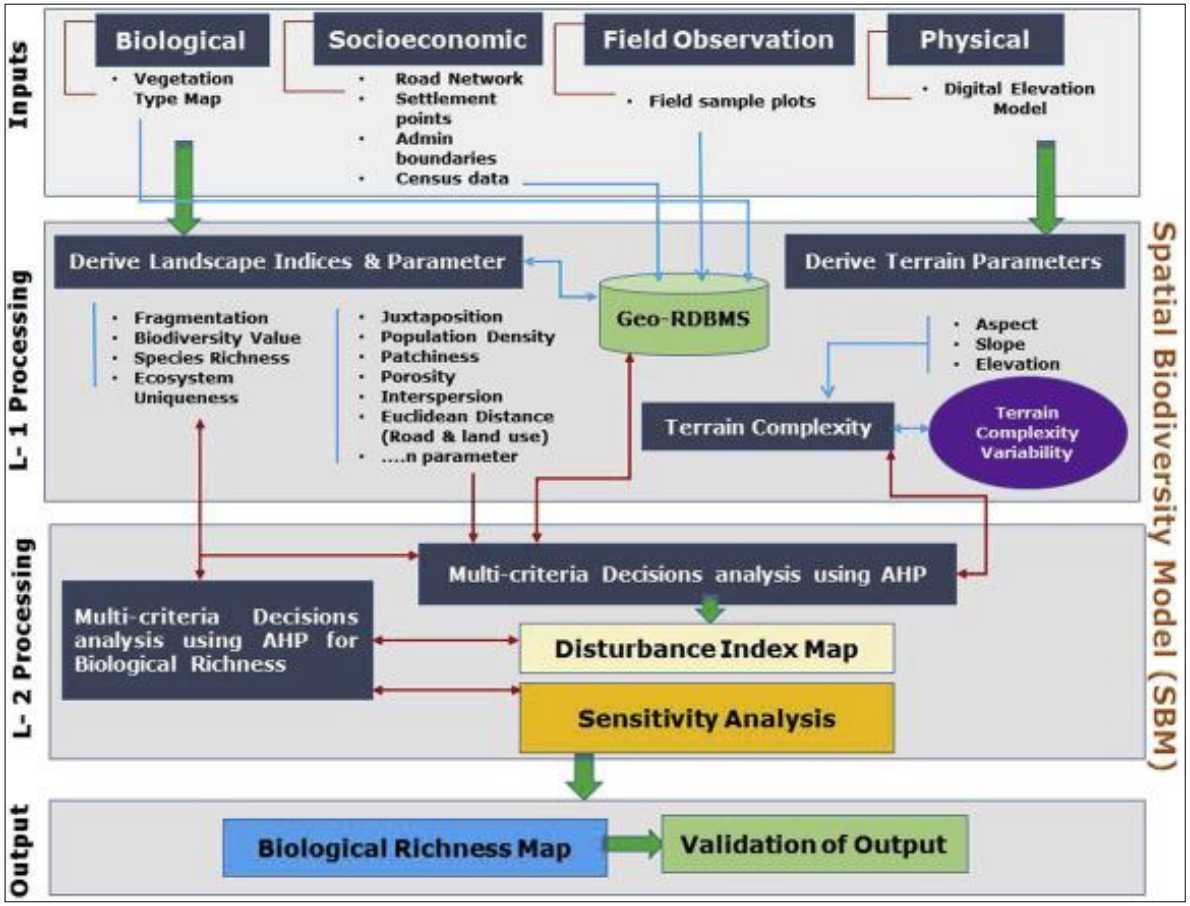
Spatial Biodiversity Model: A tool for integrating spatial landscape modelling in characterizing biological diversity

- An innovative methodological approach is developed to characterize biological diversity named as *Spatial Biodiversity Model* (SBM).
- Developed model is platform, scale, resolution and location independent solution;
- Parallel computing for reducing computation time is implemented using R platform;
- Multi-criteria decision analysis using AHP for group decision making is integrated;
- Sensitivity analysis to reduce uncertainty and optimal distribution .



