



Session 8 -
Environmental and policy issues of
land degradation;
UNSD/UNEP Questionnaire 2004

Jonathan Handley
UNSD



Overview

- Environmental issues of soil erosion, salinisation, and desertification
- Graphic of land degradation in West Asia
- Policy issues
- UNSD/UNEP Questionnaire on Environment Statistics – land degradation
- Land degradation definitions



Environmental Issues: Soil erosion

- Water erosion - sheet, rill, gully
- Wind erosion
- Mechanical erosion

Causes:

forest fires, deforestation, damaging agricultural practices, overpopulation, and drought

Impacts:

Loss of topsoil, plant growth and yield, movement of seeds, plants, pesticides, fertilisers off the field, textural change in soil with reduced water-holding capacity, silting of drainage and dams, sedimentation, species loss and pests



Salinisation

- Types: Wetland and Dryland
- Causes of Salinisation
- Effect is ironically akin to drought
- Can contribute to desertification

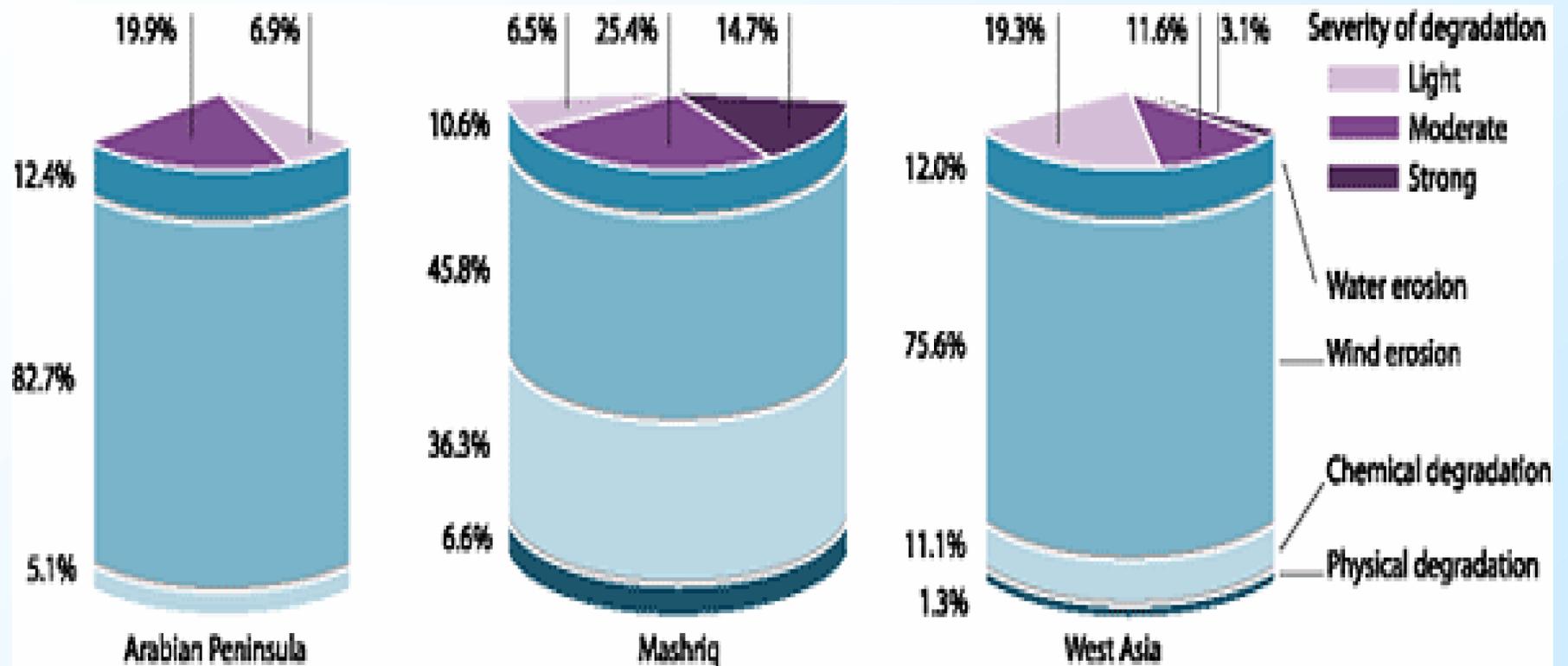


Desertification

- Land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors, including climatic variations and human activities
- Population and trade pressures
- Degraded land less resilient to climate variability and change



Land degradation in West Asia: severity and causes (%) Source: GEO 3





Policy Issues

- United Nations Convention to Combat Desertification
- Millennium Development Goals
- CSD Indicators of Sustainable Development
- World Summit on Sustainable Development



UNSD/UNEP Questionnaire 2004 on Environment Statistics

- Guidance document
- Soil erosion table
- Salinisation table
- Desertification table
- Definitions



Definitions: Soil erosion

- **Erosion – light** Terrain, with net annual soil loss that may or may not have somewhat reduced agricultural productivity, that is suitable for local farming systems. Restoration to full productivity is possible by modifications of the management systems. Original biotic functions are largely intact.
- **Erosion – moderate** Terrain not described in light erosion that has greatly reduced agricultural productivity, but is still suitable for use in local farming systems. Major improvements are required to restore productivity. Original biotic functions are partially destroyed.
- **Erosion – strong** Terrain is not reclaimable at farm level. Major investments - engineering works - are required for terrain restoration. Original biotic functions are largely destroyed.
- **Erosion – extreme** Terrain is unreclaimable and beyond restoration. Original biotic functions are fully destroyed.



Definitions: Salinization and Desertification

- **Salinization** The net increase in salt concentration in the top soil leading to declining productivity or biodiversity. Salinization can be a result of the clearing of native vegetation, the overuse of irrigation, or the evaporation of saline groundwater.
- **Desertification** The process of land degradation in arid, semi-arid and dry sub-humid areas resulting from various factors including climatic variations (e.g. drought) as well as direct and indirect human activities (e.g. overgrazing, intensive agricultural cultivation).



Choukran Thankyou Merci