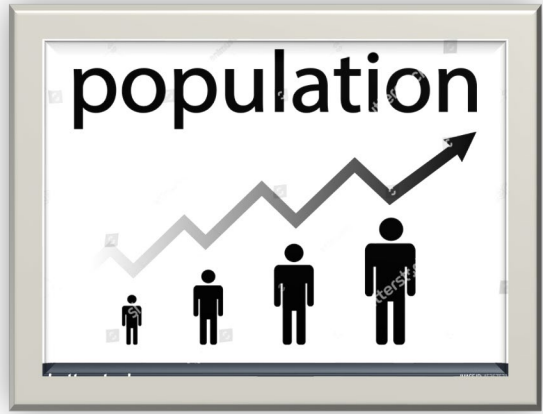


Community Forestry and Forest Cover change in Nepal

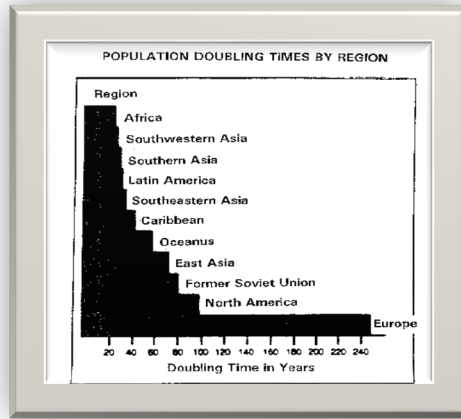
Theory of Himalayan Environmental Degradation

- **Mohonk Mountain Conference, held on 6-11 April 1986 (Ives, J. D., and Ives, P. 1987)**
 - Forest cover change: Policies, programs and law
 - A brink and pedantic forecast
 - Forest sustains agriculture
 - Study defy wider deforestation
 - Periodic and sporadic surveys
 - Forest loss in siwalik and terai
 - Some points to consider regarding forest cover change in Nepal
 - Conclusion: Answer Nepal's CF

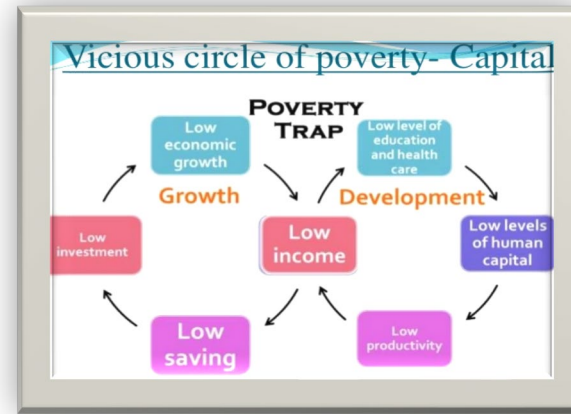
Theory of Himalayan Environmental Degradation: eight theories



1) population growth: unprecedented



2) doubling in 27 years, increased demands for fuelwood



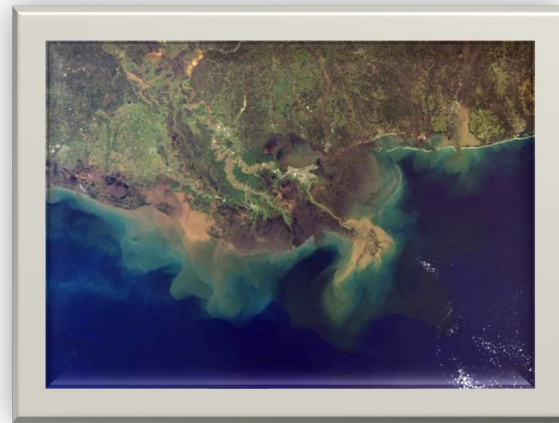
3) vicious circle, pressures on the forest, loss of half the forest in 30-year (1950-80)



