Management of Natural Resources

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Management of Natural Resources

- Soil, water and vegetation are three basic natural resources. The survival of God's creation depends upon them and nature has provided them as assets to human beings. The management of natural resources to meet people's requirements has been practised since the pre-Vedic era.
- Community based control and management of natural resources like water, forest, land and minerals on one hand and self-rule on the other. This can be achieved by adopting a holistic and multidisciplinary approach to the issues of forestry and common lands that takes us to the core of our notions of 'progress' and 'civilization'. JFM / FPC

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- Over-exploitation of natural resources by *growing population* resulted in various severe problems. *Destruction of vegetation* has resulted in *land degradation, denudation, soil erosion, landslides, floods, drought* and *unbalanced ecosystems*. A balanced ecosystem is an urgent need.
- A study on Management of Natural Resources & to update the Traditional Knowledge following methodology can be adopted: -
- Obtaining comprehensive information on traditional knowledge of natural resource management in both foothills and mountainous regions

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- Select Blocks & Villages in the hills.
- Interview Farmers to obtain information on traditional knowledge.
- PRI and / or Individual contacts be made and questions asked about traditional systems in the villages.
- Representation of women among the farmers be ensured.
- Informal interviews and interaction with old and young farmers and farm women, responses be recorded for critical analysis.
- It may also be observed how traditional knowledge is transmitted from one generation to another.
- Modes of educating young farmers, nd how elders communicate innovation through proverbs, short stories and examples.

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- Historical, Cultural and Social Perspectives
- ZONES: ANCIENT CLASSIFICATIONS
- Factors responsible for Depletion of Natural Resources;
- Measures being taken for Management of Natural Resources besides three ways viz.: mechanical, agricultural and vegetative.
- MECHANICAL MEASURES
- TRADITIONAL KNOWLEDGE FOR NATURAL RESOURCE MANAGEMENT
- WATERSHED DEVELOPMENT CONCEPT AND VILLAGE BOUNDARIES
- IRRIGATION

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- IRRIGATION
- WATER HARVESTING
- MANAGEMENT OF DRINKING WATER
- WATER-BASED INDUSTRY
- WOMEN'S KNOWLEDGE IN MANAGEMENT OF RESOURCES
- AGRICULTURE
- MANURE AND MANURING
- VEGETATIVE MEASURES FOR NATURAL RESOURCES MANAGEMENT
- Equity in Benefit Sharing

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- General Observation: Hill farmers are hard-working that even in adverse topographic conditions they are devoted to agriculture for grain production.
- Hill farmers do not like to work as labourers or beg in villages for their livelihood; instead, they prefer to go to cities to earn.
- Many hill farmers migrate for jobs to the cities or join army service.
- The women and children look after the village property, while the men send them money to run their homes.

