

Regional training workshop on geographical information system for energy planning

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Data and metadata collection guidelines

Data need explained

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Data need explained



Data need explained

The list is impressive, but we only need to access existing data

Priorities are given

DATA TYPE	POTENTIAL SOURCE	DESCRIPTION	FORMAT	UNICE needs score: 3 fundamental, 2 useful	UNICE supplementary info.
1.0 Base Map Data	International, national and department's responsible for keeping map data.	The map data are the datasets showing the various geographic features with their metadata (such as the map projection)	This is usually shapefile with associated database in (excel, access or sql) or other format as indicated: Raster (georeferenced) or vector (shp, etc)		Any paper map containing non GIS information, digitized and georeferenced
Regional /district boundaries with attributes	Various Survey Department/Town & Country Planning	This shows the boundary of the various regions/countries with their names and coordinates as well as map projection	maps in shp (Shapefile), excel, access, word etc	3	Administrative boundaries
Towns /communities with attributes	Statistical Service / Survey Department/Town & Country Planning	These data will show the location of the various towns and communities in a particular district. They are usually points features	maps in shp (Shapefile), excel, access, word etc	3	Location of the urban centers and communities + their classification
Road Network with Attributes	Survey Departments/ Highway authority/ Ministries in Charge	These are datasets that show the various surface routes such as vehicular and rail lines. They are usually polyline or polygon features. The hierarchy of the networks will not be strictly adhered	maps in shp (Shapefile), excel, access, word etc	3	Road and rail network (possibly with hierarchy)
Road infrastructures	Survey Departments/ Highway authority/ Ministries in Charge	Road and rail infrastructures (tunnel, bridge, train station)	Vector (point)	3	Add by UNICE
Infrastructure and its Attributes	Respective Survey Departments/Town & Country Planning	These are data showing structures with interests in commercial buildings and public facilities including small and medium scale enterprises etc.	maps in shp (Shapefile), excel, access, word etc	3	Commercial buildings, public enterprises, school, hospitals, ... + their Electrification Status (classified if electrified)
Water bodies	Respective Survey Departments/Town & Country Planning	These are data that will show the various water bodies within a region. Their names and location should be present	maps in shp (Shapefile), excel, access, word etc	3	Lake, rivers (possibly with hierarchy), wetlands
Land use	Ministry of Agriculture, Soil, crop and or rock research institutes, district assemblies, and national departments for Agriculture	This database layer will be only show farmlands either irrigated or not (size of farmlands and locations) and other commercial lands	maps in shp (Shapefile), excel, access, word etc; Raster files are also fine (GeoTiff, ASCII, etc)	3	Land use including industrial, commercial and transport, port and airport area, Mine, dump and construction site
2.0 Demographic Data					
Population	National Statistical offices /Census Offices	Count of People in Towns /communities	excel, access	3	Population per regional/district boundaries, including urban/rural subdivisions
3.0 Social services Data					
Health	Health Ministry/Statistical Service	Hospitals and clinics with and without access to electricity	excel, access, word, maps in shp (Shapefile), etc	3	
Education	Ministry in charge /Statistical Services	Basic & Secondary schools with and without access to electricity	excel, access, word, maps in shp (Shapefile), etc	3	
Portable Water	Water Companies /Statistical Services	Towns/Communities with and without access to potable water	excel, access, word, maps in shp (Shapefile), etc	2	
ICT	Communications Ministry, Telecom Industries, Ministry in Charge, District Assemblies	Availability and powering of telecommunication systems at community levels (e.g. e-care, repeater stations)	maps in shp (Shapefile), excel, access, word etc	2	
4.0 Economic activities Data					
Business Enterprises	Ministry in charge /Statistical Services	Large, Micro and small scale enterprises with and without access to electricity	maps in shp (Shapefile), excel, access, word etc	3	
Income or Gross Domestic Product (GDP)	Ministry in charge /Statistical Services	Income or GDP per regional/district boundaries	excel, access	3	Add by UNICE
5.0 Access to Electricity					
Electricity Transmission Network	Ministry of Energy; Electricity/Power Companies, Energy Commissions	Network map from National to local levels	Maps in shp (Shapefile), excel, access, word etc	3	
Electricity substations	Ministry of Energy; Electricity/Power Companies, Energy Commissions	Substation map from National to local levels	Maps in shp (Shapefile), excel, access, word etc	3	
Electricity production site	Ministry of Energy; Electricity/Power Companies, Energy Commissions	location and type of production (thermal, solar, hydro,...)	Vector (point)	3	Add by UNICE
Hydro stations	Ministry of Energy; Electricity/Power Companies, Energy Commissions	locations of Mini and small hydro dams	Maps in shp (Shapefile), excel, access, word etc	3	
Access to Thermal energy /mechanical power (Animal engine)	Energy Ministry, Electricity/Power Companies, District Assemblies, Statistical Services Dept.	towns/communities with access to thermal energy (e.g. Ovens, stoves, boilers)/mechancial power (e.g. diesel engines for grinding mills)	maps in shp (Shapefile), excel, access, word etc	3	
6.0 Access to Cooking Fuels (Technology, LPG DATA)					
Number & Location of fuel stations	Ministry of Energy, Energy Commissions, National Petroleum Authorities	Number and Location of LPG stations	maps in shp (Shapefile), excel, access, word etc	3	
Household level access	Statistical Service Dept., Ministry of Energy, Energy Commission	Households using LPG	maps in shp (Shapefile), excel, access, word etc	2	
Improved stoves distribution	Statistical Service Dept., Ministry of Energy, UNDP, Energy Commission	Households with access to improved stoves	maps in shp (Shapefile), excel, access, word etc	2	

