Significance of GIS/Remote Sensing

in

Forest Research

What is GIS & Remote Sensing?

- GIS – Geographic Information System is a computer based information System used to digitally represent and analyze the geographic features present on the earth`s surface and the events that taking place on it.

- Remote Sensing – It is a surveying and data collection technique about an object or area from a distance, without actually touching it.

Steps of GIS work

- Data Capture & Processing – Satellite Imagery, Aerial Photographs, GPS Devices.
- Data Preparation & Management – computer/software readable format and storage.
- Data Analysis – Data Comparation, Predictions, Surface analysis, Change detection.
- Data Presentation – Maps, Images, Table & Graphs.

Need of GIS & Remote Sensing

- Map preparation – Grid point map, forest cover map, stock map, management map, google earth map etc.
- Forest Fire management, deforestation and degradation of forest land, resource management.
- Wildlife habitat and movement tracking.
- Agroforestry cluster development.
- Watershed management and planning.
- Impact assessment – Land Use Land Cover

Institute & their Works

- Kerala Forest Research Institute
- IIRS, Dehradun –
  - Training & Education – Diploma, Mtech, certificate programs
  - Research & Development -
  - Outreach Programs – Online courses for students, professionals and government officials
- FSI, Dehradun –
  - Forest Cover Biennially
  - Develop database on forest tree resources
  - Thematic map
  - Conduct training – Resource survey, Remote sensing & GIS
  - Mapping

Institute & their Works

- NRSC, Hyderabad

Works – Satellite data acquisition and processing

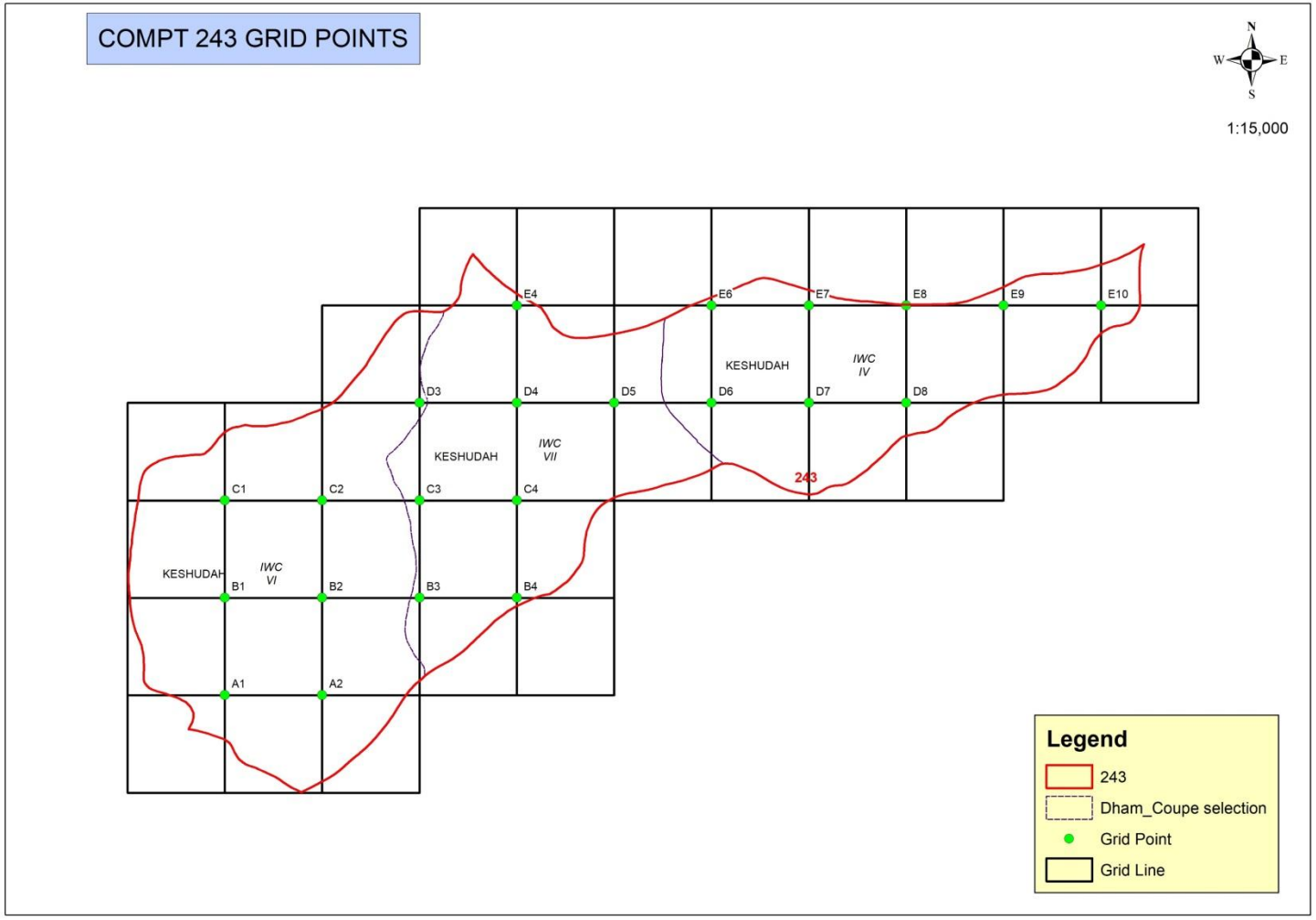
Data dissemination – provide data to user agency

