

INSPIRE Thematic Cluster on *Elevation, Orthoimagery, Reference systems and Geographical grids*

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*Serving society
Stimulating innovation
Supporting legislation*

Introduction to Thematic cluster scope

Elevation, