BIODIVERSITY: STATE, CHALLENGES AND OPPORTUNITIES

UDAY R. SHARMA, PH.D.
VICE CHAIR WCPA
SOUTH ASIA

RICH BIODIVERSITY

- Outstanding assemblages of plants, animals and ecosystems
- High variations in altitude and micro-climate cause high ecosystem diversity
- Kali Gandaki Gorge: distinct ecological breaking point
- Excellent biodiversity policy built over decades of work: Nepal Biodiv. Strategy

ECOSYSTEM DIVERSITY

- Forest Ecosystems: 118 forest ecosystems identified by Dobremez (1970)
- Rangeland Ecosystem: 11.5% over 80 percent situated in alpine and sub alpine
- Wetland Ecosystem: 242 wetlands of which 163 in tarai and 79 in hills
- Mountain Ecosystems: 80% hills and mts
- Agro-ecosystems: High variability in crop species and livestock breed

SPECIES DIVERSITY

- Flora: High proportional representation 5884 flowering plants, 10091 together with non-flowering plants, about 700 medicinal
- Fauna: 852 birds comprise 9.3% of world's birds, 181 mammals similarly 4.5%
- Genetic Diversity also very high, but poor knowledge in this field

CHALLENGES: FOREST

- Deforestation is a serious problem
- Population growth/Degradation
- In country migration from the hills
- Malaria eradication
- Ineffective resettlement programs
- Uncoordinated development efforts
- Excessive livestock grazing/population
- Budgetary shortfalls

FORESTS PLUS AND MINUS

- In 1994 forest cover was recorded as 39.6 percent. The forest cover in 1978/79 was 42.7 percent
- Yearly loss in this period was 1.7 percent 5.6 m ha forest was reduced to 4.3 m ha
- Shrub-land increased from 0.7 m ha to 1.6 m ha
- Community efforts in mid-hills restored most of the hill forest (> 1 m ha)

BIODIVERSITY ISSUES

- CONVERSION TO AGRICULTURE, ROADS, SETTLEMENTS, INDUSTRIES, HORTICUL
- OVER-EXPLOITATION OF RESOURCES: FORESTS, PAs, WETLANDS, RANGELANDS
- OVERGRAZING: PAs, FORESTS, RANGES
- POACHING, ILLEGAL HARVEST OF TIMBER, NTFPs

BIODIV ISSUES CONTD..

- WETLANDS:

  DRAINAGE, PESTICIDE/FERTILIZERS RESIDUES, DAMS, SEDIMENT DISCH
- AGROBIODIVERSITY

  EXTENSION OF HIGH-YD CROP VAR

  INDESCRIMINATE USE of PESTICIDES

  SUBSIDY FOR HIGH-INPUT AGRICULT

  DECLINE/DEGRADATION of TRADITIONAL FARMING PRACTICES

CHALLENGES: PAs

- Well established network of Protected Areas representing major ecosystems
- Under-represented areas must receive conservation/protection
- Program at Landscape level is only at its infancy
- PAs suffer from lack of management effectiveness
- Unknown effect of ongoing conflict on PAs

CHALLENGES:OTHER SYSTEMS

- Ramsar sites not managed or adequately protected. Role of local communities in their management or wise use not been internalized
- Rangelands continue to be treated as open access resources. Indigenous systems of mgmt losing their effectiveness. Endangered species and unique assemblages of flora and fauna are at loss
- Traditional farming systems as a means to on-farm conservation efforts lack adequate support and recognition

CHALLENGES:…

- Sustainable mountain development provides the basis of livelihood of majority of Nepalese people
- Integrated watershed management in Nepal has to go long way to rehabilitate watershed using: vegetative, agronomic and water resource management measures

OPPORTUNITIES

- Biodiversity conservation can not be considered in isolation. They have to be considered in the context of supporting livelihoods of rural people
- Integrated mt. development key to conservation: consolidate government resources, private and NGO resources, their manpower to this effort.

LIVELIHOOD SUPPORT KEY TO CONSERVATION SUCCESS

- PEOPLE OFTEN DO NOT SEE CONSVATION AS THEIR OBJECTIVE
- PEOPLE PERHAPS SEE CONSV TO ACHIEVE THEIR LIVEHOOD GOALS
- GOVT./INGOs OFTEN SEE CONSV. AND LIVELIHOOD AS SEPARATE OBJECTIVES AND FAIL IN BOTH
- COMBINING BOTH OBJECTIVES TO ACHIEVE CONSV GOALS PERHAPS A BETTER STRATEGY

Reorienting Conservation Efforts

- Identify PA coverage gaps; bring under-represented areas under conservation
- Review PA management for their effectiveness; identify new threats and address them; make PAs more meaningful to local people
- EIA must be given more consideration
- Create policy legislation to implement Biosafety Protocol

Sustainable Management of Forest

- District Forest Management Plans and their effective implementation
- Block forest mgmt; forest certification; export-led investment for timber and NTFP in Block Forests and leasehold forests
- NTFP mgmt in govt. forests and cultivation of selected spp in CF, LF & private lands
- DFMP specify sites for stone quarry, sand and grits extraction; conduct EIA/IEE

Fair, Equitable Sharing of Benefits

- Bring policy legislation and institution to address the issue of access to genetic resources and benefit sharing
- Equity aspects be addressed in
  - In all resource management cases
  - Transparent
  - Based on good governance
  - Broad-based participation in decision making
- Gender should be mainstreamed

LAST WORD

- Must have effective CBD implementation plan based on Nepal Biodiversity Strategy
- This would include:

➢ IEE/EIA must receive more seriousness, especially in monitoring

➢ Conservation program should be more focused; review over-represented areas

➢ Effective management in all categories of biodiversity

LAST LAST WORD

- Fair and equitable sharing of benefits accruing out of conservation or mgmt of resources
- Biodiversity conservation should be mainstreamed in all govt programs and must have human face
- Govt proactively solicit support and involvement of local communities, NGOs and international community