#### Asia-Pacific Forest Sector Outlook



Session I: Online expert workshop

Day 1 - Roadmap for primary forests conservation

### Rajan Kotru

Lead Strategist Trestle Management Advisors & Fellow International Centre of Integrated Mountain Development (ICIMOD)

DIVERSITY AND STATUS OF PRIMARY FORESTS IN INDIA



Status Primary
Forests in India:
Introduction

Forests in Hindu Kush Himalaya cover 25.36% (Total Geog. Area 4.3 Million km<sup>2</sup>). Barring Bhutan, China and India, deforestation rate – ve!

Forests closely intertwined with the socio-economic and cultural lives of people living within and on the fringes of forests. Increasingly urban populations show concerns on green cover loss.

Burgeoning basic human needs of food, water and energy etc. and macro development initiatives are not matched by current condition of residual of primary forests, forest management practices or forest ecosystem thinking of policymakers.

The Indian State of Forest Report is conducted biennially since 1987. Total Forest cover in India is approximately 21.6% (712 249 km<sup>2</sup>) of the total geographical area (ISFR-2019).

Despite an increase of forest cover by 3976 km<sup>2</sup> since 2017, all potential regions of primary forests (Bio-Hotspots) shows ongoing degradation and deforestation.



## Indian State of Forest Report 1987

|  | 1972-75 | 1980-82 | (Area in sq. km.)<br>Change |
|--|---------|---------|-----------------------------|
| Total Forest Cover   | 555180  | 463470  | (-) 91710                   |
| Total Forest Cover As Percentage of the Total Geographical Area          | 16.89%  | 14.10%  | (-) 2.79%                   |
| Closed Forest  | 464226  | 360229  | (-) 103997                  |
| Closed Forests As Percentage of the Total Geographical Area              | 14.12%  | 10.96%  | (-) 3.16%                   |
| Open/Degraded Forests  | 87673   | 100592  | (+) 12919                   |
| Open/Degraded Forests<br>As Percentage of the<br>Total Geographical Area | 2.67%   | 3.06%   | (+) 0.39%                   |
| Mangrove Forests   | 3281    | 2649    | (-) 632                     |
| Mangrove Forests As Percentage of the Total Geographical Area            | 0.099%  | 0.081%  | (-) 0.018%                  |

