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**

Input datasets

- Biological (Vegetation type map)
- Physical (DEM)
- Socioeconomic (Road, settlement etc.)
- Field observation
- Any other new datasets...

Output validation

Parallel computing

Split dataset into tiles

Spatial Landscape Indices (Algorithms)
Fragmentation, Juxtaposition, Euclidean distance etc.

Processor 1

Processor 2

Processor 3

.......

Processor N

Shared memory

Parallel moving window (Processor 1...Processor N)

Merge datasets into single output

Spatial Biodiversity Model (SBM)

New algorithms integration

Multicriteria Decision Analysis

Disturbance Index Map

Sensitivity Analysis

Robust decision making