Bhuvan Platform

Thematic map preparation

Supports project – Agriculture, Forestry, disaster management, urban planning.

Maps


COMPT 243 GRID POINTS
N
W
E
S
1:15,000
E4
E6
E7
E8
E9
E10
D3
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C1
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C3
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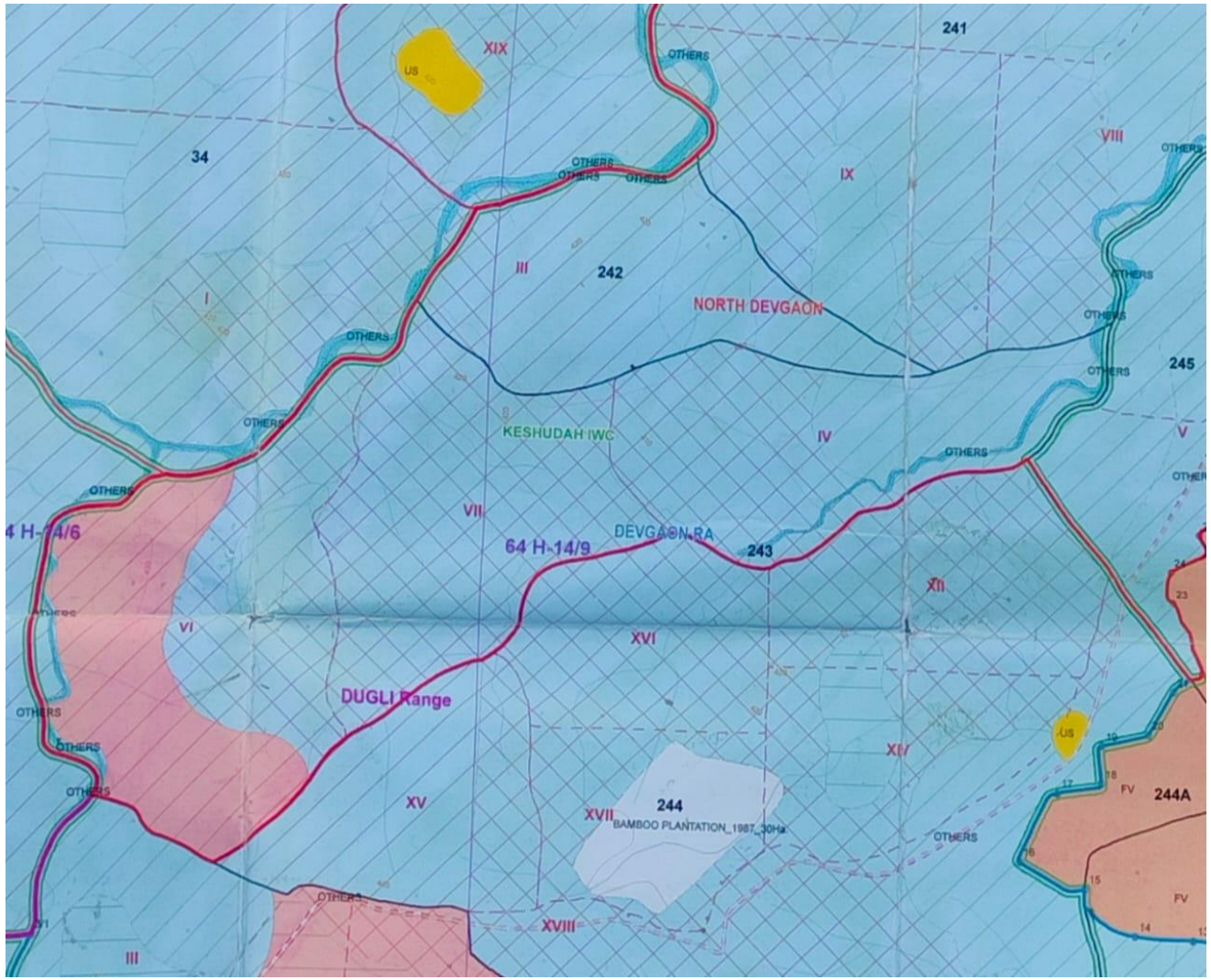
B1
B2
B3
B4
A1
A2
KESHUDAH
IWC
IV
KESHUDAH
IWC
VII
KESHUDAH
IWC
VI
243
Legend
243
Dham_Coupe selection
Grid Point
Grid Line