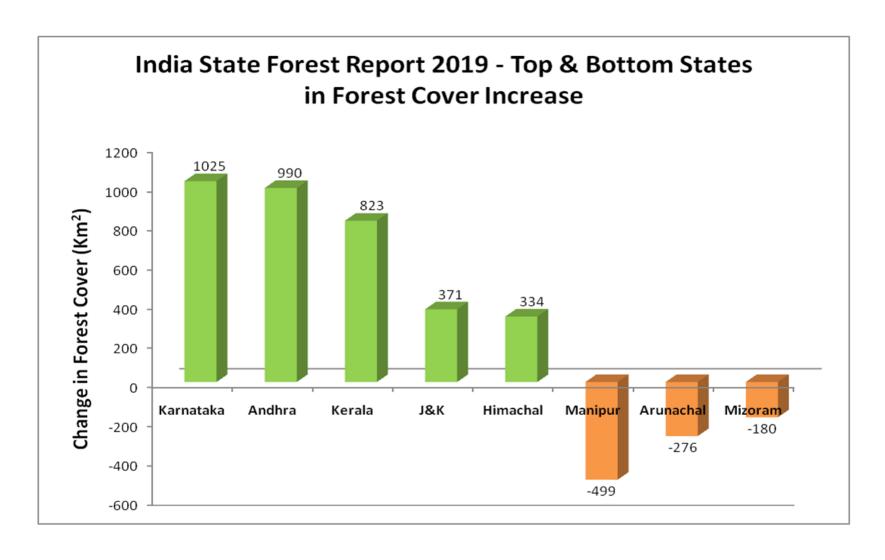


# Forest Cover in Mountain/Hilly States in 1987

| States/UTs               | Total<br>Geographical<br>Area | Close Forest | Open Forest | Total Forest<br>Area | Scrub | Non-Forest<br>Area |
|--------------------------|-------------------------------|--------------|-------------|----------------------|-------|--------------------|
| J&K                      | 222240                        | 12978        | 7902        | 20880                | 2441  | 198919             |
| West Bengal (Darjeeling) | 3256                          | 1316         | 16          | 1332                 |       | 1924               |
| Himachal<br>Pradesh      | 55670                         | 9908         | 2974        | 12882                | 2448  | 40390              |
| UP                       | 51125                         | 13713        | 7319        | 21032                | 501   | 29592              |
| Arunachal<br>Pradesh     | 83580                         | 51096        | 9404        | 60500                | 122   | 22958              |
| Nagaland                 | 16530                         | 6379         | 7992        | 14351                | 31    | 2148               |
| Mizoram                  | 21090                         | 2938         | 16154       | 19092                |       | 1998               |
| Manipur                  | 22360                         | 4670         | 13009       | 17679                | 850   | 3831               |
| Meghalaya                | 22490                         | 5749         | 10762       | 16511                | 171   | 5808               |
| Sikkim                   | 7300                          | 1867         | 972         | 2839                 | 400   | 4061               |
| Total                    | 505641                        | 110614       | 76484       | 107098               | 6964  | 311579             |
| %                        | 100                           | 21.88        | 15.12       | 37                   | 1.38  | 61.62              |



# Deforestation in Potential Primary Forest States as example (in bio-hotspots)





## Forests Cover Change

| Selected States (Himalayas) | 1987 Report (1981-1983)<br>Area in km2 | 2019 Report Area in km2 |
|-----------------------------|--|-------------------------|
| Arunachal Pradesh           | 60500                                  | 67353 (+)               |
| Nagaland                    | 14351                                  | 13464 (-)               |
| Meghalaya                   | 16511                                  | 17321 (+)               |
| Manipur                     | 17659                                  | 17280 (-)               |
| Himachal Pradesh            | 12882                                  | 14688 (+)               |
| J&K                         | 20880                                  | 22686 (+)               |

- ➤ In 1981-83: 4.35 Million ha affected by Shifting Cultivation
- ➤ 4.4 Million ha diverted to Non-Forest Use from 1951 to 1980
- ➤ Deforestation i.e. NE India lost 765 km² and Tribal areas 741 km².



#### Conclusions

- Primary forests are consistently under direct human impact (Local Use, Livestock, Markets, Development paradigms, Transboundary Issues)
- Methodology and Data/Information Issues to Assess Primary Forest Cover/Status
- Traditional Forest Use, Current Forest Management and Development Paradigms suggest that Primary Forest Cover of mountains in India has drastically reduced
- Secondary and plantation forestry is the key contributor to the increase of forest cover since 1970s apart from approx. 7% terrestrial protected areas
- Field evidence suggests that in Western Himalayas Primary forests are relegated to steepest and remotest mountain areas and in North Eastern India and Tribal areas have still substantial forest cover as primary forest
- Given the current socio-economic development trends apart from encroachments, forest land diversion and ongoing degradation (climatic/non-climatic) primary forest cover is destined to reduce further
- Research on primary forests and their dynamics is fragmented and very limited



#### Selective Recommendations for Way Forward

- ✓ Forest resource assessment methodology must be customised for identification and documentation of primary forests and their original characteristics.
- ✓ Since primary forest cover cannot be limited to protected forest areas, proactive forest management must be used to trigger natural regeneration processes to recover ecological status of such degraded forests (Here we must use the argument of climate change. resilience of natural forests than that of monocultures or secondary manmade forests).
- ✓ Use traditional practices knowledge to maintain the bio-physical characteristics as well as near to natural dynamics of such forests.
- ✓ Find alternatives and restore near to primary forest characteristics of forests affected by shifting cultivation or any other type of degradation.
- ✓ Create regional cooperation mechanisms as well as joint research networks aimed to understand the ecological dynamics of primary forests and create practical evidence for managing such forest on sustainable basis.