# ICT ENABLED IMPLEMENTATION OF FOREST RIGHTS ACT 2006 IN MAHARASHTRA

Today, Information and Communication Technology has infiltrated the remotest corners of the Farth. The Government of Maharashtra came up with an ICT based innovation to preserve the forests and the rights of those who live in these remote forest areas. Implementation of GIS and other ICT based tools played an important role in effectively tackling the most persistent problem of illegal encroachments on the forest land

Edited by ANSHU ROHATGI

### **INTRODUCTION**

The Government of India enacted the Forest Rights Act in 2006 to preserve the rights of forest-dwelling communities of land and other resources, denied to them over decades as a result of the continuance of colonial forest laws in India. However, identifying these lands and specifying the communities living in these areas was a cumbersome task for any central or state government.

It's only when the Maharashtra Government the displayed resoluteness to preserve and protect the forest land and the rights of the claimants, affected population took an easy breath. In order to simplify the process of identifying and classifying the forest land and dedicating them to the particular community, ICT innovation came to the rescue of the Maharashtra Government. Web bundled with technologies Geographical Information Systems (GIS) & Global Positioning System

(GPS) were used extensively to enable government to reach out to the real beneficiaries in order to provide them the much needed entitlement over their land.

### **INNOVATION**

To start with, there were a little over 3.3 lakh plots to be measured in 14,000 far flung villages and over 300 government offices were involved in the project. GPS devices were used for measurement of the plot and the data, in xml format, was uploaded from 110 Sub Divisional Offices (SDO) on to the centralized server located at Pune. The team of experts downloaded these xml file and analysis was done by matching them with the satellite map of the period before implementation of the Act. This resulted in elimination of fraudulent claims and in taking appropriate decision thereby saving forest land from illegal the encroachments.

## PROCESS

The process starts as soon as the Gram Sabha receives an application





SANJAY G KULKARNI Principal Systems Analyst kulkarni.sg@nic.in

from the claimant, who can either be an individual villager or a community. The Gram Sabha then gets the plot identified and measured through GPS technology and the details along with claimant information are stored in a card. The cards are then submitted to the SDO office, which in turn converts the plot details into XML data and uploads the same on the centralized server at Pune. The conversion into XML is done with the help of proprietary software (Garmin) which also assigns 13 digit unique numbers to each claim stored in GPS device card containing these details. A team of experts at the central site downloads these files and map the fresh data to the previously produced data using satellite map to verify the claim.

This process of scrutinizing the claims is essential in order to preserve the forest and to ensure the occupancy of plots for deserving and the right individual or community. The use of the GIS technology has resulted in taking appropriate decisions thereby saving the forest land from illegal encroachments. Prior to 2006, such



The team receiving e-Governance award from Hon'ble Governor and Chief Minister of Maharashtra. Team members (Dr. A.K. Jha, Commissioner TRTI, Ms P.V. Kamat, Sr. TD, Shri Avachat(TRTI), Shri Praveen Rao, PSA and Shri Sanjay Kulkarni, PSA)

documented evidences were not available to the government. The satellite images were procured from NRSA (prior to January 2006), which are compared with the fresh satellite images devised through TVGIS software by overlapping the images to analyze the claimants and occupants to avoid any mis-governance in allotting the plots to the right claimants.

As soon as the SDO uploads data on the server located in Pune, the software generates the acknowledgement slip along with a digitized map of the plots.

		Verificatio	on Details E	ntry	for Dist	rict : Pu	ine	
	CaseID (as per GPS device) : 2508pun00aaa1 Claimant's Name : Aaa Aaa A Gender : Male Claimat Type : Tribal Claim Type : Community - Group of people Date Of File Upload : 25/01/2011 Unit of Measurement : Sq.meters							76
	Area Measured : [1.111 Hectares] [2.74/		es] [2.746 Acr	Acres] [11111.000 Sq. mtr] [119597.804 Sq. ft]				
District	Date Of Measurement : 01/01/2011			Veasured by : GPS				
	Compartment / Gat No. : fdsf							
CaseID	District : Pune	Tehsil : Pune City Village : Pune (CB) [ Pun00 ]						
1 2508pun00; 2 2508pun00; 3 2508pun00;	Date Of Area Verification (dd/mm/yyyy) : Area calculated using Map Source : 1) GPX File Analysis Using MapSource Software 1.Multiple Polygon or Multiple Tracks 2.Difference In Track Name & GPX File Name 3.Widely Open or Wrongly Closed Polygon 4.Others (As Mentioned)				Sq. metre O Yes O Yes O Yes	S ONO ONO ONO		
					OYes	ONo		
	II) GPS Output Analysis Using TRTI-VGIS Satellite Images Available? :						⊛Yes ◯No	
	1.Road/River/Stream Passes Through Measured Area 2.Adjoining/Surrounding Forest Is Covered		i Area	:	OYes O OYes O	O No O No		
	3.Change In Vegetation Cove	(2005-2006) & (2)	007-2008)	:	OYes	ONo	O Satellite Images not Available	
	4. Overlapping Boundaries Of	Adjoining Polygon	S	•	OYes	ONo		
	5. Others (As Mentioned)			•	Ves	No		
	Remark : measurement Out	Jui			OK	Not	JK	

Once the scrutiny and analysis gets over, the SDO sends the same documents to the district headquarters for the clearance. The verification committee at the district collectorate downloads these files, scrutinizes them further and prepares the report to be submitted to the district headquarters for decision making process. The district level committee takes the final decision on the claim based on the facts and observations from verification committee.

#### SYSTEM ARCHITECTURE

The data is transferred into the system at the SDO office from GPS device. The SDO office uploads the .gpx files with the claimant details. The verification committee verifies the information after overlaying the .gpx file over the map. The District Level Committee takes decisions based on these observations.

#### **RECOGNITION & AWARDS**

The project received prestigious National e-Governance Award 2010-11 (Silver Icon) under the Exemplary Reuse of ICT based solutions category.

FOR FURTHER INFORMATION: Sanjay G Kulkarni, Principal Systems Analyst, E-mail: kulkarni.sg@nic.in