Desertification, Drought & Invasive species in SIDS

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The SIDS context

- Desertification – islands ?
- Drought: Where would the water come from?
- Invasive Species in SIDS
- Linking DDIS with Climate Change?
- Linking DDIS with Development?
- Addressing Land degradation in SIDS

Desertification in the context of SIDS

- UN Definition - Desertification is the process of land degradation in arid, semi-arid and dry sub—humid areas resulting from various factors, including climatic variations (?Climate Change) and human activities .
- In the SIDS context the same definition applies, however, islands share some unique specificities:
  - Strongly dominated by ocean climate
  - Many islands are centers of genetic varieties such as sugar cane, cassava, palms and so on;
  - Land scarcity implies competing uses for urban development, tourism and other types of development;
  - Runoff is rapid and erosion rates can be high
  - Some are geologically fertile (volcanic/guano deposits) and some are infertile (laterite, sandy soils)

Examples

- **CLIMATIC: Island of Fogo, Cap Verde**
  - Affected by variability in the Sahel Region
  - Reduction in rainfall of 15-30% since 1970
  - Population growth & urbanization
  - Erosion – Degradation - Desertification
- **HUMAN: Island of Lesvos, Greece**
  - Affected by land use changes – destruction of original oak forest, cultivation of rain-fed cereals, grazing, land abandonment, invasive species
  - Burning of invasive plants and overgrazing accelerated desertification
  - Over-pumping of coastal aquifer – intrusion of sea water.

Drought in the context of SIDS

- Climate Variability, ENSO
- Climate Change
- Watershed modification and urbanisation
- Guano extraction
- Lack of storage
- Salinisation of groundwater
- Fertiliser and Pesticide Use
- Pollution, solid wastes, eutrophication and contamination of soil and aquifer

Invasive Species in SIDS

- Cooperative Initiative on Invasive Alien Species (IAS) on Islands
- Impact on the economy of SIDS
  - Damage to infrastucture
  - Damage to tourism
- Impact on agriculture in SIDS
  - Cost of maintaining farms
  - Cost of feed lost, output lost
- Impact on biodiversity in SIDS
- Prevention - Biosecurity

What's all this got to do with Climate Change?

- Accelerate Desertification
- Extended drought expected in some regions
- Favor opportunistic invasives
- Propagation corridors
- Increase in Forest fires
- Increased coral bleaching events
- Warm ocean events – algal blooms

Sustainable Development issues

- Food security
- Fair trading
- Rural Development and growth
- Competing uses for land, water and conservation
- Intensive farming techniques
- Health linkages
- Balance between self-sufficiency & imports

Addressing Land degradation in SIDS

- Human resources and Capacity
- Institutional Capacity
- Watershed and Coastal Zone Management
- Spatial Planning Tools
- Land Use Change Management
- Stakeholder approaches
- Land Restoration ?

Questions

Thank you