



Esri's GIS solution simplifies Forest Survey of India's decision-making process

Client:
Forest Survey of India

Website:
fsi.nic.in

Industry:
Government

Location:
Dehradun

Organization Profile

The Forest Survey of India (FSI) works under the Ministry of Environment, Forest & Climate Change (MoEF&CC), Government of India. Its mandate is to conduct surveys and assessments of forest resources in the country.

Solution

A web GIS-based application on the ArcGIS Server and ArcGIS Desktop platforms

Highlights

Esri India helped FSI by:

- Providing accurate information
- Offering insights from datasets
- Enabling quicker and more effective decision-making
- Providing transparency in the decision-making process

Project Summary

Forest Survey of India is responsible for conducting surveys and assessments of forest resources in the country.

Recognizing the growing relevance of GIS in the field of Forestry and in better managing India's forests, FSI was keen to develop and deploy a web-based GIS system that would provide qualitative, quantitative and administration information about forests to enable fast and effective decision-making.

The organization partnered with Esri India to help it reduce the time consuming process of permitting forest land diversions and identify inviolate forest areas. The objective was to efficiently analyze data sets and make information available to managers that they could use to make scientifically. Esri India offered FSI a holistic Decision Support System (DSS) that encompassed software, application development, training, handholding and support services. The solution has helped the organization simplify and transform its decision making process.

Challenges

FSI, like other organizations working in the Forestry space, was being consistently confronted with its complex, dynamic and multi-dimensional nature. It was being challenged by issues related to inventory, land administration, sustainable planning, better forest management and adherence to regulatory compliances.

Any decision on forest land diversions needed a detailed study and analysis of several critical environmental factors such as forest type, forest cover, landscape integrity, biological richness, and protected areas, among others. This was impacting projects being initiated by industry creating unnecessary delays. FSI needed a solution that could:

- Analyze datasets quickly and efficiently
- Make decision making less cumbersome and time consuming by providing
- insights drawn from the datasets to managers immediately
- Offer a scientific methodology of assessment that would help reduce the
- possibility of errors and improve the accuracy of the information
- Share data, enhance cross-department collaboration and make better decisions
- based on smart and intelligent geographic information.

Solution

Esri India developed a web-GIS based application on top of its ArcGIS Server and ArcGIS Desktop. Various datasets

were prepared as GIS data layers and published on the web. The entire country was divided into a 1 km x 1 km grid for better processing of the data. The user-friendly application developed by Esri India enabled FSI to digitize the areas where the land diversion clearance was required and generate required scores and information to facilitate decision-making.

While at one end the solution enabled FSI and MoEF & CC to hasten the process of providing clearances to forest area diversions, at the other end, it benefited industrialists seeking these go-ahead in a time-bound manner.

The rationalization of the clearance process is helping attract more investment in the country. With the Decision Support System, The Government of India (through FSI) has been able to take one more step towards achieving transparency in governance. The solution is helping FSI to further protect the environment while pushing the envelope of growth and economic development across India's states, especially those with large forest areas. The rapid availability of correct and objective information to senior managers has exponentially improved decision-making in the domain of Forestry.



Additionally, the solution has helped FSI to:

- Introduce transparency in decision-making
- Take decisions in a scientific manner
- Reduce delays in decision-making, thereby improving the efficiency of the system
- De-centralize decision making by offering the application over the web (as a web portal) and providing several people access to it

