



**Ministry of Forests and Soil Conservation
REDD-Forestry and Climate Change Cell**

**Development of a Measurement, Reporting and
Verification (MRV) System for Emissions and
Removals**

Contract No.: FCPF/REDD/S/QCBS-7



**MRV Geographic Information System
Data Catalog**

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AGRICONSULTING S.p.A.

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REDD and Climate Change Cell

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Acronyms and Abbreviations

AFO:	Assistant Forest Officer
ANSAB:	Asia Network for Sustainable Agriculture and Bio resources
BAU:	Business as Usual Baseline
BZCFUGs:	Buffer Zone Community Forest User Groups
CBFM:	Community Based Forest Management
CBFMUGs:	Community Based Forest Management Users Groups
CCB:	Country Capacity Building
CF:	Community Forest
CFI:	Continuous Forest Inventory
CFOP:	Community Forest Operational Plan
CFUGs:	Community Forest User Groups
CoFM:	Collaborative Forest Management
COPs:	Conference of Parties
CSO:	Civil Society Organization
DBH:	Diameter at Breast Height
DBMS:	Database Management System
DDC:	District Development Committee
DFO:	District Forest Office/Officer
DFRS:	Department of Forests Research and Survey
DOF:	Department of Forests
ESMF:	Environmental and Social Management Framework
ESS:	Environmental and Social and Safeguards System (ESS)
FAO:	Food and Agricultural Organization of the United Nations
FAO FP:	FAO Forestry Paper
FCPF:	Forest Carbon Partnership Facility
DSCO:	District Soil Conservation Officer
FECOFUN:	Federation of Community Forest Users Nepal
FGD:	Focus Group Discussion
FMU:	Forest Management Unit
FRA:	Forest Resources Assessment of Nepal Project
GHG:	Greenhouse Gas Emissions
GIS:	Geographic Information System
GLCN:	FAO/UNEP Global Land Cover Network
GPG:	International Panel on Climate Change: Good Practice Guidance
GPS:	Geographic Positioning System
ICIMOD:	International Center for Integrated Mountain Development
IPs:	Indigenous Peoples
IPCC:	Intergovernmental Panel on Climate Change

LCCS:	Land Cover Classification System
LhFUGs:	Leasehold Forest User Groups
M and MRV:	Measurement and Monitoring, Reporting and Verification
MIS:	Management Information System
MRV:	Measuring, Reporting and Verifying
NAFIMS:	National Forestry Information Management System
NFCAG:	National Forest Carbon Action Group
NEFIN:	Nepal Federation of Indigenous Nationalities
NGO:	Non-Government Organization
NORAD:	Norwegian Agency for Development Cooperation
PSP:	Permanent Sample Plots
REDD:	Reducing emissions from deforestation and forest degradation
REDD+:	The REDD"+" is more than just avoided deforestation. It is tied to measurable and verifiable reduction of emissions from deforestation and forest degradation as well as sustainable management of forests, conservation of forest carbon stocks and enhancement of carbon stock
RL/REL:	Reference Emission Level
R-PP:	Readiness Preparation Proposal
SLMS:	Satellite Land Monitoring System
UNFCC:	United Nations Framework Convention on Climate Change
WISDOM:	Wood fuel Integrated Supply and Demand Overview Mapping
WWF:	World Wildlife Fund

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EXECUTIVE SUMMARY

Scope of this paper is to document the work done by the MRV Project during June-September 2013 in collecting and organizing existing relevant information. During the early phases of the Project it was realized that conspicuous information on forest and natural resources in general exist in Nepal. However it was also noticed that such information, both spatial and statistical, if often dispersed, not properly documented nor standardized. Based on these findings it seemed useful to create a systematic catalogue of the existing layers, and to standardize data formats in terms of nomenclature, projections and to produce adequate meta-data. The available information was standardized and quality checked constitutes the first nucleus of the spatial data that will populate the MRV database. This will integrate in a unique, multi-user, client/server framework (based on the software platform PostgreSQL/PostGIS) all the available spatial and non-spatial (e.g. forestry data from field surveys) data collected and used by the MRV system. A dedicated web application will manage and disseminate the relevant metadata.

The present working paper summarizes the status of the data catalogue and the thematic elements included so far.

In synthesis, at present, the MRV data catalogue contains the following thematic elements:

Administrative units (source: survey department)

- Development Regions
- Regional headquarters
- Districts
- Village Development Committees

Topography (source: ICIMOD)

- Topographic Grid
- Roads
- Rivers
- Airports
- Contour lines
- Spot height

Ecology and landscape

- Physiographic region (source: ICIMOD, Physiographic division of country into Terai, Siwalik, Hill, Middle Mountain and High Mountain)
- Digital Elevation Model (source: SRTM)
- Slope (source: SRTM)
- Precipitation (source: ICIMOD)
- Soil
- Geology
- Ecological zones (source: ICIMOD)
- National Parks and Reserves

Socio-economic variables

- Population density and growth (at District and VDC level) (source: CBS)
- Settlements (source: ICIMOD)
- Average household size and distribution (source: CBS)
- Livestock
- Fuel wood and energy consumption
- Fuel wood and timber production
- Community Forests

Land cover

- Forest cover map based on Landsat
- Global Land Cover (GLC) 2000 (FAO/ESA)
- Land Resource Mapping Project (LRMP) land cover map (1979, survey department)
- Forest cover of Terai 2010 (various sources)
- Data on 3 Community Forests case studies of REDD project sites. i.e. three watershed (Kaayerkhola of Chitwan district, Ludhikhola of Gorkha district and Charanawoti of Dolakha district) (ICIMOD, ANSAB and FECOFUN)
- Rapid Eye satellite imageries (2010, source: FRA)
- Landsat satellite imageries (1979, 1990, 2000, 2005, 2010 source: REL)
- Preliminary estimates of forest cover and deforestation at District level

SPATIAL DATA RASTER

Rapid Eye Images

File Format: GeoTiff
Spatial Resolution: 5m (approx)
Imagery Date: 2010
Scene per reference year: 1
Source: FRA Nepal

Landsat Satellite Imageries of Nepal (1979, 1990, 2000, 2005, 2010 source: REL)

Geographic Coordinate System: GCS_WGS_1984
Cell Size: 28.25 x 28.25
Source: REL
Scene per reference year: 1

Slope Map of Nepal

Slope map of Nepal is produced by analyzing SRTM DEM with ten classes.

File Name: NEPAL_SLOPE_MAP
Geographic Coordinate System: GCS_WGS_1984
Cell Size: 97.62 m X 97.62 m

Attribute Table:

Field Name	Data Type	Description
Value	(Default)	(1-10 representing each class)
AREA_SQM	Double	Area in Square Meter
CLASS	Text (Length=30)	Categorizations of Class

Global Land Cover Dataset of Nepal

File Name: NEPAL_GLOBE_COVER
 Datum: D_WGS_1984
 Cell Size: 277.7 m X 277.7 m
 Data Source: FAO/ESA

Attribute Table:

Explanation of "Value" field of "Globe_Cover_Nepal" as described under "Global_Legend"

Value	Description
11	Post-flooding or irrigated croplands (or aquatic)
14	Rainfed croplands
20	Mosaic cropland (50-70%) / vegetation (grassland/shrubland/forest) (20-50%)
30	Mosaic vegetation (grassland/shrubland/forest) (50-70%) / cropland (20-50%)
40	Closed to open (>15%) broadleaved evergreen or semi-deciduous forest (>5m)
50	Closed (>40%) broadleaved deciduous forest (>5m)
60	Open (15-40%) broadleaved deciduous forest/woodland (>5m)
70	Closed (>40%) needleleaved evergreen forest (>5m)
90	Open (15-40%) needleleaved deciduous or evergreen forest (>5m)
100	Closed to open (>15%) mixed broadleaved and needleleaved forest (>5m)
110	Mosaic forest or shrubland (50-70%) / grassland (20-50%)
120	Mosaic grassland (50-70%) / forest or shrubland (20-50%)
130	Closed to open (>15%) (broadleaved or needleleaved, evergreen or deciduous) shrubland (<5m)
140	Closed to open (>15%) herbaceous vegetation (grassland, savannas or lichens/mosses)
150	Sparse (<15%) vegetation
160	Closed to open (>15%) broadleaved forest regularly flooded (semi-permanently or temporarily) - Fresh or brackish water
170	Closed (>40%) broadleaved forest or shrubland permanently flooded - Saline or brackish water
180	Closed to open (>15%) grassland or woody vegetation on regularly flooded or waterlogged soil - Fresh, brackish or saline water
190	Artificial surfaces and associated areas (Urban areas >50%)
200	Bare areas
210	Water bodies
220	Permanent snow and ice
230	No data (burnt areas, clouds)

LRMP Dataset of Nepal

File Name: NEPAL_LRMP
Geographic Coordinate System: GCS_WGS_1984
Cell Size: 29.6 m X 29.6 m
Source: Survey Department

Digital Elevation Model of Nepal

File Name: DEM_NEPAL
Geographic Coordinate System: GCS_WGS_1984
Cell Size: 90 m X 90 m
Source: SRTM

SPATIAL DATA VECTOR

Village Development Committee (VDC) Map of Nepal

Name: NEPAL_VDC
Scale: 1:25000
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Source: Survey Department of Nepal

Attribute Table

Field Name	Data Type	Description
DCODE	Text	District Code
ZCODE	Text	Zone Code
VDC_NAME	Text	VDC Name
DIST_NAME	Text	District Name
ZONE_NAME	Text	Zone Name
REGI_NAME	Text	Development Region Name
AREA_SQM	Double	Area of VDC in Square Meter

District Map of Nepal

Name: NEPAL_DISTRICT
Geometry Type: Polygon
Scale: 1:25000
Source: Survey Department of Nepal
Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
DCODE	Text	District Code
ZCODE	Text	Zone Code
DIST_NAME	Text	District Name
ZONE_NAME	Text	Zone Name
REGI_NAME	Text	Development Region Name

Regional Headquarters

(Source: Survey Department of Nepal)

Name: "REGI_HQ"
Geometry Type: Point
Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
HQ_NAME	Text	Regional headquarter name

District Headquarters

(Source: Survey Department of Nepal)

Name: "DIST_HQ"
Geometry Type: Point
Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
DHQ_NAME	Text	District headquarter Name
DCODE	Text	District Code

Nepal Topographic Grid

Source: Survey Department of Nepal
Name: "NEPAL_TOPO_GRID"
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
CENTRAL_MERIDIAN	Text	Central Meridian taken for the MUTM (Modified Universal Transverse Mercator) Projection
SHEETNO	Text	Grid Sheet Number
MUTM_ZONE	Text	Classification of the zones for MUTM projection

Ecological Regions

The map was prepared based on Topographic Zonal Map (1:250,000) showing Ecological Regions of Nepal. The map was prepared to publish in GIS Database of Key Indicators of Sustainable Development in Nepal. The data source for map is zonal map (1:250,000) of Department of Survey 1988 having Projection in UTM Spheroid Everest. Data Source: Dobremez, 1988.

