



Exploration & Production

GENERAL SPECIFICATION

Environment

GS EP ENV 501

GIS deliverables for HSE

00	01/2012	First issue
Rev.	Date	Notes

Owner: HSE

Managing entity: HSE



Contents

1. Scope	3
2. Reference documents.....	3
3. Deliverables	4
3.1 Documentation provided by the Company.....	4
3.2 Deliverables to be provided by the Contractor.....	4
4. General requirements	6
4.1 Software compatibility	6
4.2 Dataset compatibility	6
4.3 Language.....	6
4.4 Dataset QA/QC	6
4.5 Units	7
4.6 Applicable geodesy.....	7
5. Dataset organization	7
5.1 Conventional naming of the files	7
5.2 Metadata.....	7
5.3 Symbology	8
5.4 Associated documents (hyperlinks).....	8
5.5 Dataset organisation	8
Bibliography.....	9
Appendix 1 Glossary.....	10
Appendix 2 Cultural data.....	11
Appendix 3 Environmental data	14
Appendix 4 Societal data	16
Appendix 5 Logistical resources and preparation for pollution control	20
Appendix 6 Sampling location	22



1. Scope

The objective of the present General Specification is to define the basic requirements to build a Geographic Information System (GIS) with Environmental and Societal data relative to an affiliate, a site or a Project.

2. Reference documents

The reference documents listed below form an integral part of this General Specification. Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the EFFECTIVE DATE of the CONTRACT.

Standards

Reference	Title
Not applicable	

Professional Documents

Reference	Title
NOS OR&R 11	Environmental Sensitivity Index Guidelines, version 3.0, National Oceanic and Atmospheric Administration (NOAA, USA)
Technical Report No 40	Corine land cover technical guide – Addendum 2000, 2000, European Environmental Agency (EEA)
Technical Report No 89	Corine land cover update 2000, technical guidelines, 2002, European Environmental Agency (EEA)

Regulations

Reference	Title
Not applicable	

Codes

Reference	Title
Not applicable	

Other documents

Reference	Title
Not applicable	



Total General Specifications

Reference	Title
GS EP ENV 111	Environmental Baseline and Monitoring Studies: Onshore sites
GS EP ENV 112	Environmental Baseline and Monitoring Studies: Offshore and Nearshore sites
GS EP ENV 120	Environmental Impact Assessment of E&P activities
GS EP GIN 301	Geographical Information shared data specifications
GS EP SDV 101	Social Baseline Study
GS EP SDV 102	Social Impact Assessment

3. Deliverables

The GIS for HSE is developed with information collected in the frame of Environmental and Social studies as defined in [GS EP ENV 111](#), [GS EP ENV 112](#), [GS EP ENV 120](#), [GS EP SDV 101](#) and [GS EP SDV 102](#).

The GIS for HSE shall allow to:

- Access to available HSE data where any E&P activity occurs,
- Measure any potential changes happening in the surroundings of an E&P site,
- Prepare a strategy and manage an Oil Spill Response,
- Provide reliable information for crises management.

3.1 Documentation provided by the Company

When available, Company provides the following information to the Contractor:

- The official geodesy and its parameters to be applied for the project,
- Oil and/or gas facilities locations,
- Any available cultural data,
- Satellite images (if license is available)
- A model geodatabase.

The GIS *area of interest* is defined in a particular specification.

When available, the Company provides in the geodatabase, the dataset from previous Environmental or Social studies. In that case, the Contractor shall provide only updated interpretation dataset as described in the particular specification.

3.2 Deliverables to be provided by the Contractor

3.2.1 GIS Preliminary Report

A preliminary GIS Report shall be provided to the Company for approval, containing:

- a description of all the dataset identified,

- a proposal for organization of the dataset in accordance with the present General Specification.