6 main categories

Base map data

Demographic Data

Social services Data

Economic activities Data

Access to Electricity

Access to Cooking Fuels /Technology (LPG DATA)

Base map data

Regional/district boundaries with attribute

Administrative boundaries at the lowest level available

The screenshot displays the QGIS 2.4.0-Chugiak interface. The main map window shows the administrative boundaries of Senegal, with the lowest level (SEN_adm4) selected. The Layers panel on the left shows a hierarchy of administrative levels: SEN_adm4, SEN_adm3, SEN_adm2, SEN_adm1, and SEN_adm0. The Attribute table window is open, showing the following data:

ID_0	ISO	NAME_0	ID_1	NAME_1	ID_2	NAME_2	ID_3	NAME_3	ID_4	NAME_4	VARNAME_4	TYPE_4	ENGTYPE_4
0	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	1	Biscuiterie	Commune d'arro...	Commune
1	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	2	Cambérène	Commune d'arro...	Commune
2	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	3	Dieuppeul-Derké	Commune d'arro...	Commune
3	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	4	Fann-Point E-Ami...	Commune d'arro...	Commune
4	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	5	Gorée	Commune d'arro...	Commune
5	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	6	Grand Dakar	Commune d'arro...	Commune
6	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	7	Grand Yoff	Commune d'arro...	Commune
7	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	8	Gueule Tapée-Fa...	Commune d'arro...	Commune
8	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	9	Hann-Bel Air	Commune d'arro...	Commune
9	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	10	HLM	Commune d'arro...	Commune
10	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	11	Médina	Commune d'arro...	Commune
11	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	12	Mermod-Sacré C...	Commune d'arro...	Commune
12	199	SEN	Senegal	1	Dakar	1	Dakar	1	Dakar	13	Noor	Commune d'arro...	Commune

Base map data

Towns/communities with attributes

Possibly with hierarchical information

The screenshot displays the QGIS 2.4.0-Chugiak interface with a map of Senegal. The map shows several blue dots representing populated places. The legend on the left indicates population density ranges for 'ne_10m_populated_places' and 'ne_10m_urban_areas'. The 'Identify Results' window is open, showing a list of attributes for the selected feature (Dakar).

Feature	Value
ne_10m_populated_places	
NAME	Dakar
(Actions)	
(Derived)	
ADMO_A3	SEN
ADMOCAP	1.0000000000
ADMNAME	Senegal
ADMINAME	Dakar
ADMIN1_COD	1.0000000000
CAPALT	0.0000000000
CAPIN	NULL
CHANGED	5.0000000000
CHECKME	0
CITYALT	NULL
COMPARE	0
DIFFASCII	0
DIFFNOTE	Changed scale rank.
ELEVATION	0.0000000000
FEATURE_CL	P
FEATURE_CO	PPLC
FEATURECLA	Admin-0 capital
GEONAMEID	2253354.0000000000
GEONAMESNO	GeoNames match general.
GN_ASCII	Dakar
GN_POP	247640
GTOPO30	14.0000000000
ISO_A2	SM
LABELRANK	8
LATITUDE	14.71583172500
LONGITUDE	-17.47313012840
LS_MATCH	1
LS_NAME	Dakar
MAX_AREAKM	302.0000000000
MAX_AREAMI	117.0000000000
MAX_BBMAX	-17.1250000000
MAX_BBXMIN	-17.5333333000
MAX_BBYMAX	14.8250000000
MAX_BBYMIN	14.6500000000
MAX_NATSCA	100
MAX_PERKM	288.0000000000
MAX_PERMI	179.0000000000
MAX_POP10	2635239
MAX_POP20	2634882
MAX_POP300	2660614
MAX_POP310	0
MAX_POP50	2660614
MEAN_BBXC	-17.34377921750
MEAN_BBYC	14.74282823750
MEGACITY	1
MEGANAME	Dakar
MIN_AREAKM	257