Name: ECO_REGION
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Publication Date: 02/1996
Scale: 1:250000
Source: ICIMOD

Attribute Table

Field Name	Data Type	Description
ECO_REGION	Text	A broad ecological classification of Nepal

Ecology Types

The Ecological (polygon) vector digital data of Nepal in geographic projection jointly is prepared by MENRIS/ICIMOD. This Ecological Digital Data of Nepal was based on Dobremez Map 1970,072,073,075,078,084,085 published in France. The information was generalized based on Elevation, Vegetation and others in 2003. No assessment or ground truthing has been carried out on this data.

Name: ECO_TYPES
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute Table

Field Name	Data Type	Description
BIO_CODE	Text	Code for Ecological Types
TYPES	Text	Different Ecological Types

Geographic Region

The Geographic Region (polygon) Topographical basic vector digital data of Nepal in geographic projection is prepared by MENRIS/ICIMOD based Topographic Zonal Map 1988. The Data Source for this data is topographic Zonal Map of scale 1:250,000 prepared by Department of Survey of Nepal of 1988. No assessment or ground truthing has been carried out on this data.

Name: GEO_REGION
Geometry Type: Polygon
Scale: 1:250000
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute Table

Field Name	Data Type	Description
GEO_REG_CODE	Text	Code for geographic regions
REGION	Text	Names of Geographic Regions

Geological Region

Geological Vector Data of Nepal was prepared by MENRIS/ICIMOD having purpose topographic base layer. Data Source for the preparation of this was Zonal map published by Topographical Survey in 2004.

Name: GEOLOGY
Scale: 1: 250000
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute Table

Field Name	Data Type	Description
GEO_CODE	Text	Code for Geological regions
GEO_CLASS	Text	Different types of Geological Classes

Mean Annual Precipitation

Mean annual precipitation of Nepal was prepared by MENRIS/ICIMOD by taking 12 mean annual precipitation.

Name: MEAN_ANN_PREP
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute Table

Field Name	Data Type	Description
PREP_ANN_MEAN	Text	Mean Annual Preparation

Physiographic regions

Physiographic regions of Nepal was prepared by MENRIS/ICIMOD. The map was prepared based on Zonal map (1:250,000) and Physiographic Map showing districts by Five different Physiographic Regions of Nepal. The map was prepared in 2004 to use in various publications. Data Source for Map was Topographical Zonal Map (1:250,000) and Physiographic Map, Department of Survey 1988 having Projection: UTM, Spheroid Everest.

Name: PHYSIOGRAPHY
Scale: 1:250000
Publication Date: 2004
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute Table

Field Name	Data Type	Description
PHY_CODE	Text	Code for different physiographic regions
PHY_REGION	Text	Description of different physiographic regions

Soil and Terrain Database for Nepal

The Soil and Terrain database for Nepal primary data (version 1.0), at scale 1:1 million (SOTER_Nepal). SOTER_Nepal is generalized from the original Soils and Terrain database of Nepal at scale 1:50,000 compiled by FAO and Nepal's Survey Dept. The SOTER_Nepal database provides generalized information on landform and soil properties at a scale 1:1 million. It consists of 17 SOTER units, characterized by 56 representative and four synthetic profiles for which there are no measured soil data. The SOTER database includes also attribute data of 99 profiles initially selected as references to soil components that have already a representative profile.

Source: Survey Department of Nepal
Name: SOIL
Geometry Type: Polygon
Scale: 1: 1000000
Dataset released date: 2009
Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
SOIL_CODE	Text	Code for soil types
SOIL_TYPE	Text	Description of different Soil Types

Land cover data by FRA of Central Terai

Name: FRA_CENTRAL_TERAI
Geometry type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Source: FRA

Attribute Table

Field Name	Data Type	Description
CLASS	Text	Classification of Forest or Other Wooded
UPDATE_DATE	Date	Date of last Updating

Land cover data by FRA of Western Terai

(Source: FRA)

Name: FRA_WESTERN_TERAI

Geometry Type: Polygon

Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
CLASS	Text	Classification of Forest or Other Wooded
UPDATE_DATE	Date	Date of last Updating

Land cover data by FRA of Mid-West Terai

(Source: FRA)

Name: FRA_MIDWEST_TERAI

Geometry Type: Polygon

Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
CLASS	Text	Classification of Forest or Other Wooded
UPDATE_DATE	Date	Date of last Updating

Land cover data by FRA of Far-West Terai

Name: FRA_FARWEST_TERAI

Geometry Type: Polygon

Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
CLASS	Text	Classification of Forest or Other Wooded
UPDATE_DATE	Date	Date of last Updating

Land cover data by FRA of SIWALIK

(Source: FRA)

Name: FRA_SIWALIK
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
CLASS	Text	Classification of Forest or Other Wooded
AREA_SQKM	Double	Area in Square Kilometer

Land cover data of 2010 by ICIMOD

(Source: ICIMOD)

Name: ICIMOD_LANDCOVER
Geometry Type: Polygon

Attribute Table

Field Name	Data Type	Description
LCCODE	Text	Code for Land cover Classification
AREA_SQM	Double	Area in Square Meter

Land Use data by Land Resource Mapping Project (LRMP) of Nepal

(Source: Survey Department)

Name: LRMP_LANDUSE
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984

Attribute Table

Field Name	Data Type	Description
LUCODE	Text	Code for Land Use Classification
DESCRIPTION	Text	Description of Land Use Class
SPECIES	Text	Description of Species
CLIMATE	Text	Description of Climatic Condition
ELEVATION	Text	Classification on the basis of elevation
CULTIVATION	Text	Categorization of Cultivation whether it is Light, Medium or Intense

Protected areas and National Parks

Name: NATIONAL_PARKS
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute table

Field Name	Data Type	Description
PTCODE	Text	Park Types code
PARK_TYPES	Text	Types of Parks (National Park, Conservation area, Wildlife Reserve, Hunting Area etc)
NAME	Text	Park Name

Location of the Airports of Nepal

Name: AIRPORT
Geometry Type: Point
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute table

Field Name	Data Type	Description
ACODE	Text	Code of Airports
NAME	Text	Name of Airports
CLASS	Text	Class of Airport (Grass, Asphalt, Clay, Gravel, etc)
DCODE	Text	District Code

Contour line map of Nepal

Name: CONTOUR
Geometry Type: Polyline
Contour Interval: 500m
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute table

Field Name	Data Type	Description
CONCODE	Text	Contour Code
CON_HEIGHT	Text	Height of Contour

Elevation Zone map of Nepal

Name: ELEV_ZONE
Geometry Type: Polygon
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Attribute table

Field Name	Data Type	Description
EZCODE	Text	Elevation Zone Code
ELEV_CLASS	Text	Categorization of Elevation Class
AREA_SQKM	Double	Area in Square Kilometer

Rivers of Nepal

Name: RIVERS
Geometry Type: Polyline
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Field Name	Data Type	Description
Shape_Length	Default	Length of River

Roads of Nepal

Name: ROAD
Geometry Type: Polyline
Geographic Coordinate System: GCS_WGS_1984
Source: ICIMOD

Field Name	Data Type	Description
TYPE	Text	Types of Roads (Main trail, footpath, Graveled, Highway, Railway etc.)
Shape_Length	Default	Length of River

Settlements of Nepal

(Source: ICIMOD)

Name: SETTLEMENTS
Geometry Type: Points
Geographic Coordinate System: GCS_WGS_1984

Field Name	Data Type	Description
VCODE	Text	VDC Code
DCODE	Text	District Code
VDC_NAME	Text	Name of Village Development Committee
TOTAL_POP	Long Integer	Total Population of the particular settlement
TOTAL_HOUSE	Long Integer	Total number of houses in particular settlement

Spot Heights

(Source: ICIMOD)

Name: SPOT_HEIGHT
Geometry Type: Point
Geographic Coordinate System: GCS_WGS_1984

Field Name	Data Type	Description
SPOT_HEIGHT	Long Integer	Height value of spot
PEAK_NAME	Text (Length=30)	Name of the peak

FRA's Permanent Sample Plots

(Source: FRA)

Name: PSPs_FRA
Geometry Type: Point
Geographic Coordinate System: GCS_WGS_1984

Field Name	Data Type	Description
ID	Long Integer	Individual Plot Identification Number
CLUSTER_ID	Long Integer	Individual Cluster Identification Number
PROJ_ZONE	Text	Projection Zone for Nepal (Zone44 or Zone45)

ROW	Text	Row
COL	Text	Column
PLOT_NO	Text	Plot Number
REGION	Text	Region
STRATUM	Text	Stratum
GEO_PHY	Text	Geographic Physical Zone
EASTING	Double	Easting of Plots in respective Projection zone
NORTHING	Double	Northing of Plots in respective Projection zone
LATITUDE	Double	Latitude in GCS WGS 1984
LONGITUDE	Double	Longitude in GCS WGS 1984
FAO_LANDUSE	Text	Land use classification according to FAO
CLASS_SOURCE	Text	
TREE_OUT_FOREST	Short Integer	Trees out of forest
ACCESSIBILITY	Short Integer	
ACCESS_TIME	Short Integer	
INTERPRETOR	Text	Name of Data Interpreter
TIMEST	Date	Date for data collection
SEL_FOR_FIELD	Text	
DEM	Double	Elevation of the plot
STRATA	Text	
AREA	Double	Area of the plot

TABULAR DATA

National Population Census 2011 by District level

Source: Central Bureau of Statistics

Name: CENSUS2011_DIST

Attributes

Field Name	Data Type	Description
DCODE	Double	District Code
TOTAL_HH	Double	Total number of households
AVG_HH	Double	Average size of household
TOTAL_POP	Double	Total Population
MALE	Double	Male Population

FEMALE	Double	Female Population
DIST_AREA	Double	Area of the district

National Population Census 2011 by VDC Level

Source: Central Bureau of Statistics

Name: CENSUS2011_VDC

Attributes

Field Name	Data Type	Description
VCODE	Double	VDC Code
VDC_NO	Double	Number of VDC in particular District
DCODE	Double	District Code
TOTAL_HH	Double	Total number of households
TOTAL_POP	Double	Total Population
MALE	Double	Male Population
FEMALE	Double	Female Population
DIST_AREA	Double	Area of the district

Community Forest data at District Level

Source: Community Forest Division, Department of Forest

Name: CF_DIST

Attributes

Field Name	Data Type	Description
DCODE	Double	District Code
ZCODE	Double	Zone Code
CF_NO	Double	Total number of Community Forest
CF_AREA_HA	Double	Area of Community Forest in Hectare
COM_MEMB	Double	Committee Members
FEM_MEMB	Double	Female Members in Committee
DIST_NAME	Text (Length=30)	Name of the District
TOTAL_HH	Double	Total number of Households

Fuel wood and timber Production of Fiscal Year 2007/08

Name: FWOOD_TIMB_PROD_FY07_08

Source: Department of Forest

Note: Data is only available for 25 Terai Districts.