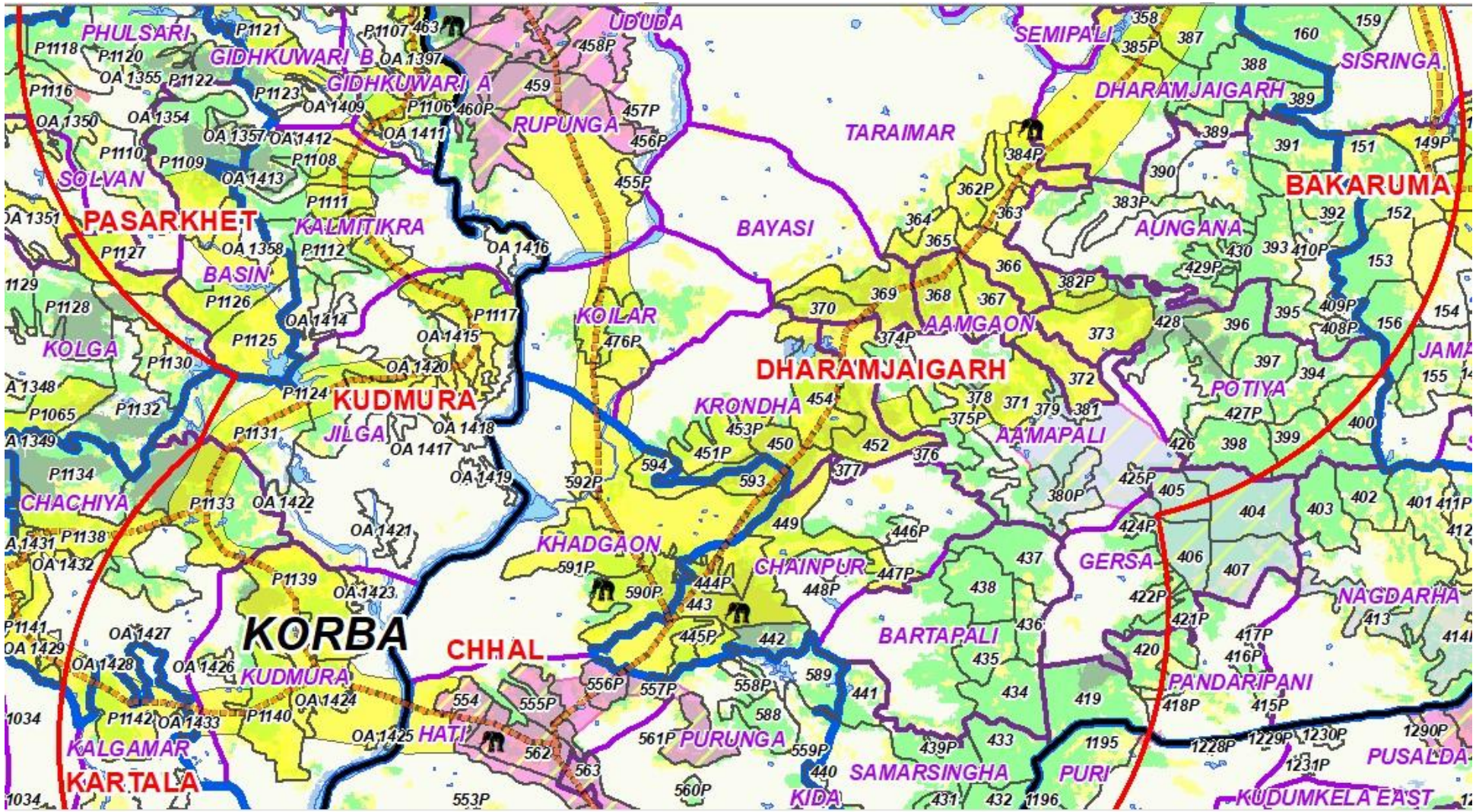
Maps


241
XIX
US
OTHERS
34
VIII
IX
III
242
NORTH DEVGAON
I
245
KESHUDAH IWC
IV
V
VII
64 H-14/9
DEVGAON RA
243
XII
VI
XVI
DUGLI Range
XIV
XV
XVII
244
244A
BAMBOO PLANTATION_1987_30Ha
XVIII
FV

