

OPEN SOURCE SOFTWARE TOOLS COME HANDY IN BIODIVERSITY CONSERVATION OF WESTERN GHATS

Click to post spatial data

Annie Philip

Jaisen Nedumpala, an assistant secretary at the panchayat in Koorachundu village, Kozhikode district, Kerala is an avid user of Open Source Software tools, a skill acquired mostly through self-learning. He led a team in mapping his village using Remote Sensing (RS) and Geographic Information System (GIS), and used the information for village administration.

Mr. Nedumpala was invited to speak at FOSS4G-India 2015, Dehradun, a national conference on Free and Open Source Software for Geoinformatics.

S. Narendra Prasad from Open Source Geospatial-India (OSGeo-India) cited the example of Mr. Nedumpala to illustrate the ease with which the use of such tools can be learnt and used to advantage with awareness.

Mr. Prasad was speaking at the sidelines of a workshop on using Open Source Geospatial Software Tools for biodiversity conservation of the Western Ghats. The workshop was organised by the OSGeo-India, French Institute of Pondicherry and International Institute of Information Technology, Hyderabad, at the French Institute of Pondicherry here on Wednesday.

It aimed at equipping stakeholders from Tamil Nadu, one of the six States which share the Western Ghats.

The Union Ministry of Environment, Forests and Climate Change-funded Open Source Geospatial-India has been tasked with deploying a Biodiversity Spatial Data Infrastructure for Western Ghats



The Free and Open Source Software tools will ensure the freedom to modify and improvise the biodiversity information by conservation groups and local communities. A view of the Siruvani Dam water spread in the Western Ghats. - FILE PHOTO

(WGSDI) to aid decision making.

The year-long project is supported by the Asia-Pacific Network for Global Change Research.

The workshop, held here and in other States, is meant to kick off the required capacity building for conservation groups and others in the use of GIS, GPS and remote sensing applications using the Open Source tools.

At the workshop, trainers were trained, so they can in turn train other stakeholders. State Biodiversity Boards, government departments like forests, land use, fisheries and livestock, academia and NGOs are some of the stakeholders in this project.

Data on forest boundaries and divisions, bird and tree transect methods, aquatic plants, fishes, elephant presence and distribution of endem-

ic species and species on rocky outcrops are some of the information made available through the SDI.

The Free and Open Source Software tools which are being used in this project will ensure the freedom to modify and improvise the biodiversity information by conservation groups and local communities, said Mr. Prasad. This will prove useful in cases of human-animal conflict where the SDI will allow users to capture, display and analyse data, he said.

Mr. Prasad said that the SDI would be particularly useful in countering differing opinions on marking of forested areas with on-the-ground accurate data and monitoring. He cited the case of areas of plantations in the Annamalai hills being marked as not having a forest cover in the Kasturirangan report.

“With training, school children and communities can use the software to record data. There is also a provision for using regional languages,” he said.

The Android application ‘Kriti’ on phones will enable users to post spatial data directly to the SDI ensuring dynamic update of information. The app records precise coordinates when it is used.

“Such efforts in citizen science allows for democratisation of biodiversity information,” said Mr. Prasad.

The SDI will create a network of people who can use these tools for advocacy with real-time data.

“Data is made visible and share-able, making it transparent,” said Mr. Prasad.

Further training will take place at the International Institute of Information Technology, Hyderabad.

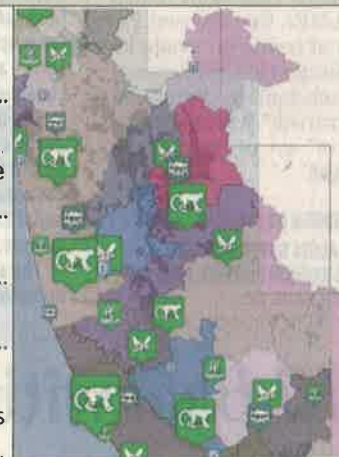
A separate training session will also be held for decision makers and policy makers, said Mr. Prasad.

For Tamil Nadu, the French Institute of Pondicherry and Care Earth Trust, Chennai are the partners.

ENABLING DYNAMIC UPDATES

Features of the Biodiversity Spatial Data Infrastructure for Western Ghats (WGSDI)

- Free and Open Source Software tools have been used to develop the WGSDI.
- Can be accessed on desktop, mobile and web in all major operating systems like Windows, Linux, MacOS.
- Can be customised as a cloud service.
- Collates existing data in an integrated manner.
- Ability to download data and use of web analytics to view visualisation of clusters of species on the map.
- **Kriti- an Android app** enables on-the-ground users to post spatial data directly to the SDI ensuring dynamic update of information.



WITH TRAINING, SCHOOL CHILDREN AND COMMUNITIES CAN USE THE SOFTWARE TO RECORD DATA. THERE IS ALSO A PROVISION FOR USING REGIONAL LANGUAGES

S. NARENDRA PRASAD
OPEN SOURCE GEOSPATIAL-INDIA