Attributes

Field Name	Data Type	Description
DCODE	Double	District Code
TIMBER_CFT	Double	Production of Timber in Cubic Feet
FWOOD_CHATTA	Double	Fuel wood Production in Chatta
ROYALTY	Double	Royalty generated in Nepalese Currency
DIST_NAME	Text	Name of the District

Fuel wood and timber Production of Fiscal Year 2008/09

Name: FWOOD_TIMB_PROD_FY08_09

Source: Department of Forest

Note: Data is only available for 25 Terai Districts.

Attributes

Field Name	Data Type	Description
DCODE	Double	District Code
TIMBER_CFT	Double	Production of Timber in Cubic Feet
FWOOD_CHATTA	Double	Fuel wood Production in Chatta
ROYALTY	Double	Royalty generated in Nepalese Currency
DIST_NAME	Text	Name of the District

Data of district wise fuel wood uses for Cooking

Source: Central Bureau of Statistics (CBS), 2012

Name: FWOOD_USES_CBS2012_DIST

Attributes

Field Name	Data Type	Description
DCODE	Double	District code
DIST_NAME	Text	Name of the district
FWOOD	Double	Number of household using fuel wood for cooking
KEROSINE	Double	Number of household using kerosene for cooking
LP_GAS		Number of household using Liquefied Petroleum Gas for cooking
COW_DUNG	Double	Number of household using cow dung for cooking
BIO_GAS	Double	Number of household using bio-gas for cooking
ELECTRICITY	Double	Number of household using electricity for cooking
OTHERS	Double	Number of household using others for cooking
NOT_STATED	Double	Number of not stated household for cooking
TOTAL	Double	Total number of household

Statistics of Livestocks (2004/05)

Name:LIVESTOCK_04_05_DIST

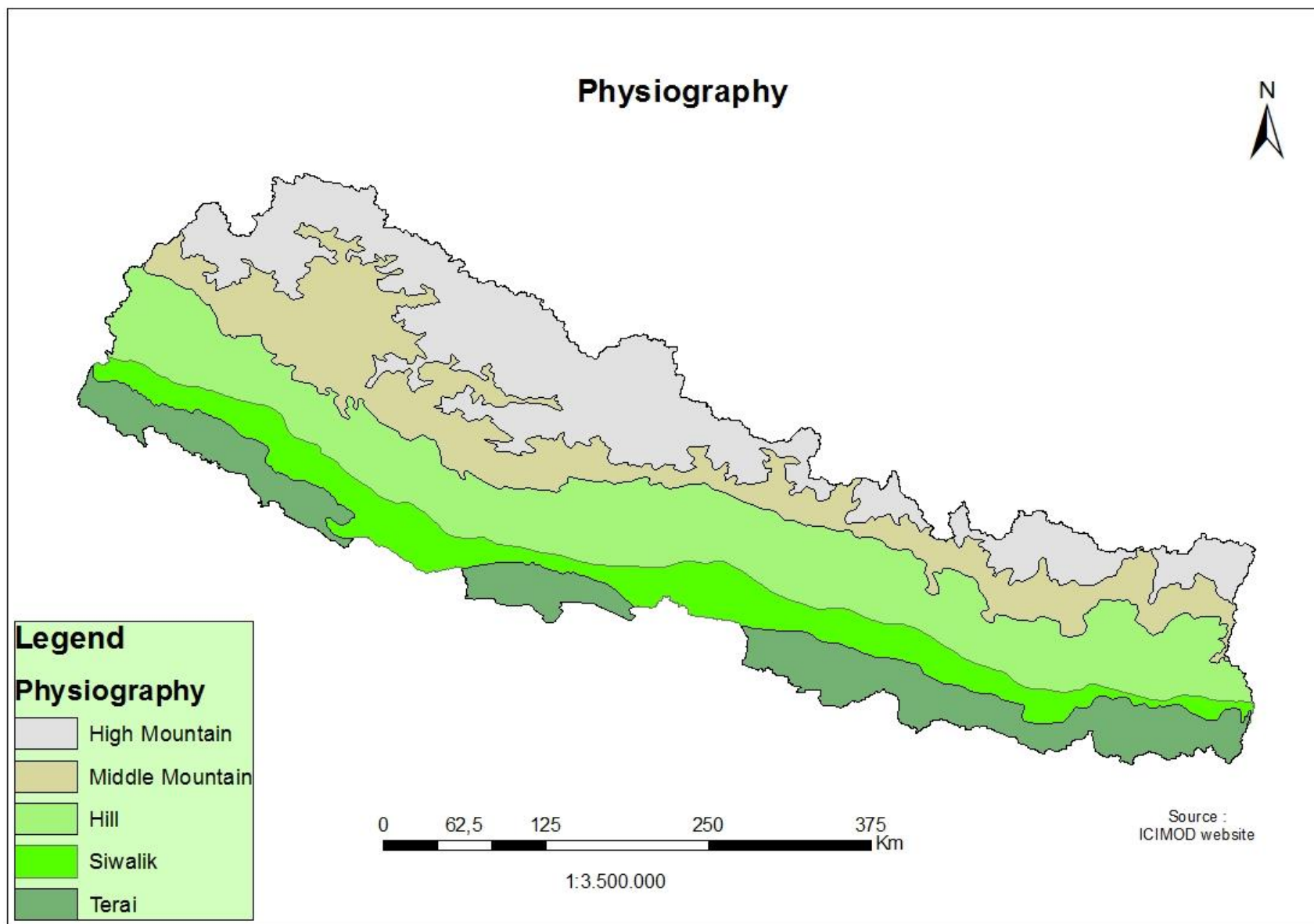
Attributes

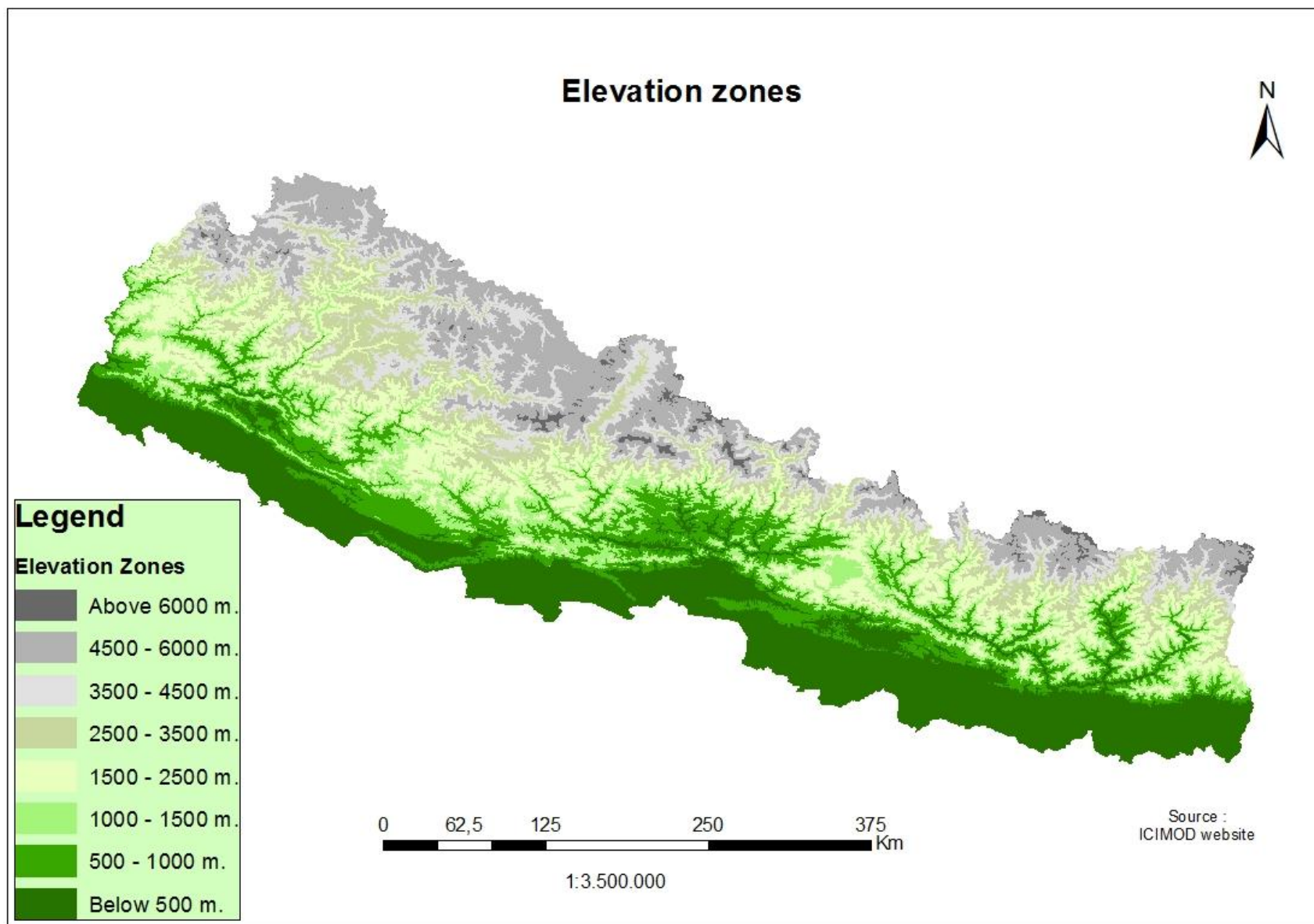
Field Name	Data Type	Description
DCODE	Double	District Code
DIST_NAME	Text	Name of district
CATTLE	Double	Number of cattle
BUFFALO	Double	Number of buffalo
SHEEP	Double	Number of sheep
GOAT	Double	Number of goat
PIG	Double	Number of pig
FOUL	Double	Number of foul
DUCK	Double	Number of duck