4) Steep terraces on marginal slopes, soil erosion and loss of productive land



5) increased run-off during monsoon



6) increased sediment load, delta



7) animal dung used for fuel



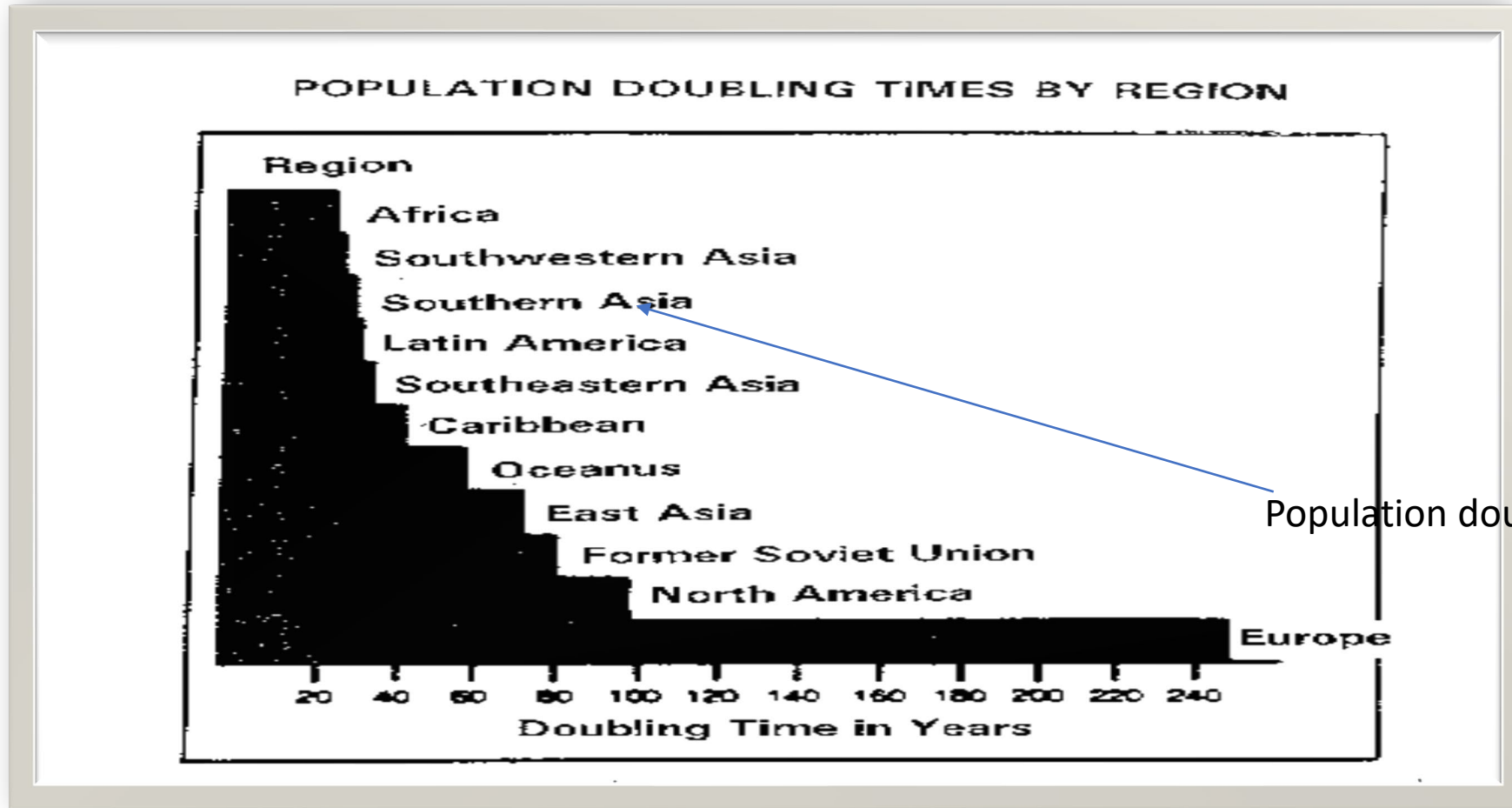
8) trees cut on marginal slopes to make agri terraces

Theory of Himalayan Environmental Degradation: eight theories...(Contd.)