Research Publication

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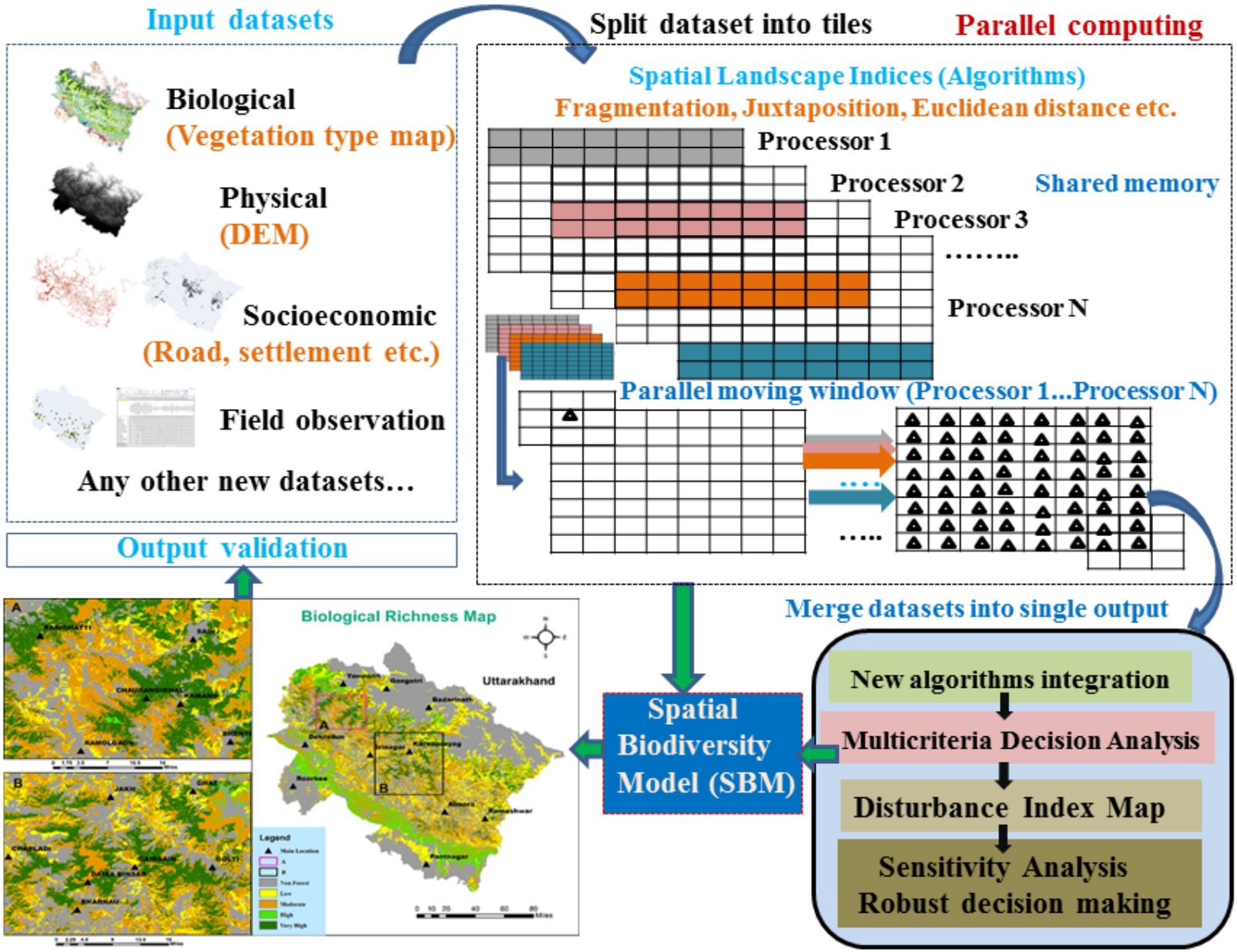
Input datasets
Biological
(Vegetation type map)
Physical
(DEM)
Socioeconomic
(Road, settlement etc.)
Field observation
Any other new datasets…
Split dataset into tiles
Parallel computing
Spatial Landscape Indices (Algorithms)
Fragmentation, Juxtaposition, Euclidean distance etc.
Processor 1
Processor 2
Shared memory
Processor 3
……..
Processor N
Parallel moving window (Processor 1…Processor N)
Output validation
Biological Richness Map
Uttarakhand
Legend
Spatial Biodiversity Model (SBM)
Merge datasets into single output
New algorithms integration
Multicriteria Decision Analysis
Disturbance Index Map
Sensitivity Analysis
Robust decision making