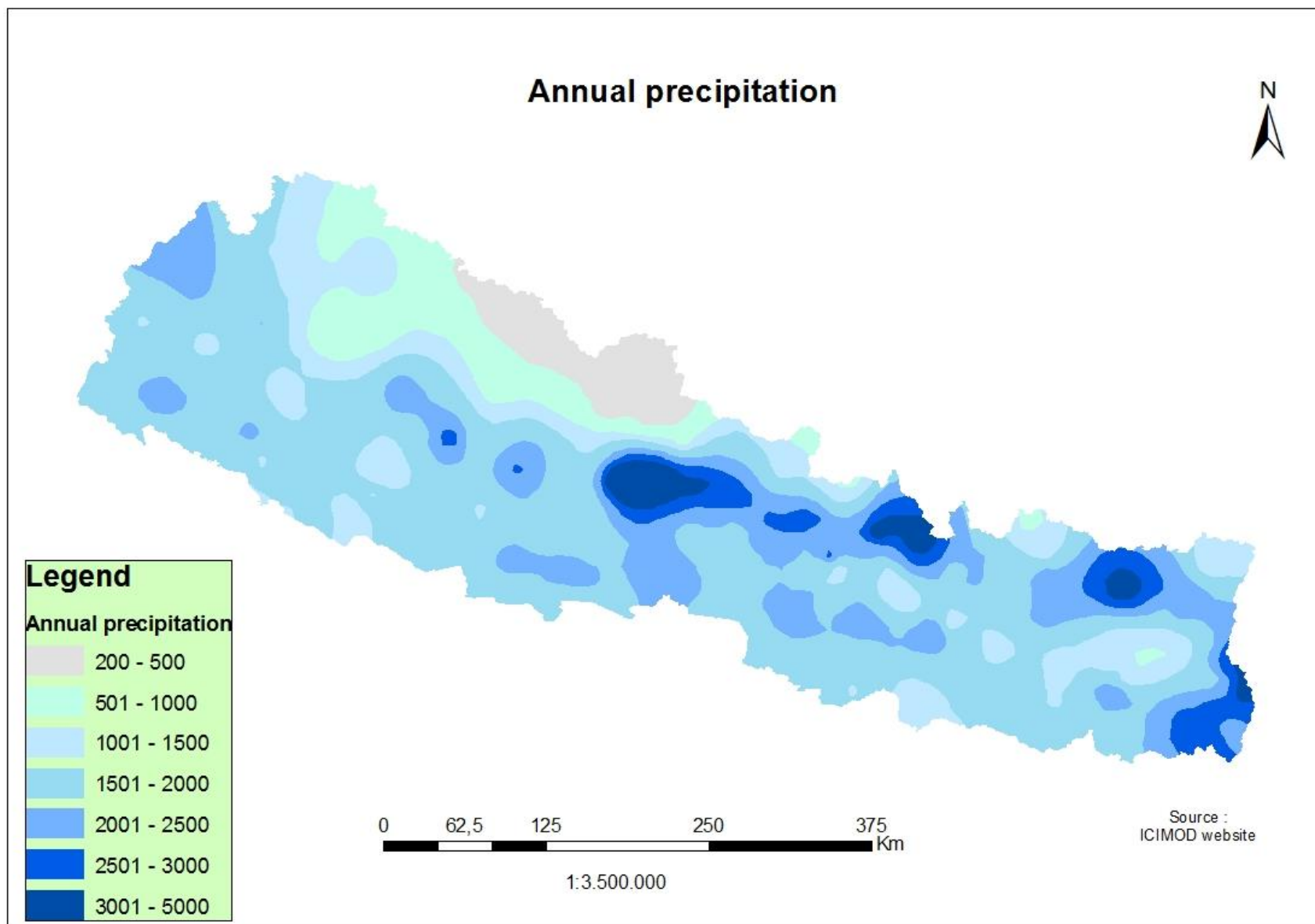
Annex 1: Thematic Maps

Note: The sources mentioned in the map refer to data source. All thematic maps have been produced by the MRV Team