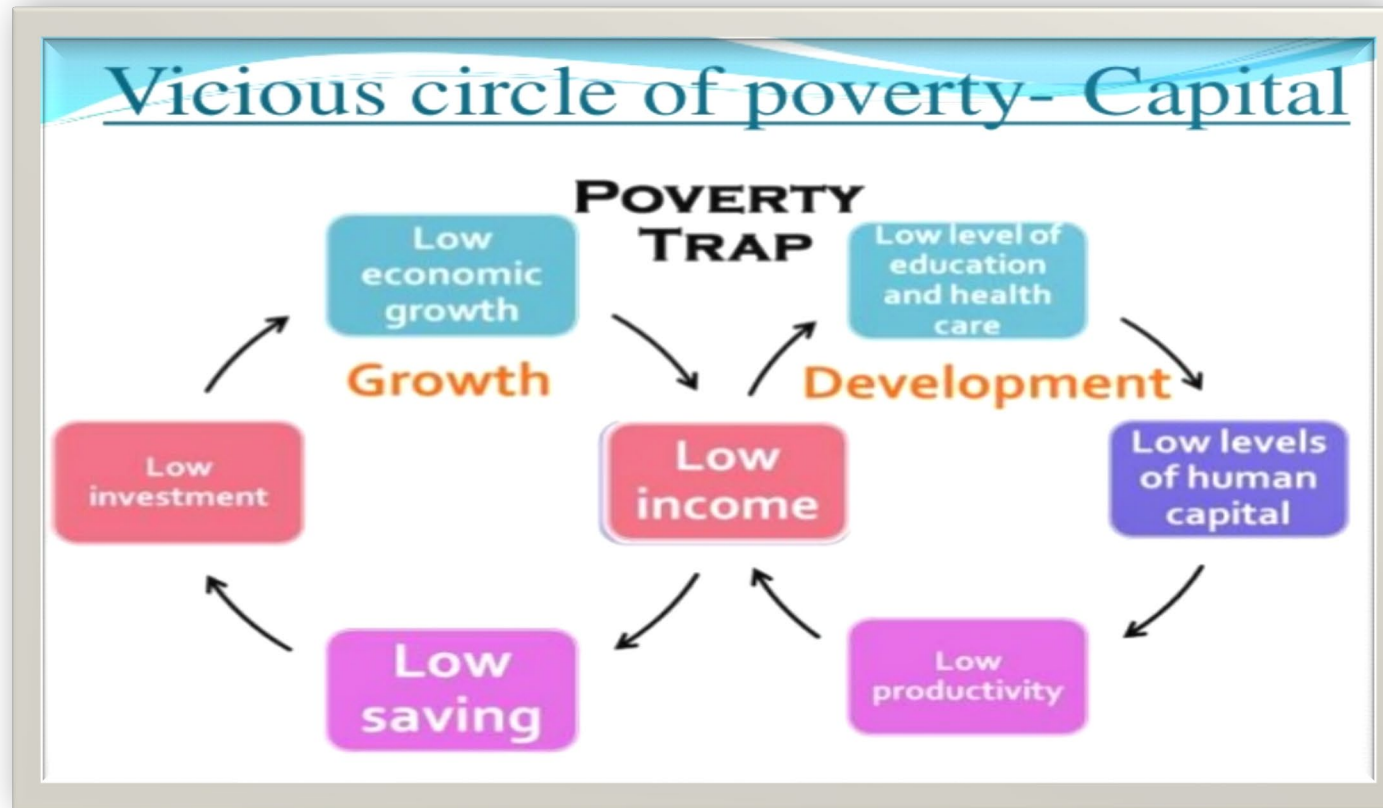
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Theory of Himalayan Environmental Degradation: eight theories...(Contd.)



2) doubling in 27 years, increased demands for fuelwood

Theory of Himalayan Environmental Degradation: eight theories...(Contd.)



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Theory of Himalayan Environmental Degradation: eight theories...(Contd.)