Base map data

Road Network with Attributes

Road infrastructures

Infrastructure and its Attributes

Water bodies

Land use

Demographic Data

Population

Social services Data

Health

Education

Potable Water

ICT

Economic activities Data

Business Enterprises

Income or Gross Domestic Product (GDP)

Access to Electricity

Electricity Transmission Network

Electricity substations

Electricity production site

Hydro stations

Access to Thermal energy /mechanical power (Animal, engine)

Energy consumption

Access to Cooking Fuels /Technology (LPG DATA)

Number & Location of fuel stations

Household level access

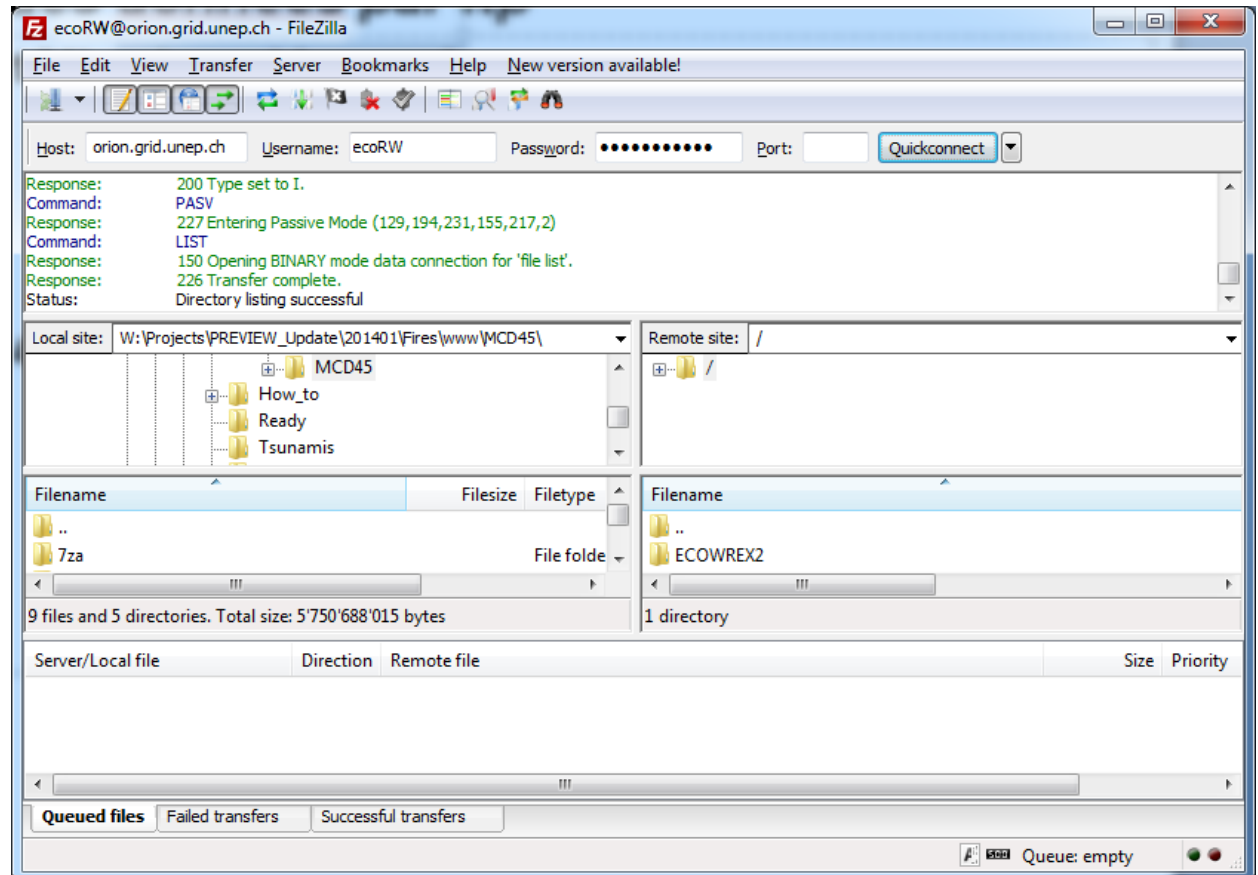
Improved stoves distribution

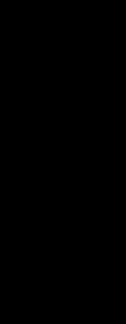
Partage des données par ftp

ftp: orion.grid.unep.ch

Read and Write

Read only





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Thanks

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