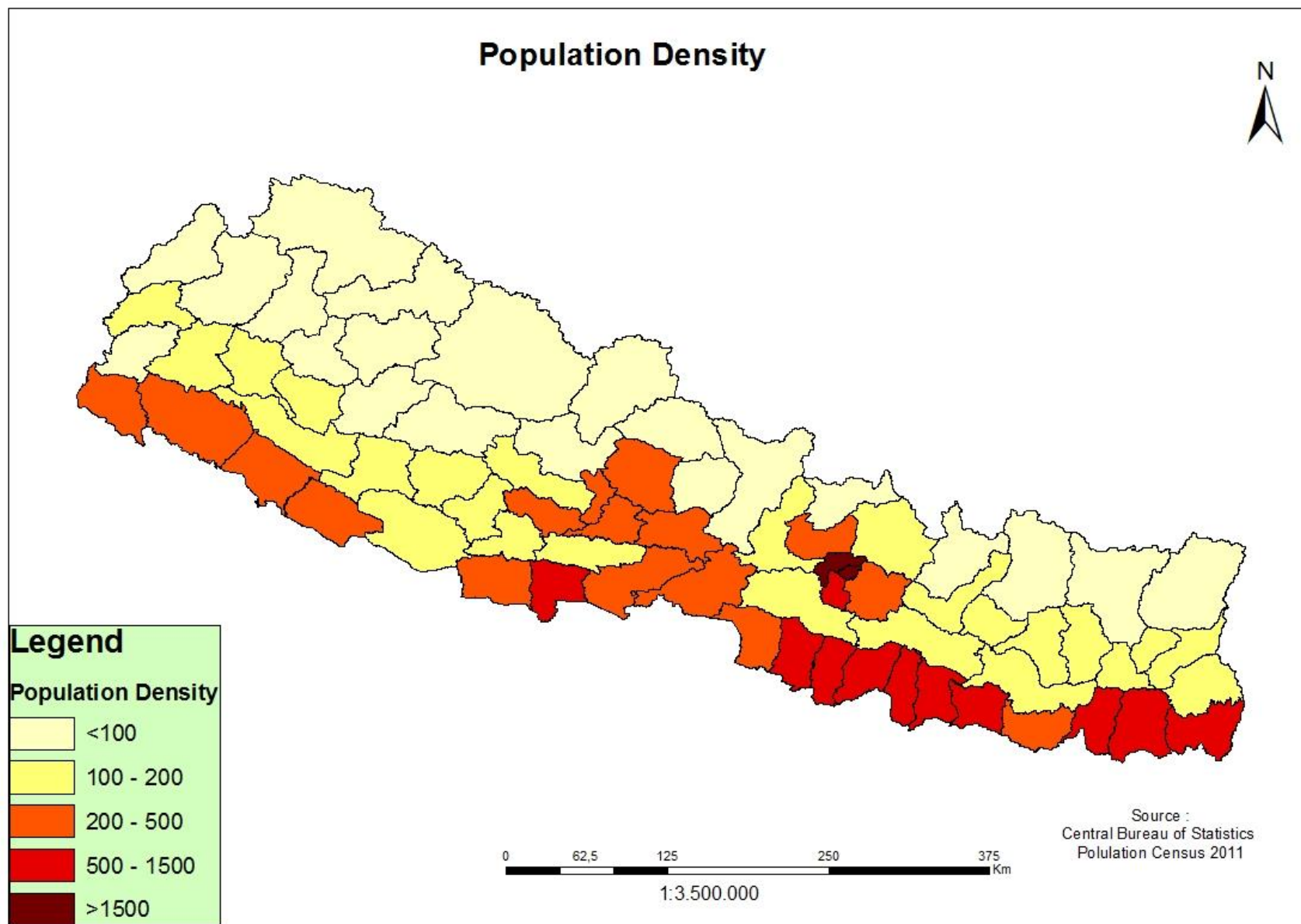
Ecology and landscape

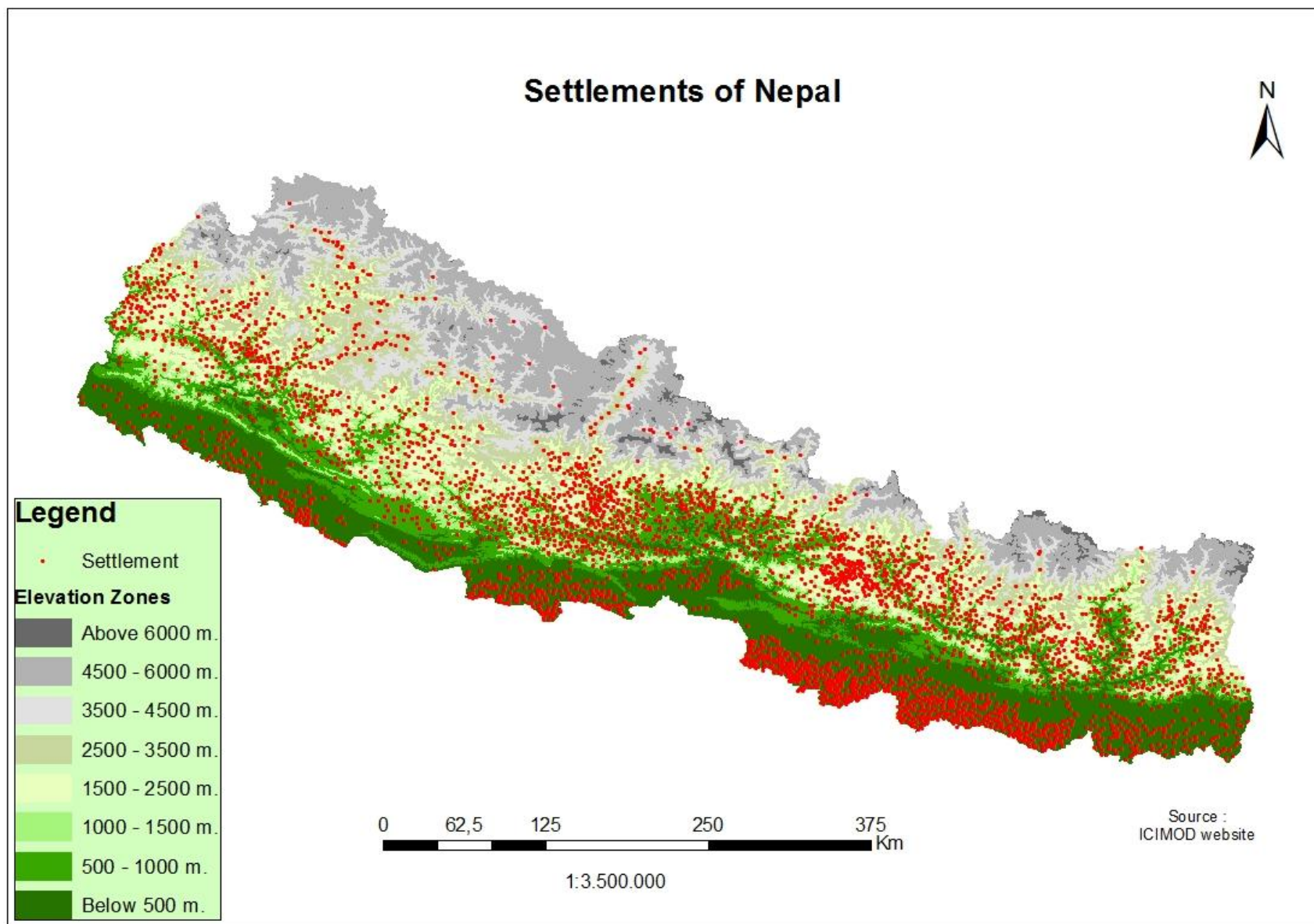


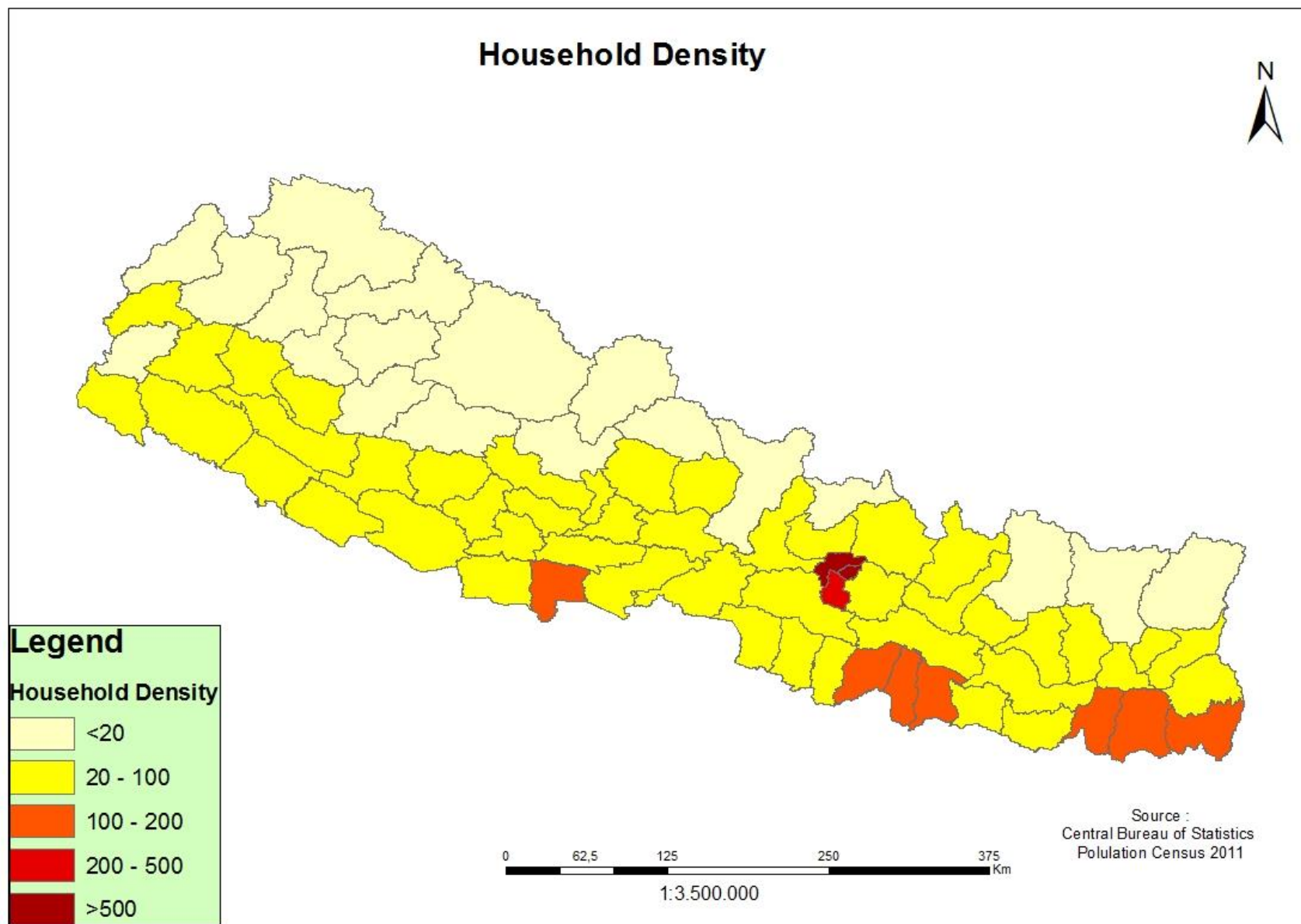


