CAUSES OF DRYLAND FOREST DEGRADATION

(First Draft)

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The causes of dryland forest degradation have economic, social, ecological, policy and institutional dimensions, and could be categorized for convenience under:

- **Natural factors**:

  - *Physical environmental factors*: sloppy topography, fragility, erosion by wind and water, soil fertility decline, low organic matter and associated physical problems, salinity, alkalinity, bush fires, etc.
  - *Climatic factors*: insufficient and variable total rainfall, unpredictable variation in rainfall pattern within and between seasons, occurrence of intermittent but serious drought periods that affect natural and plantation forests, etc.
  - *Biological factors*: diseases and pests, e.g. high malaria and tsetse infestations in the lowlands leading to burning of forests and woodlands and, hence, constraining tree planting practices; aggressive perennial plants; termite attack, etc.

- **Anthropogenic factors**:

  - *Deforestation* – destruction, clearing or incineration of dryland forest and woodland resources for: (i) expanding crop cultivation spurred by the ever-increasing human population coupled with several constraints preventing/narrowing possibilities of options for economic diversification; (ii) charcoal and wood production meant for domestic requirements of energy (because of shortage or lack of alternative sources of energy), construction material (because of shortage or lack of alternative sources of construction materials) and carpentry/household utensils as well as for sale to generate income and support household livelihood; (iii) urgently required socio-economic/infrastructural development, namely re-settlement, mining, road construction, etc.
  - *Overgrazing/grazing by livestock*: leading to soil compaction, herbivore damage of seedlings and hampered natural regeneration.
  - *Unsustainable utilization*: improper and unplanned harvesting practices resulting in wastage of wood (because of very low recovery rates) and damage to the residuals trees/plants and stands
  - *Introduction of invasive alien species*: resulting in the displacement of the native dryland forest flora in particular and biodiversity in general.

- **Socio-economic and policy-related factors:**

  - *Poverty, population growth and poor economic performance*: declining standard of livelihood of the farming communities and their close dependence on forests and woodlands have lead to clearing/burning for subsistence farming, cutting of trees/shrubs for fuelwood and charcoal production (both for consumption and sale), construction material, overgrazing, burning associated with traditional apiculture, etc.
  - *Inadequate or Absence of land-use classification, land use and forest policies and legislation*: lack or inadequate policies and legislation that lay down guidelines for development, conservation and sustainable utilization as well as research in dryland forests;

- *Absence of land and tree tenure/ownership right*: because trees have long gestation period, the decision to plant trees is generally influenced by farmers' perception of risks and absence of secured access to land that reduces investment risks.
- *Lack of pricing and incentive policies*: "under pricing" of fuelwood and construction wood that occurs as a result of "open access" to dryland forest resources in state and communal land.
- *Inadequate institutional arrangements/set-up for (dryland) forestry*: low profile given to forestry by Governments and frequent restructuring of forestry institutions leading to discontinuity of planned activities and inadequate budget, qualified manpower and infrastructure.
- *Inadequate or lack of viable dryland forestry development strategies*: inadequate participation of rural population and no demand-driven forest development strategy.
- *Weak forestry research system*: general absence of (dryland) forest research policy that clearly defines research directions, priorities, strategies, and weak performance that has not been able to generate knowledge and technologies useful for forest development, conservation and utilization.
- *Insufficient information acquisition, management and dissemination*: lack of or insufficient knowledge about dryland forests, woodlands and their components leading to inappropriate management and utilization as well as inadequate conservation practices and lack of or insufficient awareness of the environmental role of forestry by communities; inadequate information about traditional knowledge as well as local institutions and their contribution to dryland forestry development and conservation; etc.