3.2.2 Dataset delivery

The following shall be provided by the Contractor, after GIS Preliminary Report approval:

- dataset as Geodatabase formats, rasters, built as required in chapter 5 and appendices,
- layout and/or maps as defined by the Company in a particular specification,
- when relevant, project (*.mxd), projection (*.prj), templates (*.mxt), style (*.style), layer (*.lyr), queries and scripts files. The dataset in the *.mxd will be stored in relative path.

The more precise dataset shall be preferentially integrated to the GIS.

Dataset format and architecture shall comply with **GS EP GIN 301** requirements to ensure data sharing between E&P entities.

3.2.3 GIS Report

The GIS Report shall be delivered in paper and digital copy.

The GIS Report shall contain at least the following information:

General information

- **Title of the study**
Name of the recipient - Company affiliate/ project,
Block reference and site name, Country,
Study Contractor name,
Start/end dates of the study.
- **Certification:** the first page of the report shall show the Contractor's certification, and shall specify:
Name(s) of person(s) responsible(s) for GIS dataset preparation,
Name and signature of QA/QC issuing Authority,
Date of issue.

Project summary

- **Abstract:** brief description of the study
Study dates,
Name(s) of person(s) responsible(s) for the study,
Site(s) and location(s) surveyed with key co-ordinates and situation plan.
- Project Geodesy.
- Listing of all the dataset and description.

Description of the satellite images (when relevant)

The Contractor shall describe for each dataset the following elements:

- **Name** of the location

- **Satellite information:**

Platform, Sensor, Type,

Acquisition Date,

Resolution,

Geodesy of acquisition,

Integration and georeferencing Process of raw data (Description and listing of used points).

- **Method** applied to process raw data (Radiometric and geometric treatment).

Description of the dataset

For each dataset the following elements shall be described:

- **Content:** meaning of the layer,
- Type of **geometry** (raster, vector, point, polyline Z, polyline M, etc.),
- **Attributes:** name, significance, type, values, domains, etc.,
- A brief description of the **origin** of the dataset: Excel file, software export, etc.,
- **The method** applied to collect the data, and definition and method applied to characterize sensibility.

Others

Where applicable: all significant scripts, queries, etc. used for the Project.

4. General requirements

4.1 Software compatibility

Contractor's deliverables shall be compliant with ArcGis Desktop 9.3, from ESRI, unless otherwise stipulated in a particular specification.

4.2 Dataset compatibility

Dataset shall be stored in a geodatabase organized as per section 5.5 and appendices 2 to 6.

Any geo-referenced data can be imported into GIS. The preferred formats, however, are as follows:

- Raster files: Geotiff, Tiff, Jpg (associated with *.Tfw or *.Jwg world file, and spatial index saved),
- Vector files: a Geodatabase (FGDB),
- Microsoft Excel files with geodesy description appended.

4.3 Language

The English language shall be used except otherwise defined in a particular specification.

4.4 Dataset QA/QC

The Contractor shall apply QA/QC procedures for producing the GIS datasets.



Any anomaly or discrepancies between the datasets detected by the Contractor shall be brought to the attention of the Company.

In particular, the following items are of primary importance:

- Georeferencing
- Geometry
- Topology
- Content (attributes, metadata), etc.

4.5 Units

International System shall be used.

4.6 Applicable geodesy

All files shall be geo-referenced in the official geodetic system specified by Company in the particular specification since the beginning of the project.

5. Dataset organization

5.1 Conventional naming of the files

The layer's names in the geodatabase shall be given as described in the appendices 2 to 6.

The name of the layers can be modified (see section 5.4). Any modification shall be submitted to the Company for approval

For new layers, the Contractor shall submit a name to the Company for approval. Fields names shall be in capital letters with no space and no hyphen.

5.2 Metadata

Any data imported into the GIS shall be traceable for its source and history:

This is achieved by ensuring the inclusion of the relevant metadata.

For each dataset, the Contractor shall provide the following metadata:

- Company name
- Contractor name
- Study date
- Project reference
- GIS Contractor
- GIS date
- GIS revision
- GIS Maker
- Geodesy
- Source