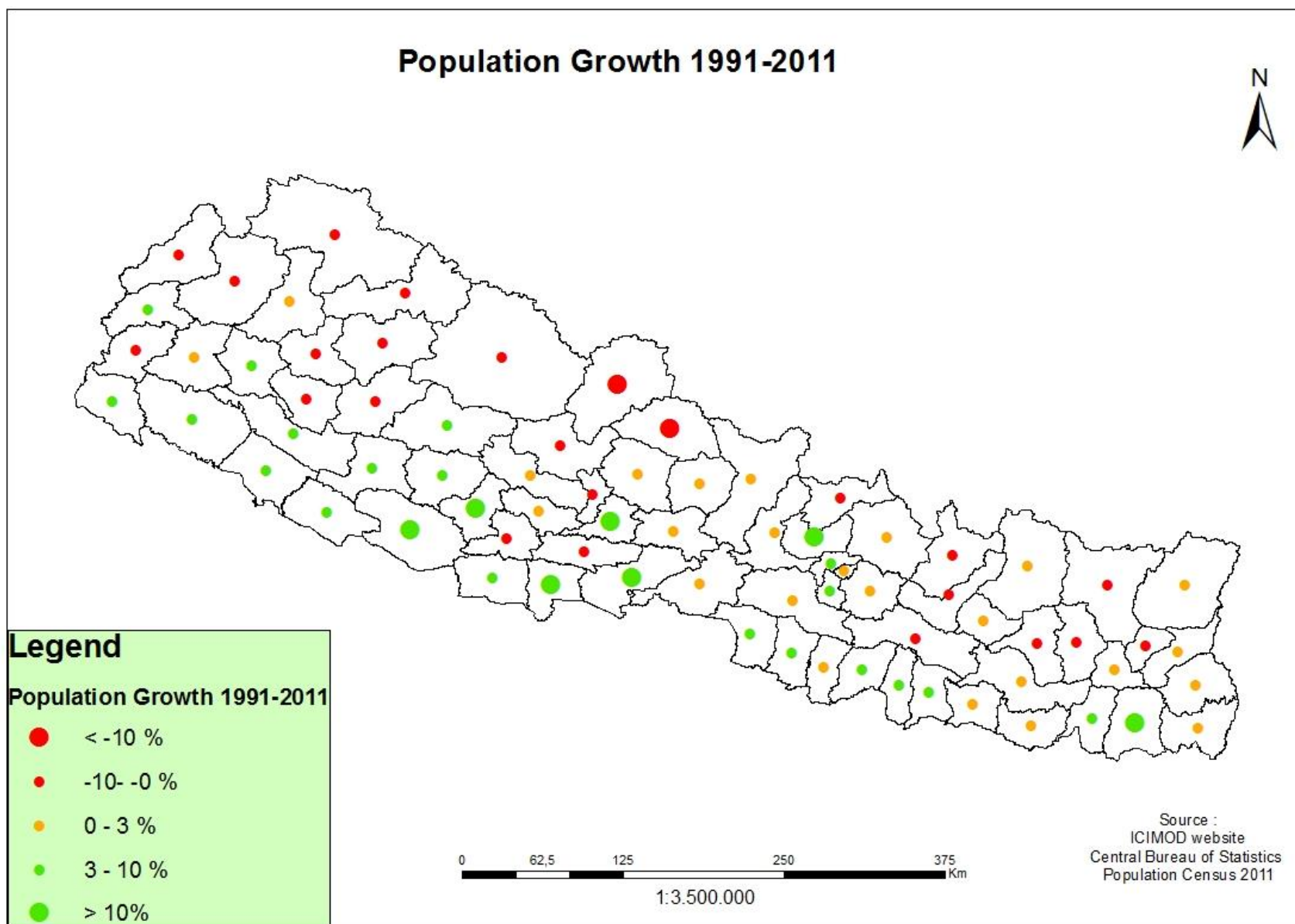


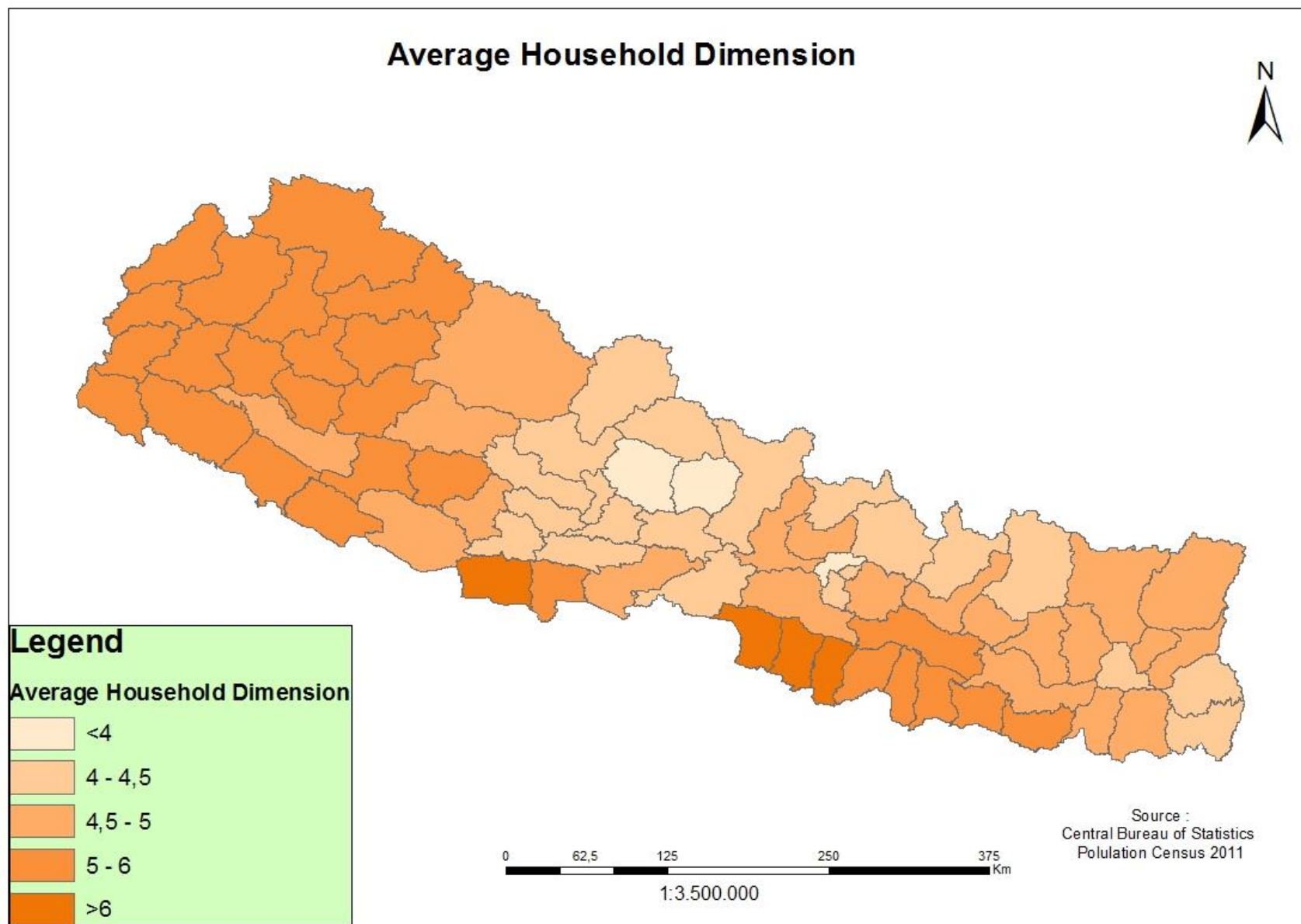
Socio-economic variables

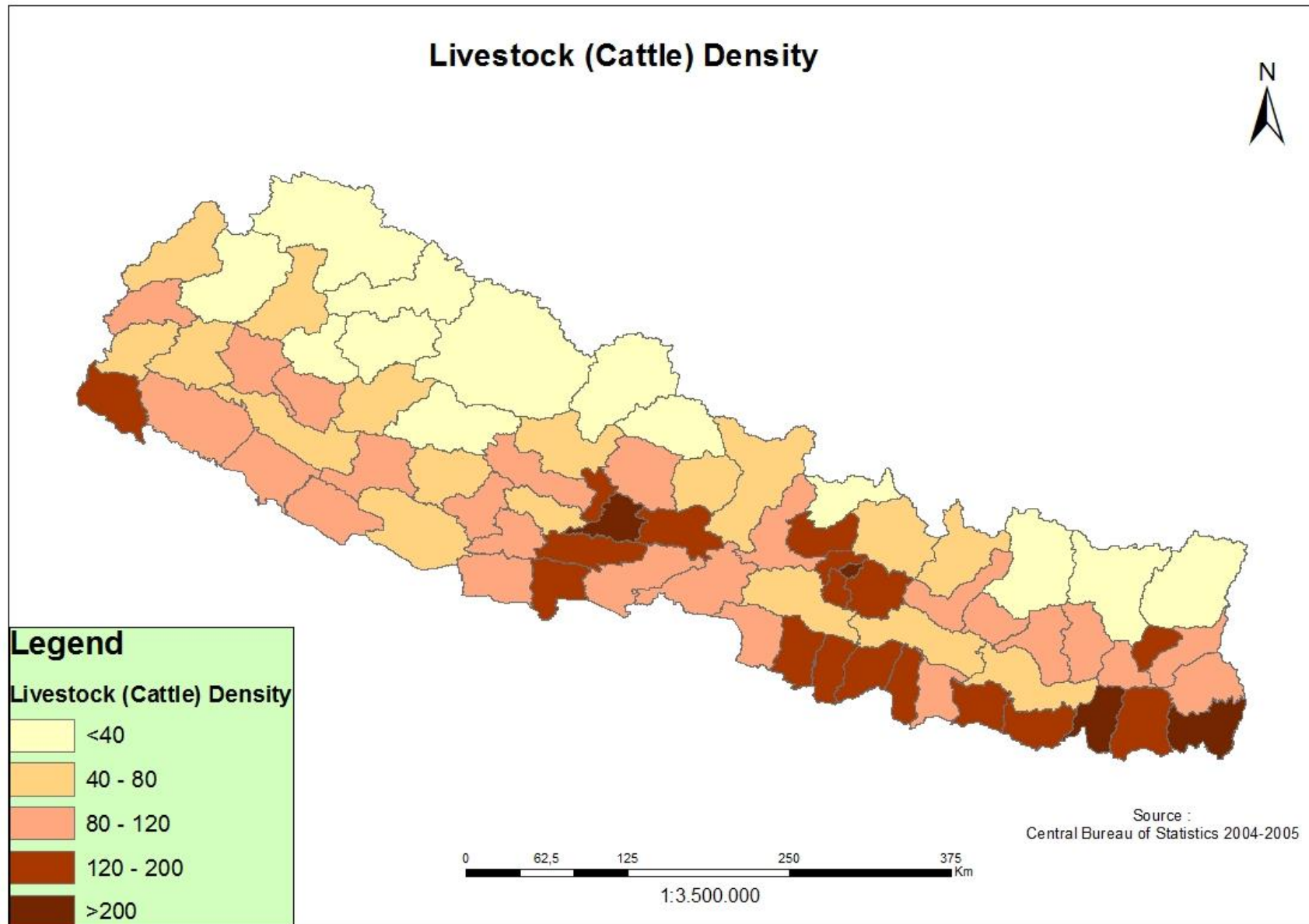