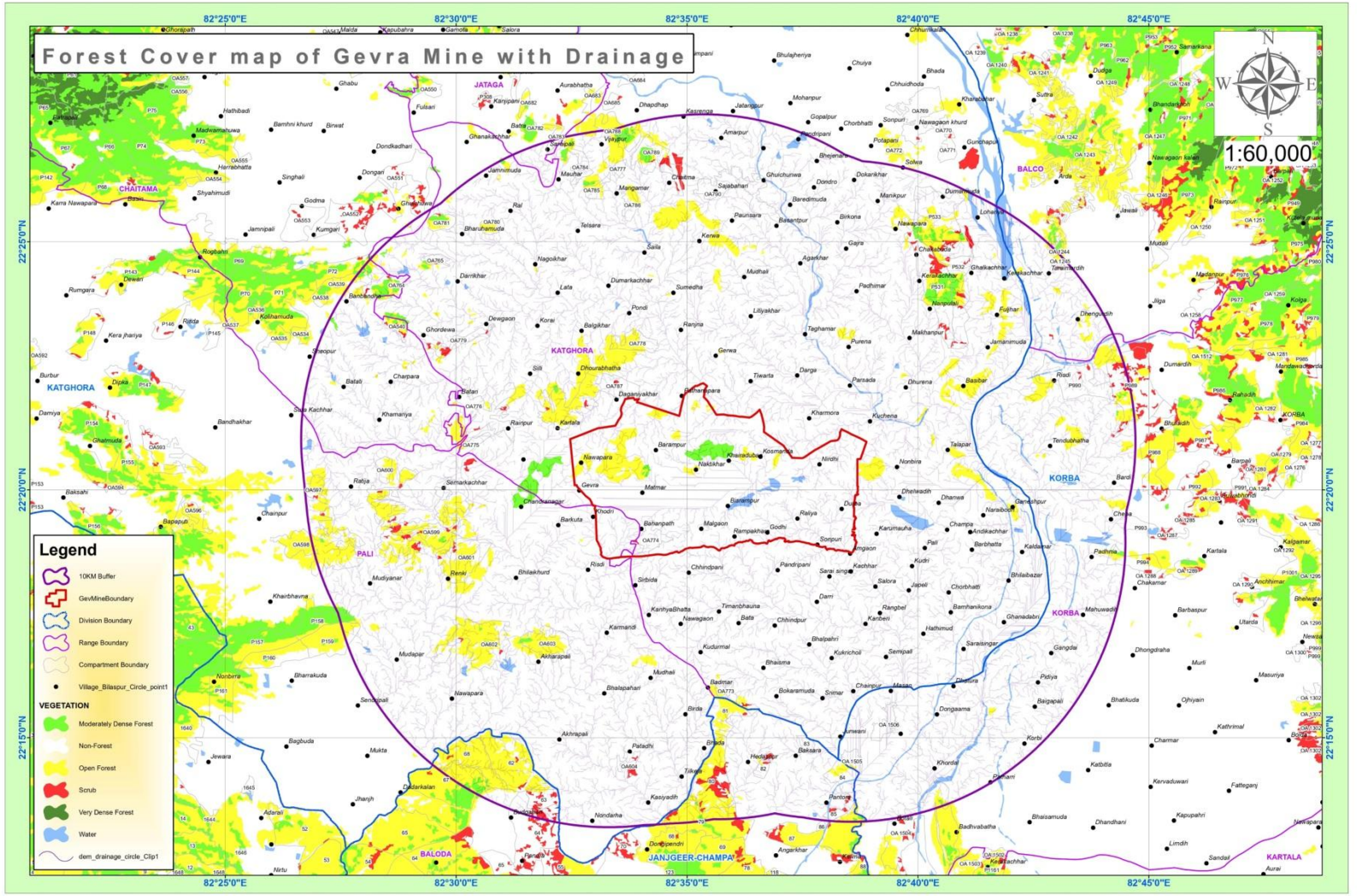
Maps


Jhiriya Map
1:2000
3.3
0.4
5
0.3
3.6
4
5
3.3
5
Legend
Plantation
10m
Jhiriya Boundary
Road
pond
Canal
Plot Boundary
Soil
Black
Murum
Red
Bamboo Boundary
3m
Bamboo

Maps


PHULSARI
GIDHKUWARI B
GIDHKUWARI A
UDUDA
RUPUNGA
SEMIPALI
SISRINGA
DHARAMJAIGARH
TARAIMAR
BAKARUMA
SOLVAN
PASARKHET
KALMITIKRA
BAYASI
AUNGANA
BASIN
KOILAR
AAMGAON
KOLGA
DHARAMJAIGARH
KUDMURA
KRONDHA
POTIYA
JILGA
AAMAPALI
CHACHIYA
KHADGAON
GERSA
CHAINPUR
NAGDARHA
KORBA
CHHAL
BARTAPALI
KUDMURA
PANDARIPANI
KALGAMAR
HATI
PURUNGA
KARTALA
SAMARSINGHA
PURI
KIDA
PUSALDA
KUDUMKELA EAST

Maps


Forest Cover map of Gevra Mine with Drainage
1:60,000
Legend
10KM Buffer
GevMineBoundary
Division Boundary
Range Boundary
Compartment Boundary
Village_Bilaspur_Circle_point1
VEGETATION
Moderately Dense Forest
Non-Forest
Open Forest
Scrub
Very Dense Forest
Water
dem_drainage_circle_Clip1
82°25'0"E
82°30'0"E
82°35'0"E
82°40'0"E
82°45'0"E
22°25'0"N
22°20'0"N
22°15'0"N
JATAGA
CHAITAMA
KATGHORA
PALI
BALCO
KORBA
JANJGEER-CHAMPA
BALODA
KARTALA