GEOGRAPHIC INFORMATION SYSTEM (GIS) AND VILLAGE LEVEL MAPPING

SIG01 ■ Tools/Methodology/Professions

DURATION

5 days

TARGET AUDIENCE

Ministries in charge of infrastructures planning (health, education, water, transportation, energy, …)

Rural electrification agencies

National utilities

Engineering firms

Engineering schools

Power systems' operators

Independent consultants

A FEW REFERENCES…

CI-ENERGIES (Ivory Coast)

REA (Tanzania)

MIME (Cambodia)

SBEE (Benin)

USED TOOLS

Manifold©, Mapsource©, Google Earth©

OBJECTIVES

The usefulness of GIS as a support to decision making for infrastructure development is now widely recognized, particularly for multicriteria analysis applied to electricity, energy, transport, water, education or health sectors. The functionalities of GIS offer a wide range of possible spatial and numerical analyses, which can then be illustrated on the produced maps, with combinations of color schemes, graphs and boxes with popup options. The present training course covers the whole range of tools and skills required to produce maps: use of GIS and their functionalities, working from online data sources such as Google Earth, using GPS instruments and topographical maps.

TRAINING PROGRAMME

1. Geographic Information Systems (GIS)

- Introduction to GIS
- Fundamentals : Projection systems, graphic semiology, cartography
- Structuring GIS and databases
- Examples of applications : rural electrification

2. Introduction to a GIS software: MANIFOLD©

- Presentation of Manifold and its interfaces
- Basic functions
- Accessing and visualizing geo-referenced information

3. Practical session: using information organized in database

- Importing data (GIS, Excel, Google Earth etc.),
- Integration of GPS information
- Creating / updating databases
- Use of not geo-referenced data and maps :satellite imagery, base maps, ...
- Producing thematic maps
- Exporting data and maps for presentation purposes
- Spatial and alphanumerical analysis : queries introduction

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