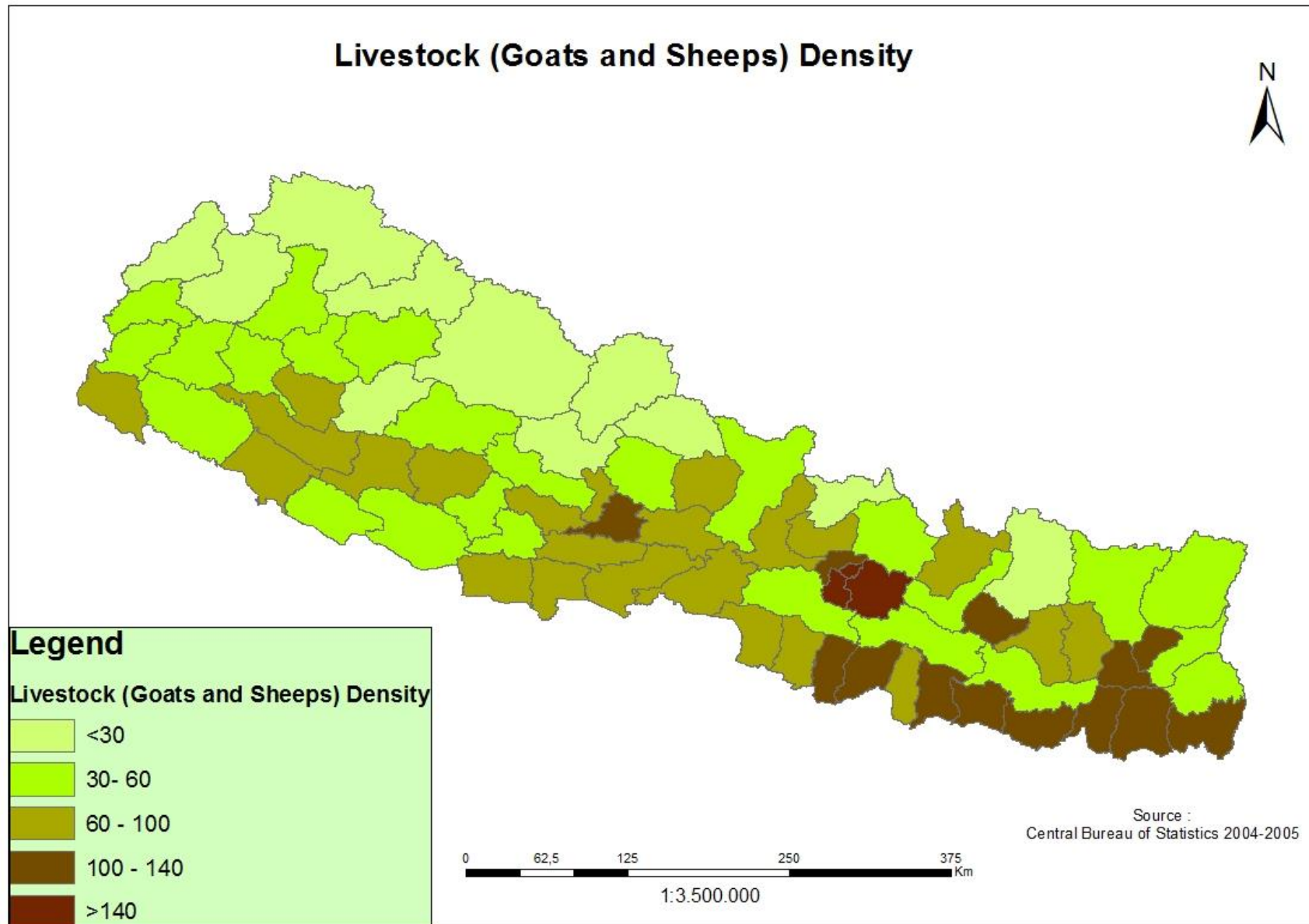


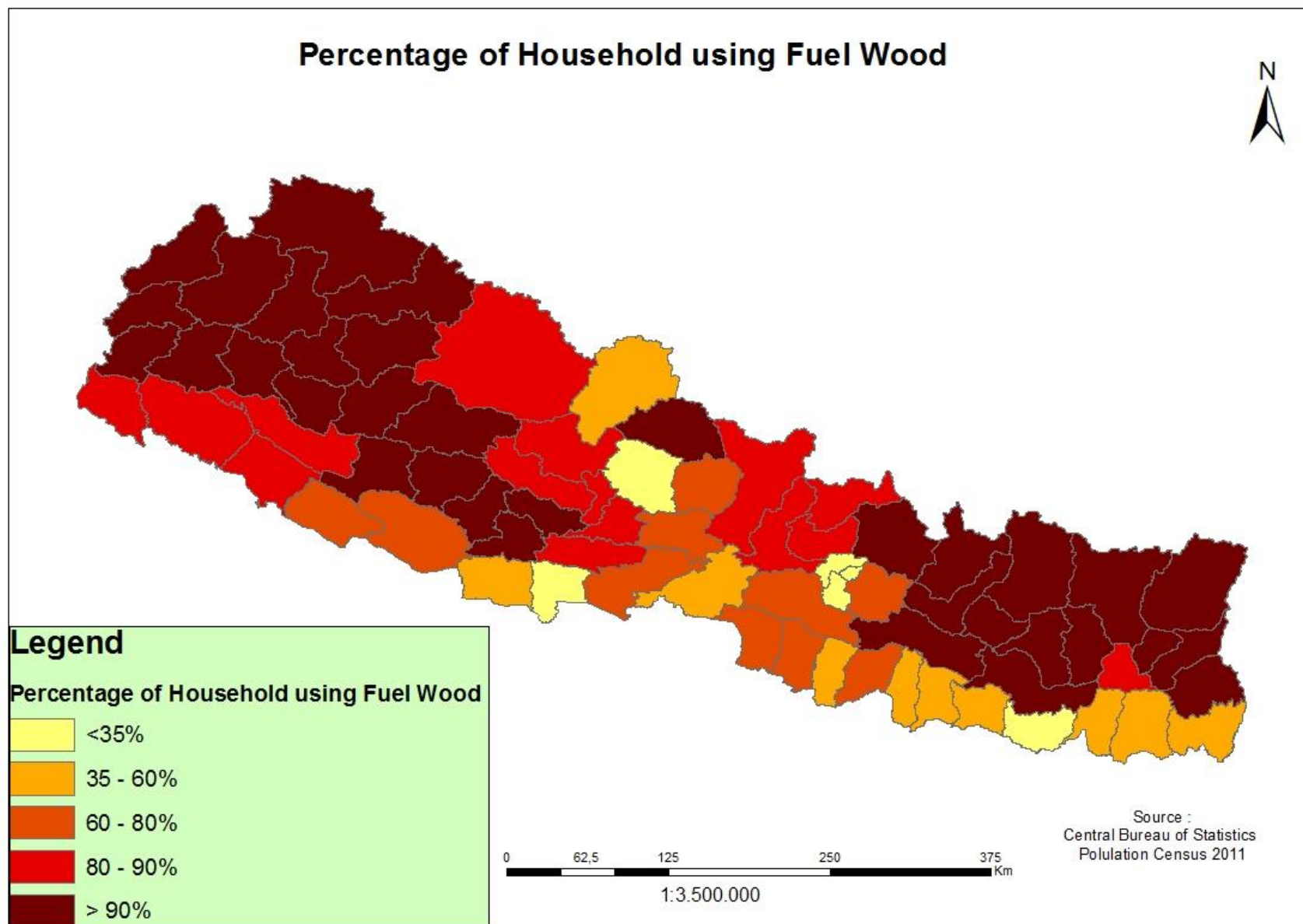










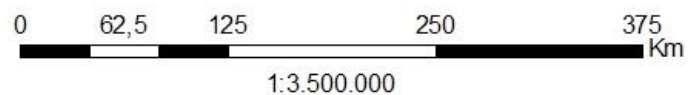
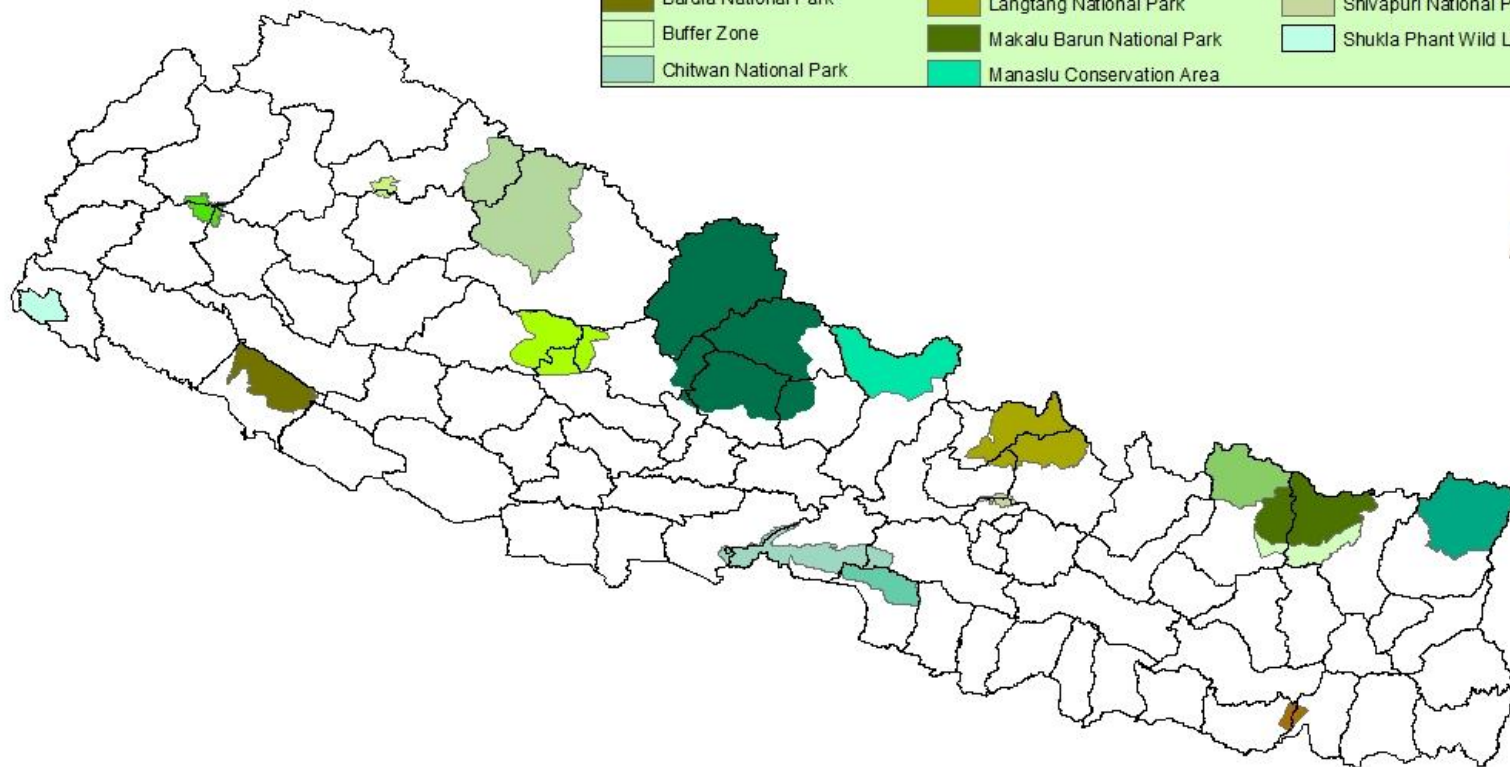


