

# Distribution Mapping of Medicinal Plants A GIS assisted approach

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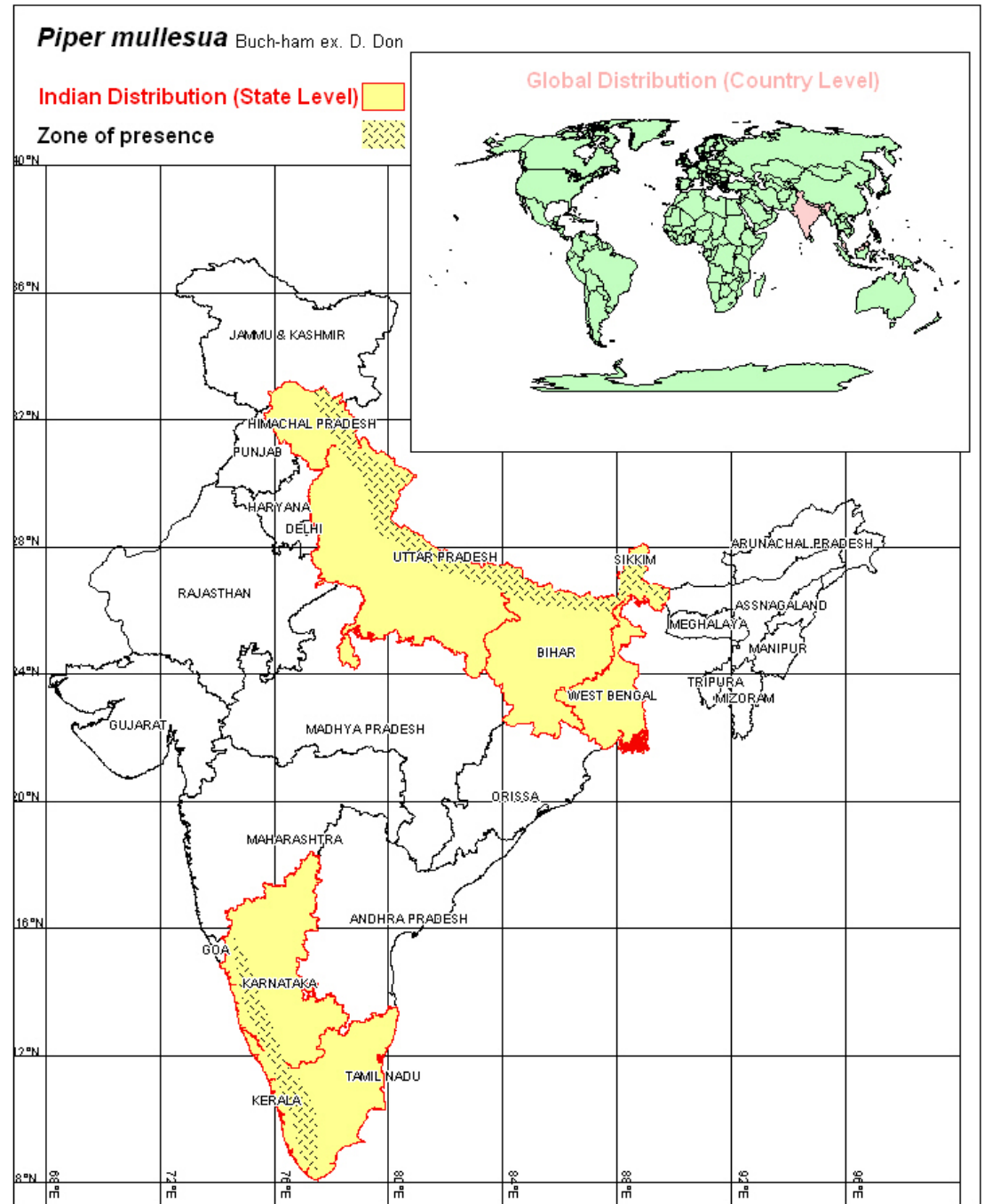
# Background

- Over seven thousand medicinal plants in India being used in indigenous medical systems like Ayurveda, Sidhha, Unani, and Tibetan
- Traditional Knowledge regarding these plants is increasingly realized and being put to use in modern medicine
- Plant Populations are depleting
  - Habitat fragmentation
  - High volume trade
  - Unregulated destructive collection
- Need conservation efforts

