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Introduction to Decision Support System



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- MoEF & CC assigned the work to develop a web based GIS System to provide qualitative, quantitative & administrative attributes of forests to facilitate, informed, unbiased and expeditious decisions on management of forest in general and implementation of FC Act in particular to the FSI.
- FSI started working on the project in September 2013, with ESRI as service provider.
- This application software has been developed using Arc GIS server software with Flex technology.



GIS based
Decision Support System



Parameters for identification of Inviolable and Not Inviolable Areas



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- MoEF & CC constituted committees to formulate the Parameters for Inviolable/ Not Inviolable areas
- After detailed discussions ministry decided to include following parameters-
 - Forest Cover Map (FCM)
 - Forest Type Map (FTM)
 - Biological Richness (BR)
 - Landscape Integrity (LI)



Parameters for identification of Inviolable and Not Inviolable Areas



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- Protected Area (PA)
- Tiger Reserves (TR)
- Wildlife corridors
- India Grid (1km x 1km)



Analysis of Inviolate/ Not Inviolate areas on DSS portal



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In Decision Rule 1

- Buffer area of the polygon according to its requirement.
- Polygon falling over PA, TR, Wildlife Corridors are Checked .
- If the polygon falls on PA,TR & Wildlife Corridor then it is considered as Inviolate.



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In Decision Rule 2 –Analysis based on 50% rule

- 1Km x1Km Grids are overlaid on the Polygon.
- Analysis Forest Cover Map(FCM)
- Analysis Forest Type Map(FTM)
- Analysis Biological Richness (BR)
- Analysis Landscape Integrity with 5Km buffer (LI)
- Final Result

IF the final result contains the 50 % or more of total no. of grids having score ≥ 70 then the polygon is considered as Inviolable otherwise it is considered as Not Inviolable.



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Limitations of the Geospatial Data



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- Remote Sensing Classification accuracy is about 90%.
- Cartographic Limitations is 50-100 meters.
- Availability of Bandwidth – Geospatial data requires higher bandwidth for analysis on Web.



Future course

- MIS application
- Development and addition of New features
 - NPV Layer
 - Hydrological layer
 - Time series of FCM
 - Wildlife spp. In area of interest
 - Change analysis
 - What if analysis



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THANK YOU



जहाँ है हरियाली ॥
कहाँ है स्वस्थाली ॥