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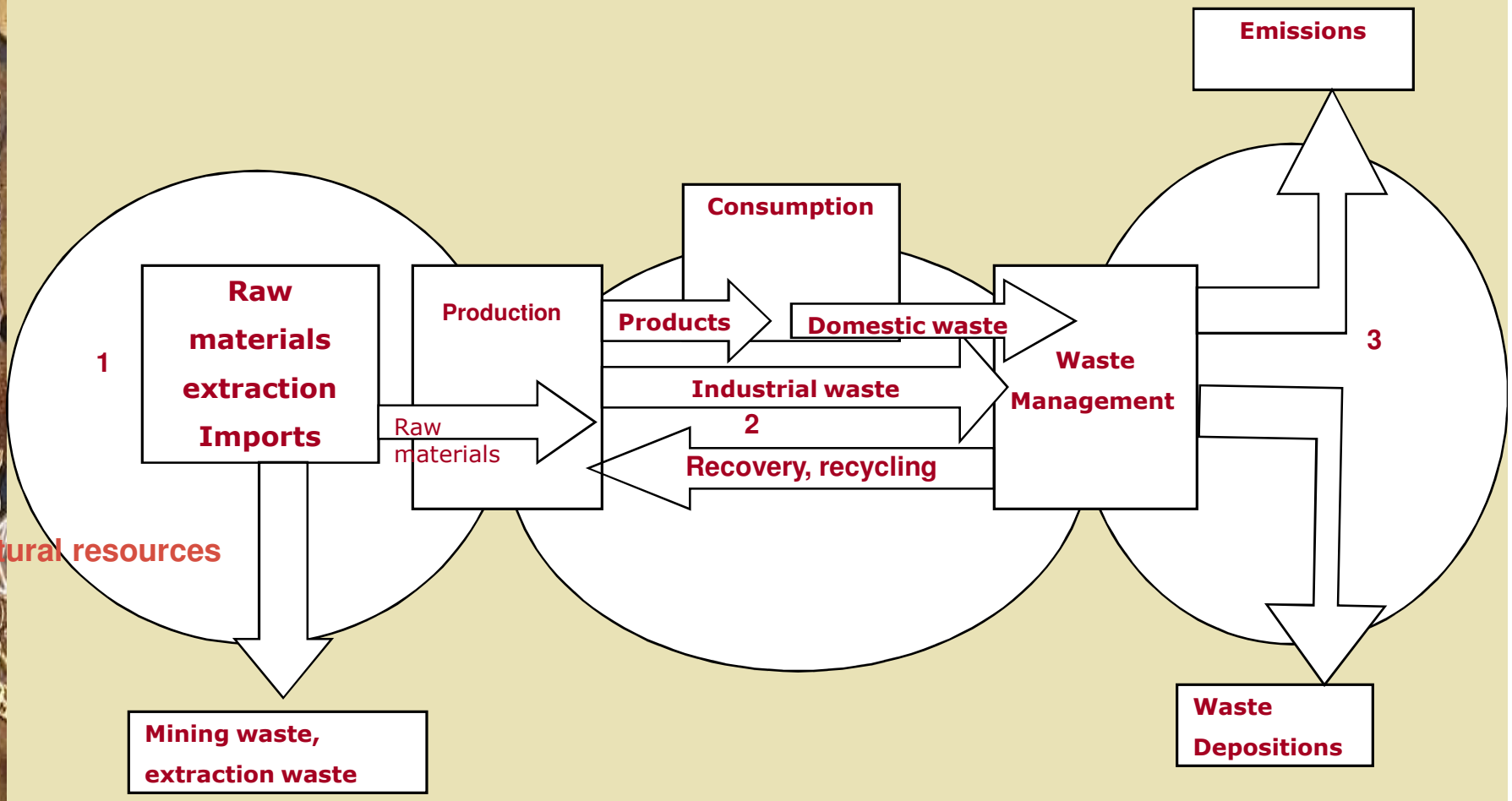
- Resource use and environmental impacts
- Environmental impacts are typically grouped into several impact categories, including:
  - acidification
  - climate change and global warming
  - ecotoxicity
  - human toxicity
  - eutrophication
  - photochemical ozone formation (summer smog)
  - stratospheric ozone depletion.
- The relationship between resource use and environmental impacts has to be well understood and documented

Intervention points for sustainable resource management



(1) Taxes for raw materials, licence, self-commitment

(2) Integrated product policy, recycling quotas

(3) Changes for waste and emissions, technical standards

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- Except for the impacts directly related to resource extraction, there are only a few instances where a causal relationship between a specific resource use and its environmental impacts can be demonstrated.
- They include global warming and the acidifying effect of the consumption of fossil fuels, and health-related impacts of metal refining.
- Concerning indicators, no single aggregate measure or index is yet available for 'impacts of use of natural resources.

Intervention points for sustainable resource management

- These are the virgin areas where immediate possibilities of the (currently available) studies can offer to establish direct links between indicators of resource use and indicators of environmental impacts.
- More limited and additional research is required to explore such links.'

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- Some pilot studies carried out in few countries have identified eight 'final-demand‘ product groups with large life-cycle-wide resource use and environmental impact potentials:
- 1. Construction
- 2. Food products and beverages
- 3. Motor vehicles, trailers and semi-trailers
- 4. Electricity, gas, steam, and hot water supply
- 5. Basic metals
- 6. Agricultural products
- 7. Chemicals and chemical products
- 8. Machinery equipment.

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- Concerning materials, preliminary research carried out in few countries in EU have listed the ten material categories with the highest environmental impacts .
- Both mass flows and impacts per unit weight were taken into account by combining information on material flows and life cycle impact assessment.
- 1. Animal products
- 2. Crops
- 3. Plastics
- 4. Oil for heating and transport
- 5. Concrete
- 6. Hard coal for electricity
- 7. Brown coal for electricity
- 8. Iron and steel
- 9. Gas for heating
- 10. Paper and board.

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- Thus, some stakeholders argue that while recognizing the need for a scientifically-proven input into the policy-making process, a general indication of priorities for action is already available.
- The MoE&F, GoI recognizes that much work in this field is under way in the research community, although the information and results are widely spread.
- In order to obtain adequate information on environmental impacts, the MoE&F, GoI has suggested that access to existing information should be improved by making it available from a single place, a 'one-stop shop'.
- Suggestions from Participants

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- *Thanks for your patient hearing*