# Methodology

- Data collected from Herbaria, Literature and Field Surveys
- Data sources maintained for later references
- Literature Data tabulated at three levels:
  - Countries
  - Districts and States within India
  - Precise locations (which could be converted in Latitude and Longitude for plotting)
- Three types of maps generated:
  - World maps depicting countries present
  - District / States within India
  - Detailed regional maps superimposed with Rainfall, Altitude etc.
- Used MapInfo for map preparation

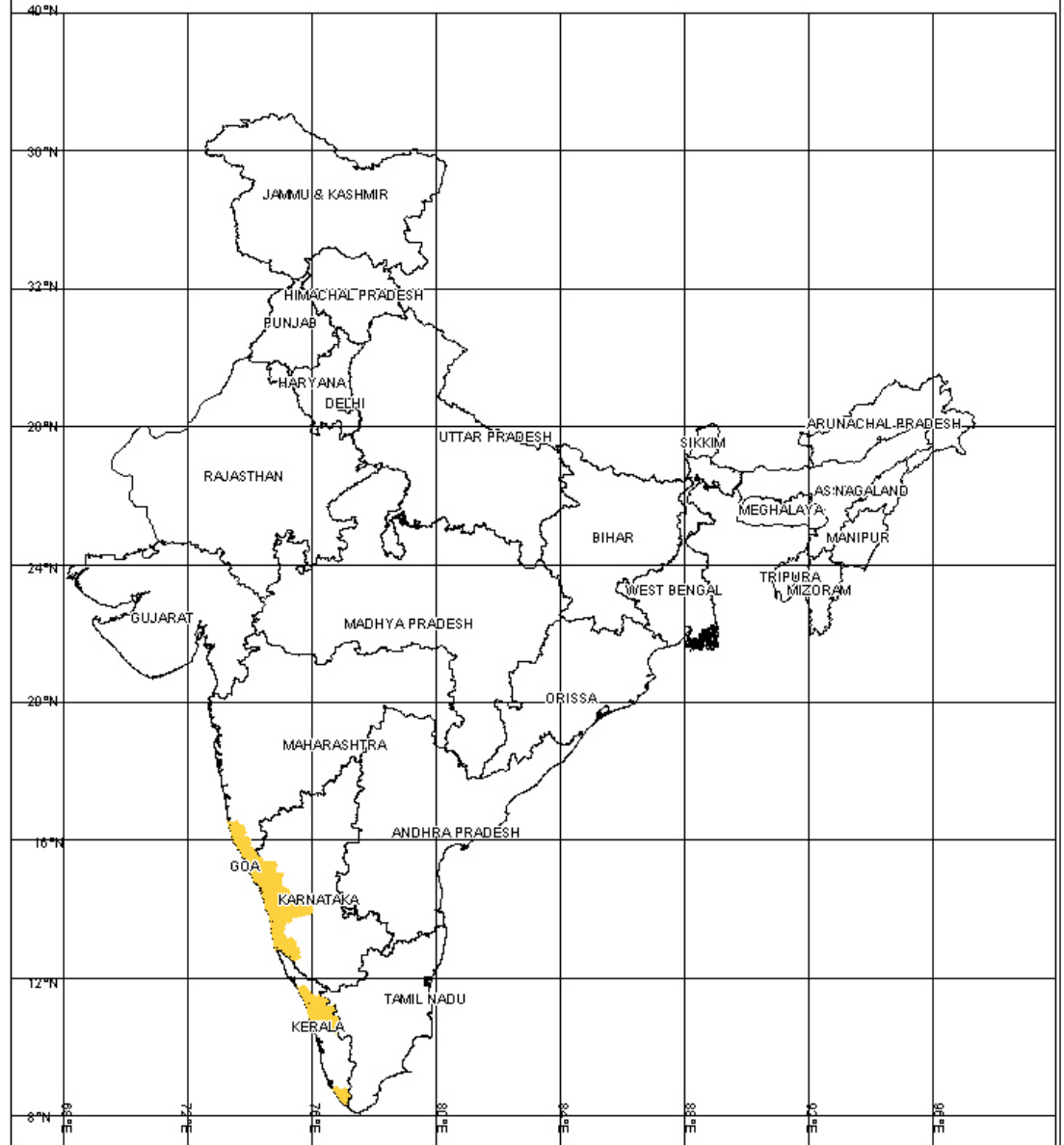
# Global and State Maps



# District Maps

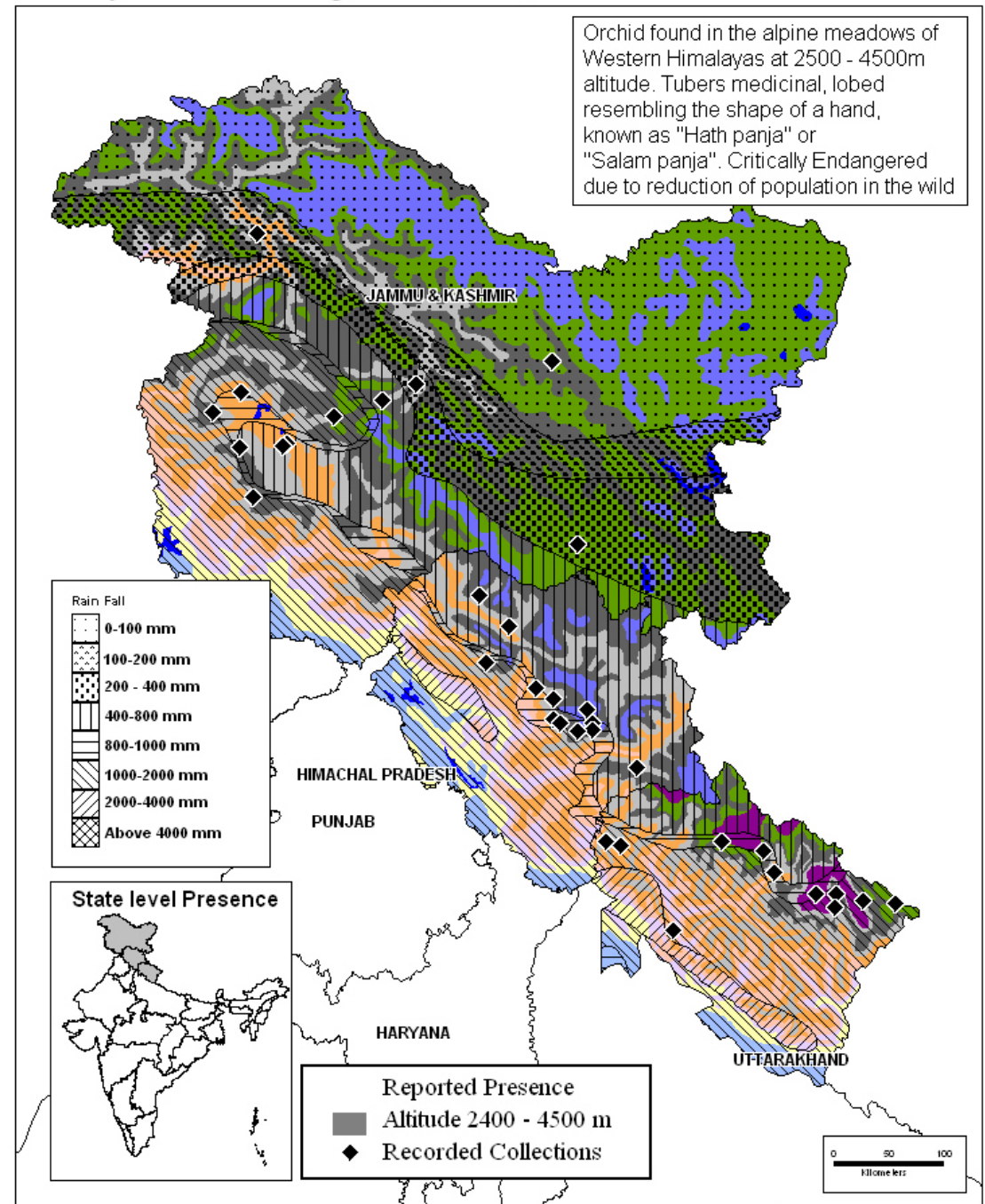
*Myristica malabarica* Lam.

Indian Distribution  
( District Level )



# Eco-Distribution Maps

## *Dactylorhiza hatagirea* (Don.) Soo



Eco-Distribution Map

# Conclusions

- Understanding distribution and eco-climatic limits help in formation of conservation strategies
- Causes for reduction can be diagnosed looking at availability of species in historic and current time
- Provides insights into the regions where conservation measures need to be initiated
- Using the historical literature and collection records, has lead to rediscovery of plants
- Area for species recovery programs can be identified
- Serves as an important tool for conservation planners

# Future Work

- More data on abundance levels might be added to open up more analysis possibilities
- Data collected can be used for Niche Modeling of the species, which would provide more insights into conservation planning
- Make it available on open source and web based GIS platform
- Opportunities are infinite ...

*Your feedback please*