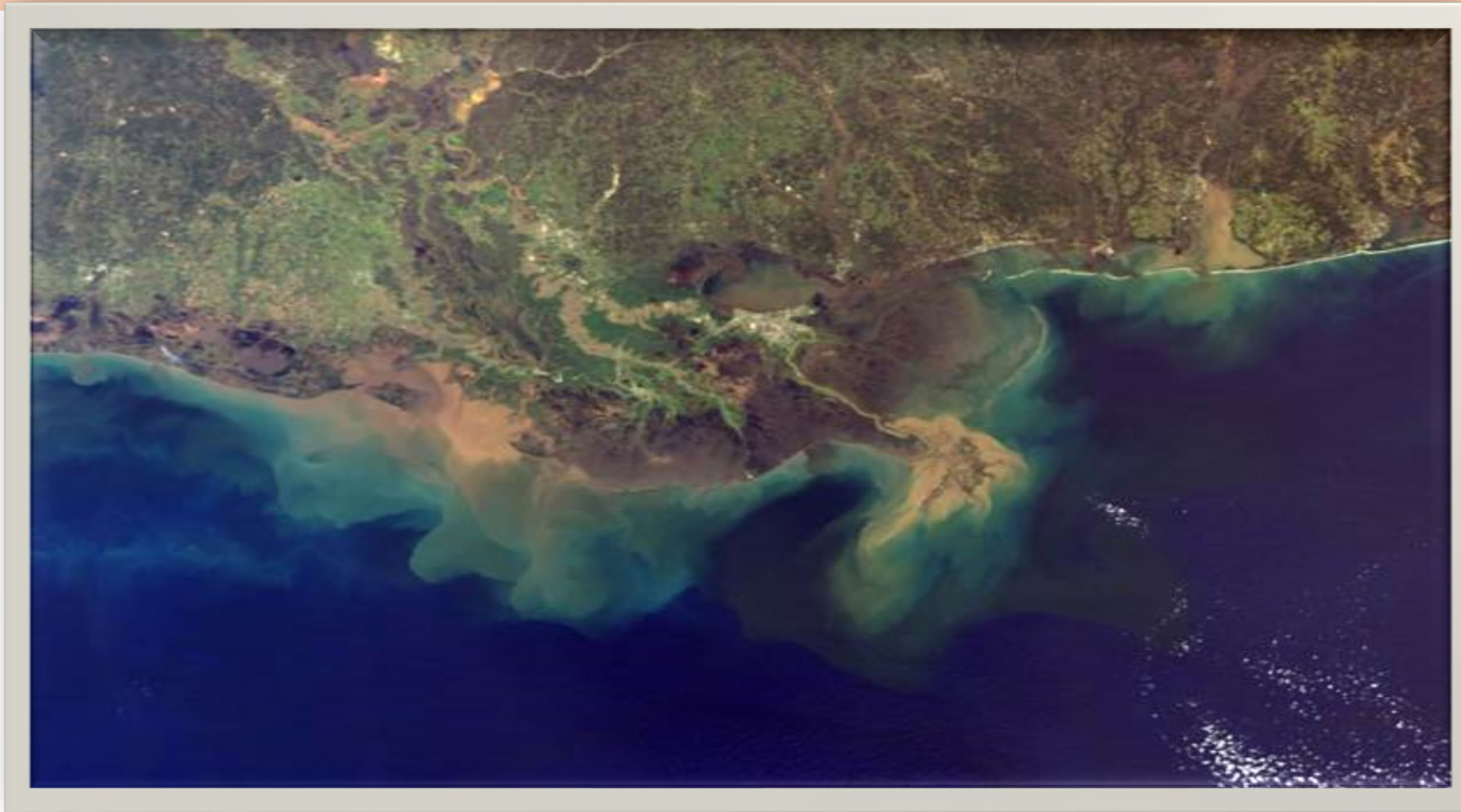
4)Steep terraces on marginal slopes, soil erosion and loss of productive land

Theory of Himalayan Environmental Degradation: eight theories...(Contd.)



5) increased run-off during monsoon

Theory of Himalayan Environmental Degradation: eight theories...(Contd.)



6) increased sediment load, delta

Theory of Himalayan Environmental Degradation: eight theories...(Contd.)



7) animal dung used for fuel

Theory of Himalayan Environmental Degradation: eight theories...(Contd.)



8) trees cut on marginal slopes to make terraces for agri-cropping

Forest cover change: Policies, Programs and Law

- Policies effectively reduce deforestation
- Creating institutions (community forest management) or markets (payment for environmental services)
- Enable land users to capture a larger share of land rent
- Deforestation results from trees being chopped down to generate space for crops and infrastructure
- Reducing deforestation means slowing down the expansion of agricultural land and building infrastructure into forests
- Challenge to feed growing number of mouths and keep pace with increased consumption

Forest cover change: Policies, Programs and Law (contd.)

