



सत्यमेव जयते

GIS Cell
Forest Department
Gandhinagar

Use of GIS technology in Working Plan preparation & Application in Forest

Establishment of GIS Cell :-

- Application of Remote Sensing Technology was initiated by Research & Working Plan wing of Gujarat Forest Department in 1991 at GEER Foundation, Gandhinagar.
- GIS Cell, Gandhinagar& Vadodara established in 1998 during IFDP project which was aided by JICA and Hardware& Software were procured.
- Technical collaboration received from Space Application Center, ISRO, Ahmedabad at the initial stage and Forest Officers were trained.
- Need based Forest cover mapping was carried out at that time.
- It was functioning at Vadodara Center from 2004 to March-2019 as Sub Division.
- Now, it is shifted to the O/o PCCF &HoFF, G.S., Gandhinagar under PCCF, W.P., G.S., Gandhinagar.

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At present, GIS Cell is headed by Assistant Conservator of Forest under PCCF, Working Plan, G.S., Gandhinagar. The staff of GIS Cell comprises of a Range Forest Officer, a Beat Guard, an Accountant and two clerical staff. Besides, the GIS Cell hires project based technical staff time to time.

Vision:-

To provide full fledged GIS based support to GFD in its all works where are necessary. To provide rapid, reliable and accurate information regarding the status of Forests which is required for the management of Forest and support in the decision making process.

Main Activities:-

- To provide GIS support for working plans.
- To provide GIS support for PA Management Plans.
- Provide mandatory layers as per latest National Working Plan Code.
- To maintain, develop and prescribe meta-data policy.
- To maintain all point, line and polygon feature classes.
- To vet all data from thin (desktop and mobile) clients before writing to the GIS server.
- To maintain the geo database.
- To provide geo statistical analysis based inputs for Decision Support System.
- To maintain all the boundary sets in one single repository.
- Any other GIS services required for eGujforest project.

Achievements of GIS Cell :-

NO	Projects Name	Division under Projects	Year
1	Status of Forest Cover Mapping	Sabarkantha(N),Sabarkanth(S)	2007
2	Status of Forest Cover Mapping(G.F.D.P) Ex-ante period	Banaskantha, Sabarkantha(N), Sabarkantha(S), Dang(N), Dang(S), Baria, Chhotaudepur	2008
3	G.F.D.P Non-Forest Area Project	Vadoodara, Banaskantha, Sabarkantha, Surat, Bharuch, Godhra, Narmada, Dahod, Navsari, Valsad	2008
4	Status of forest Mapping Project (G.F.D.P) Midterm Period	Banaskantha, Sabarkantha(N), Sabarkantha(S), Dang(N), Dang(S), Baria, Chhotaudepur	2012
5	G.F.D.P Non Forest Area Project	Vadodara, Banaskantha, Sabarkantha, Surat, Bharuch, Godhra, Narmada, Dahod, navsari, Valsad	2012
6	Bio-Diversity Project	Godhra, Baria	2011-12
7	Fire Prone Area Mapping Project	Banaskantha, Sabarkantha(N), Sabarkantha(S), Dang(N), Dang(S), Baria, Chhotaudepur, Vyara, Godhra, Mahisagar, Narmada, Bharuch, Gandhinagar, Junagadh and Patan	2011-12, 2012-13, 2013-14, 2014-15, 2015-16
8	Field survey of Forest Resource (Hurb-Shurb, Climber, Grasses and Bamboo)	Dang(N), Dang(S)	2012-13
9	Impact of J.F.M.C of Forest Area of Gujarat State by physical survey		2012-13
10	Impact of J.F.M.C of Forest Area of Gujarat State by using G.I.S and Remote Sensing		2012-13
11	Status of Forest Cover Mapping Project	Patan	2013
12	Digital Flora of Gujarat Project		2013-14
13	Mapping of Shelter Belt along the costal border of Gujarat State		2013-14
14	Thematic Mapping	Rajpipla(E), Rajpipla(W), Vyara, Valsad(N), Valsad(S), Banaskantha, Sabarkantha(N), Sabarkantha(S), Chhotaudepur and Gandhinagar	2013-14
15	Mapping of tree present in grass land	Surendranagar,Jamnagar	2013-14
16	Basemap preparation of Gujarat Normal Division		2013-14
17	Evaluation reason behind change in the forest area under J.F.M.C of Gujarat state		2013-14
18	GrassVidi Mapping base on density/productivity		2013-14, 2014-15

19	Forest cover mapping and Working Circlewise change detection with reference to working plan period	Banaskantha, Dang(N), Dang(S), Patan, Bharuch, Surat and Narmada	2014-15
20	Selection of landscape and operational units in Gujarat state for 'Green India mission'		2014-15
21	Socioeconomic Survey Project	Surendranagar, Patan	2016-17
22	Forest Resource survey Project	Surendranagar, Patan	2016-17
23	Developing file of grass land Gujarat		2017

Ongoing Activities :-

- Preparation of Mandatory layers Prescribed in National working plan code.
- Provide supports in GIS base maps or data requirements of all wings and divisions on short term basis.
- Managements of legacy data of GIS center.
- Management of NRSC and other satellite images.
- As part of integration of MIS and GIS module application, Support in development of GIS base mobile application, Web GIS, GIS Module in eGujForest Application.

Future Strategy and Other Activities :-

- Taking all the GIS data of Forest at one place -State Data Center (cloud base data storage).
- Prepare GIS maps for Site selection for Plantation.
- Higher technical inputs to Working Plan Preparation
- Plantation Monitoring by Higher Resolution Remote Sensing data
- Wildlife Habitat Mapping and land use cover mapping for protected areas.
- The condition of riparian forests of big rivers and it's tribuneries of state like Narmada, Tapi, Sabarmati, Mahisagar and other rivers.
- Wetland mapping
- Identifying zone and mapping Man animal conflict.
- Mapping of Threaten Flora and fauna of state for the important biodiversity areas.

- Monitoring of Forest Fires and mapping fire risk zonation for the higher risk forest fire prone divisions.
- Support in Development of MIS and GIS integrated mobile application Web GIS and egujforest GIS modules.

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