Land cover

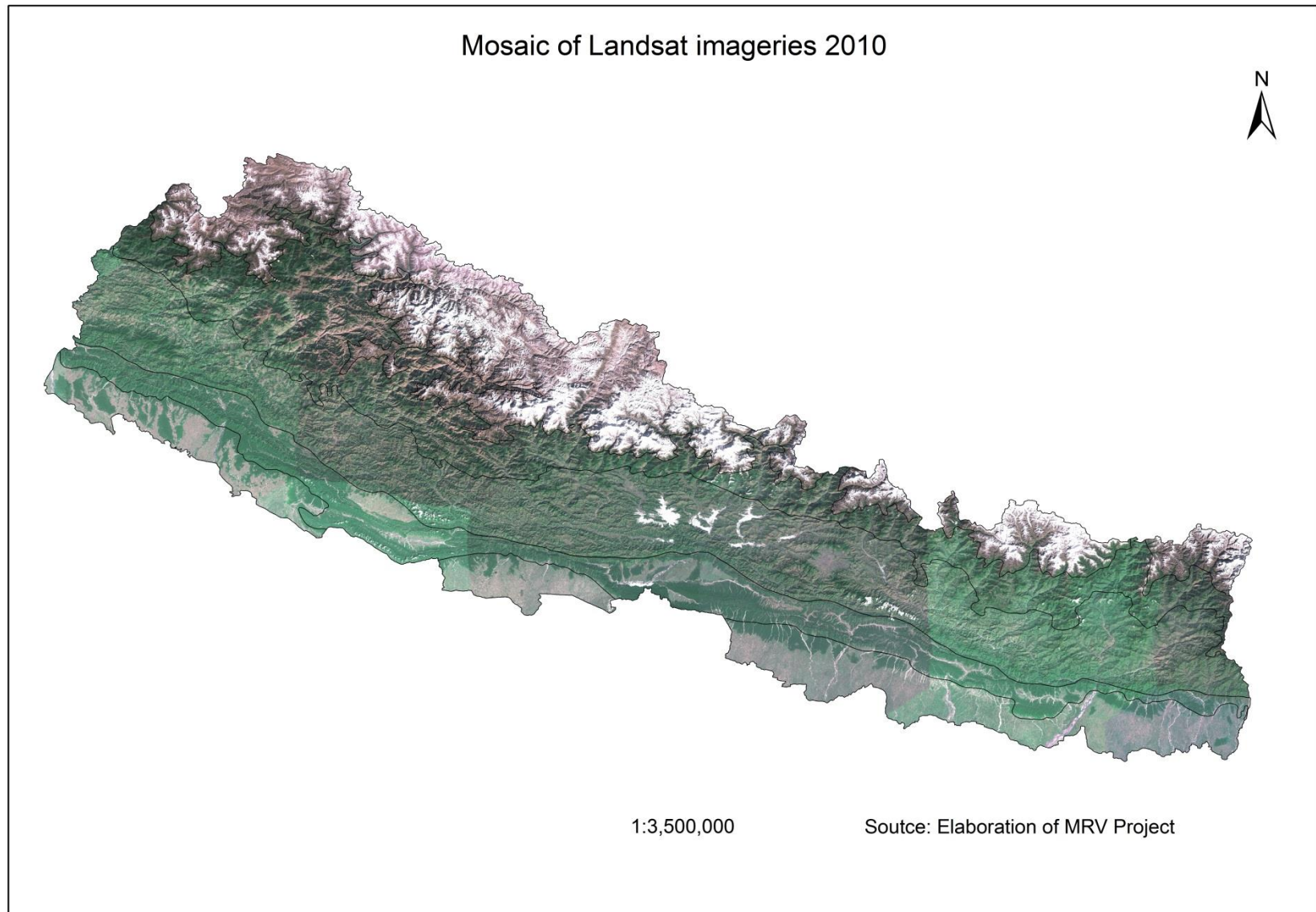
National Parks and Reserves

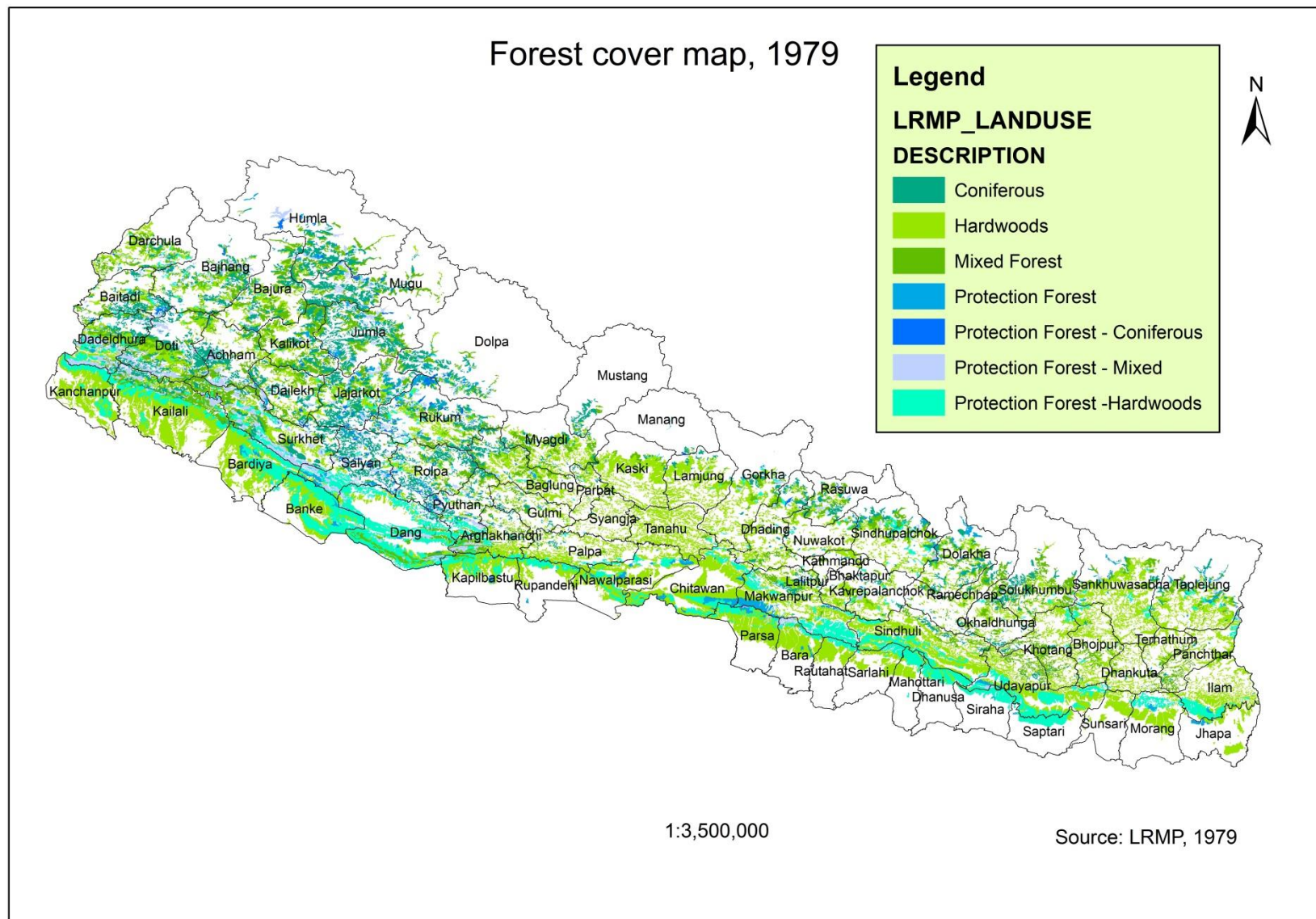
Legend

Districts of Nepal	Dhorpatan Hunting Reserve	Parsa Wild Life Reserve
National Parks and Reserves	Kanchanjunga Conservation Area	Rara National Park
Annapurna Conservation Area	Khaptad National Park	Sagarmatha National Park
Bardia National Park	Koshi Tappu Wild Life Reserve	She-Phoksundo National Park
Buffer Zone	Langtang National Park	Shivapuri National Park
Chitwan National Park	Makalu Barun National Park	Shukla Phant Wild Life Reserve
	Manaslu Conservation Area	

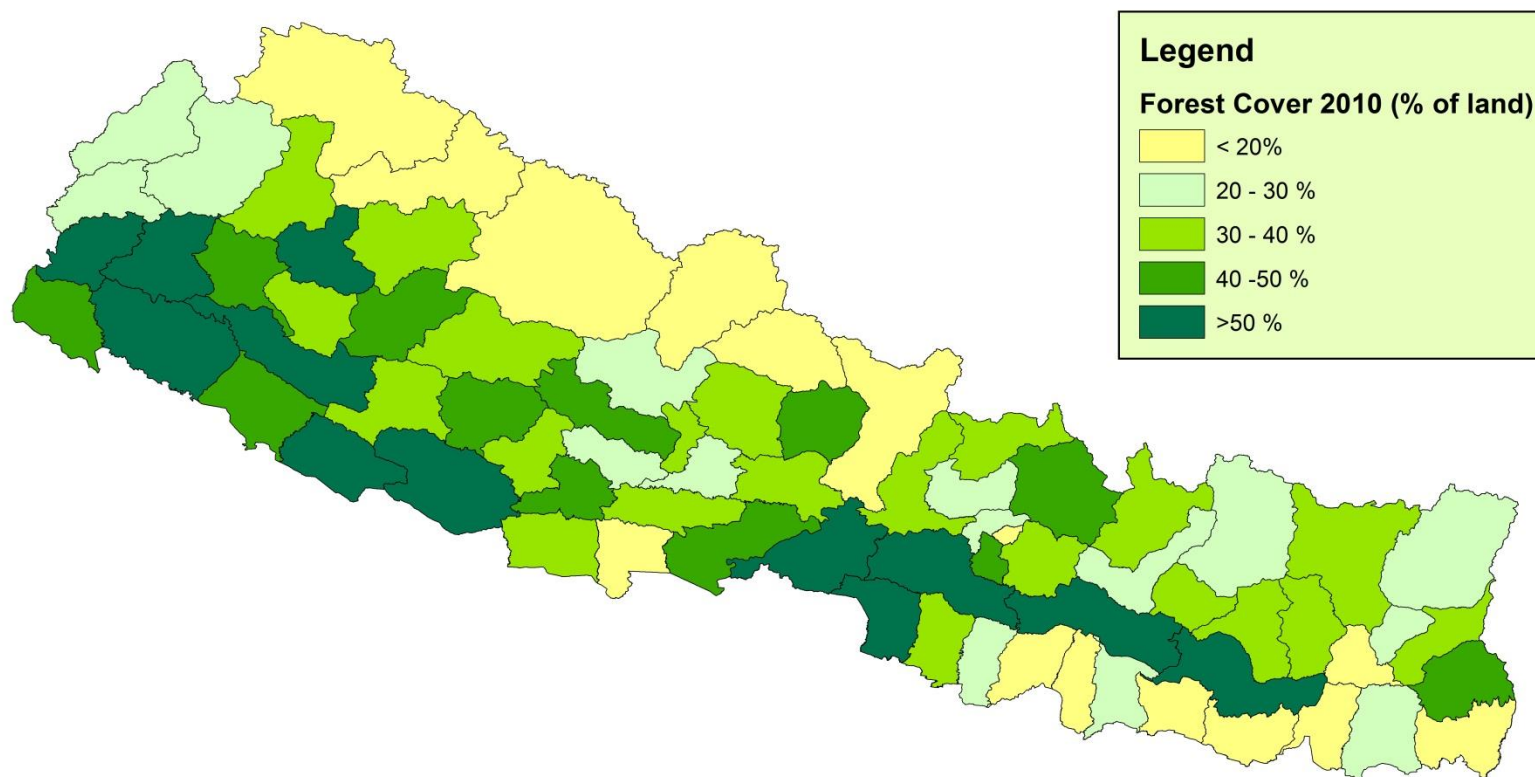


Source :
ICIMOD website





Estimated Forest Cover 2010 (% of land), by District



1:3,500,000

Source MRV Project elaboration, 2013