- Meet increased food demand arising from higher incomes
- Unpleasant choice between “feeding the hungry” and “conserving the forests”?
- Von Thünen’s land rent approach and ask what policies are effective to halt deforestation and how these will affect agricultural yield and thereby total output
- Ask if yield-enhancing policies will reduce deforestation or make forest conversion more lucrative rent from protecting forests

Forest cover change: Policies, Programs and Law...(Contd.)

- Tenure right has intrinsic value
- Land users take actions to increase tenure security
- Forest conversion, according to both customary and statutory law, establishes rights
- Large tracts of forests are characterized by weak, unclear, and contested property rights
- De facto open access Deforestation becomes a strategy for establishing title
- 83% of new crop land in tropics came at the expenses of natural forests (2000-2016), little proof of Borlaug hypothesis “ increase in agriculture productivity reduce cultivated areas”.
- Low harvesting costs (no insurance premium, unskilled manpower, lack of registration of forest labor) expedites forest degradation and accelerates deforestation

A brink and pedantic Forecast

- From 1950 to 1980 Nepal lost forest cover by 50%
- By year 2000 no accessible forest will remain: The World Bank's Forecast (Staff Appraisal report, 1979)
- In late 70s The World Bank made prediction regarding forest situation of Nepal
- Based on deforestation trends, The World Bank (1978) predicted that there would be no trees left in the hills of Nepal by 1993

Forest sustains agriculture

- Conflicting estimates of the amount of forest land needed to 'support' one hectare of arable land
- Actual figures are expected to vary with altitude and with each specific annual agricultural cycle
- Reasonable to conclude that sustainable use of one hectare of arable land requires between one and four hectares of forest

Studies defy wider deforestation

- Nevertheless, we believe that the data supporting the claims for catastrophic deforestation are inaccurate and totally unreliable on several counts
 - Bajracharya (1983a and b),
 - Thompson and Warburton (1985a and b),
 - Mahat et al. (1986a and b, 1987a and b),
 - Griffin et al. (1988), and others,

Periodic and sporadic surveys

- Various surveys of forest cover in Nepal, using air photography and satellite imagery, are inconsistent.
- Nepal Water and Energy Commission study (1983) presents comprehensive picture on the extent of forested area and the loss of forest cover in the different geographic regions of Nepal since 1964
- Comparison of air photographs dating from 1964 and 1977 suggests a loss of 47,200 ha (1.5 %) of forest in the Middle Mountains

Forest loss in Siwalik and Terai

- Annual loss of 0.11 percent over thirteen years
- Terai and Siwalik losses of 250,000 ha and 148,500 ha respectively (27.5 percent and 10.2 percent of the forest area) are indicated
- Annual loss rates over the thirteen-year period of 2.1 percent in the Terai and 0.8 percent in the Siwalik

'nibble effect' (Moench and Bandyopadhyay, 1986) and forest cover loss in Nepal

- Average annual deforestation rate of 1.90%
- In total, between 1990 and 2005, **Nepal** lost 24.5% of its **forest cover** or around 1,181,000 hectares
- Nepal lost 46,000 hectares of its forest cover between 2001 and 2016, a recent study has revealed.
- Nepal lost forest cover of 46,000 hectares, it gained 12,200 hectares of forest in that period, indicating that the total forest cover loss was 33,800 hectares.

Some points to consider in Nepal's forest cover change

- During the 16 years, the highest forest loss occurred in the Chure and the Tarai regions.
- A study reports “the loss of tree cover in Siwalik was 28 percent, Hill region 26 percent, Tarai 22 percent, Middle mountain 21 percent and High mountain 2 percent “.
- A significant loss of tree cover was witnessed in Kailali (6 pc), Dang (5 pc), Sarlahi (4 pc), Rautahat (3 pc) and Nawalparasi (3 pc).
- The Hill region gained the highest area of 6,200 hectares of forest (51 pc) followed by Siwalik 3,000 ha (25pc), Tarai 2,100 ha (17pc), Middle mountain 830 ha (7pc), and High mountain 70 ha (1 pc).

Answer: Community Forestry

A study found that contribution of forest user groups to forest recovery was better in the districts where forests were maintained by local communities.

Thank you all for kind attention !