Integrated e-Governance Portal for Automation, Streamlining & Effective Management of Processes related to Plantation & Other Forestry Works

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A WEB-BASED,CONCURRENT & TRANSPARENT SYSTEM: e-GREEN WATCH

INTRODUCTION

The e-Green Watch is a web-based and user friendly application that is transparent, reliable and accountable. It is an integrated e-governance portal that enables the temporal change detection for the effective online monitoring and evaluation of works in forestry sector undertaken by State CAMPA.

- It is a holistic approach to facilitate the automation of various management processes related to utilization of CAMPA and other funds provided by states under various centrally sponsored schemes for plantation and other forestry related works.

- The application is capable of showing the Compensatory Afforestation, Diverted Land, Plantations, other Plantations and Assets categories on the Google earth imageries and FSI portal.

- The project initiated with the 5 pilot states viz. Andhra Pradesh, Karnataka, Madhya Pradesh, Sikkim and Tripura.

- At present 27 States/ UT's have been linked to the e-Green Watch portal.

- The approach for a systematic monitoring of on-going plantation is need of an hour for the financial accountability and adequate success of plantation and other schemes on ground.

(A) Early Stage (0-6 months) of Plantation

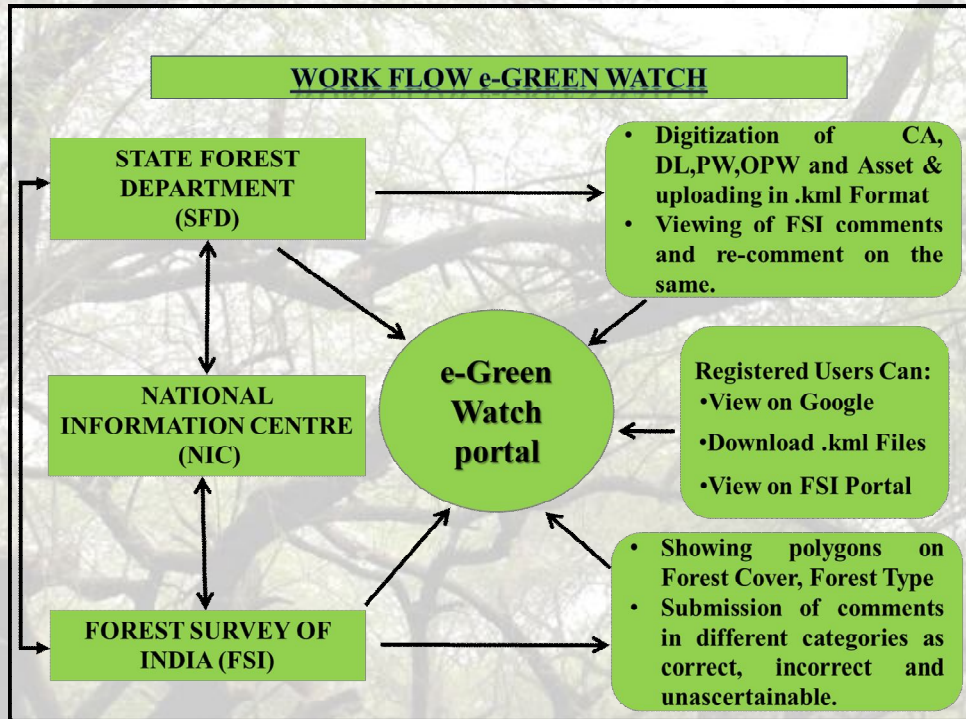
(B) 3-4 Years Old Plantation

OBJECTIVES

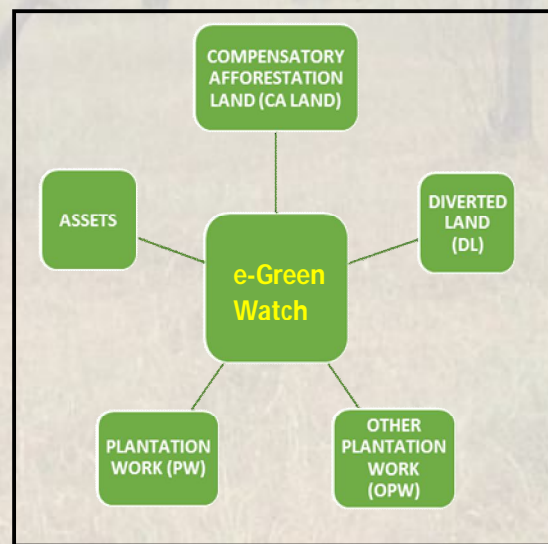| 1. An integrated & online system that is completely transparent, reliable and accountable.	2. Presents the data in real time and accessible to all stakeholders and public at large.	3. Allows online monitoring and evaluation of C.A & forest related activities.

