not work (lack of skills of the extension staff)**

Management Challenges

- ❑ Role of the private sector in providing services**
 - ❑ Gains in agricultural productivity through technological innovation has to be incremental, knowledge-based, locally specific and geared towards overcoming specific farmer constraints**
 - ❑ Availability of land to the landless and marginal farmers**
 - ❑ Women farmers need to be given property rights, trained and provided all extension services as a target group**
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Forest

- State controlled – power to allocate rights of use to local people or private companies**
 - Nexus between the politicians, timber merchants and private companies**
 - Conflict of use of forest resources by local populations and the state/market for commercial purposes (logging concessions)**
 - State control over forests has hastened the process of degradation due to the open access situation**
 - Privatisation of forests/lands has also not helped in protecting the vegetation and its systems**
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Management Challenges - Multiple-objective demands

- Participatory (equity concerns included) development and conservation of biodiversity**
 - Scale back the efforts of the government (FD) and to define a new role for the state to meet the challenges of developing community-based forest management**
 - Shift from resource creation projects towards institutional reform programmes**
 - Decentralisation of forestry programmes**
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Water

- Poor maintenance of the irrigation systems**
 - Conflict between urban and rural water users**
 - Lack of specification of water rights at the local level**
 - Huge expenditures made in operating large scale irrigation systems (often through donor support) – leading to corruption**
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Water

- ❑ Neglect of pre-existing farmer managed irrigation systems**
 - ❑ Submergence of villages and problems of resettlement – construction of big dams and multi-purpose projects**
 - ❑ Lack of clarity about responsibilities for irrigation management and water policy**
 - ❑ Water rights heavily tilted towards urban and industrial users**
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Water

- ❑ **Indiscriminate groundwater extraction for irrigation – led to scarcity in drinking water**
 - ❑ **Large population are not linked to the formal system – self-provision of water (informal)**
 - ❑ **Range of informal institutions at the ground level**
 - ❑ **Lack of gender/equity concerns in water use and mgnmt policies/progs**
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Management Challenges

- Supply is given more importance than demand management**
 - Private management – through participatory irrigation management by user groups**
 - Coordination among various departments in water supply and management**
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Management Challenges

- **Integrated Water Resource Management (IWRM)**
 - **Process which promotes the co-ordinated development and mgmt of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner with compromising the sustainability of vital ecosystems (GWP, 2000) – focus on demand mgmnt.**
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Instruments of IWRM

- ❑ A National Water Policy**
 - ❑ A water law and regulatory framework**
 - ❑ Recognition of river basin as a unit of planning and management**
 - ❑ Treating water as an economic good**
 - ❑ Creation of water rights, preferably tradable by system of water withdrawal permits**
 - ❑ Participatory water resource management – with involvement of women – “water is everybody’s business”**
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IWRM

- IWRM in India – whether it is possible to operationalise?**
- Is India ready for a shift from supply to demand mgmnt**
- Informal nature of the water economy**
- Reach of the three pillars of water governance – policy, law and administration**
- Are there river basin organisations that can take over IWRM**

Major institutional challenges

- effectiveness in responding to local water scarcity problems
 - to develop comprehensive water management approaches for addressing regional problems
 - competence to design water management systems to alter social and political systems affecting water use
 - capability to ensure equitable and sustainable resource use
 - ability to implement water allocation plans effectively and resolve conflicts
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Technological challenges

- need for options to deal with the supplies**
 - technologies needed for cleaning aquifers that are contaminated**
 - need for an MIS that can help understand the problems and come up with management decisions (domestic water use, irrigation and industrial use)**
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