METHODOLOGY

e-Green Watch portal has been designed and developed by National Informatics Centre (NIC) and plays active role in designing, maintenance and improvement of technologies in the portal.

- FSI is carrying out the analysis and monitoring of polygon uploaded by SFD's/UT's on e-green watch portal and the same downloaded in the kml (Keyhole Markup Language) format.

- FSI monitors the polygons online and gives remarks based upon the information of polygons uploaded in five different categories viz. Compensatory Afforestation land, Diverted Land, Other Plantation Work, Plantation Work, Assets by SFD's/UT's.

- FSI classify them as correct, incorrect and unascertainable by analysing Google earth imageries.

- The performance report of the same is generated online and sent to the MOEF & CC on monthly basis.

  FSI monitors the uploaded data on the portal (http://www.egreenwacth.nic.in) and accordingly give its comments to State Forest Departments in different categories. Commenting is a two-way system in which SFD's/UT's can re-comment on FSI comments in the web portal.

Categories under e-Green Watch

Role of FSI in e-Green Watch

Monitoring of polygons on e-Green Watch portal

- Monitoring of Polygons under five categories CA, DL, PW, OPW and Assets.
- Comments online by FSI can be viewed by SFD's/UT's and re-commented online by SFD's/UT's.
- Submission of analysis report online.

Training of SFD's/UT's along with NIC.

- Outreach trainings conducted for SFD's/UT's : Odisha, Punjab, Himachal Pradesh, U.P, J&K, Bihar Maharashtra, Andhra Pradesh & Telangana.
- Workshop & trainings at FSI, Dehradun for SFD's/UT's.

The system has contributed in creating a geo-spatial database of compensatory afforestation and other plantations carried out from CAMPA fund along with geospatial data of diverted land and other allied forestry works.

Category of plantation works verified through satellite data:

Plantation Works

1. **PW: CA Sites**

   Plantation works carried out on compensatory afforestation land falls under PW category (CA sites).

2. **OPW: Non-CA Sites**

   Plantation works carried out on non-compensatory afforestation sites falls under OPW category.

- Details of plantation works of various durations from first year to fifth year of operations are provided as attribute information by State Forest Department along with the number of plants, area and species etc.
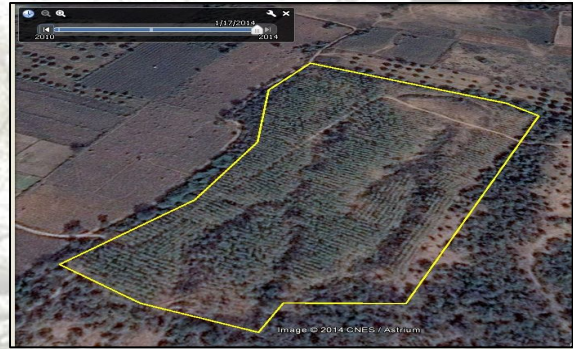
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Date of Pass: 13.02.2016

Date of Pass: 19.11.2011

Date of Pass: 28.05.2008

Date of Pass: 11.12.2011   **Date of Pass: 17.01.2014**

LIMITATIONS OF MONITORING THROUGH E-GREEN WATCH PORTAL

Monitoring through e-green watch portal has certain technological limitations. Although several technological advances in the past has alleviated the constraints and improved the overall quality. The following work cannot be ascertained through satellite data:

- Civil Works such as repair, maintenance and widening of forest roads, repair works Forest quarters, buildings etc.

- Works like painting, whitewash, construction of boundary wall, barbed wire fencing, desilting of tank, polythene bag seedling, maintenance of plantation etc.

- Weeding and Hoeing works and replacement of plants.

- Artificial Natural Regeneration (ANR) and Natural Generation (NR) works, Gap plantations works cannot be ascertained through satellite imageries.

- Satellite data constraints such as satellite data insufficiency, lack of time series data of certain places on google earth.

WAY FORWARD

The approach of a systematic monitoring has to be enhanced by encompassing appropriate RS & GIS technologies and other advancements in this field. This will make e-green watch application as an effective tool in monitoring forestry related works effectively in a more comprehensive and transparent manner.

- Quantification of total forest area state-wise diverted under Diverted Land (DL) category.

- Quantification of total Compensatory Land (CAL) state-wise made available by the user agency to SFD.

- Quantification of plantation areas under PW & OPW categories state-wise.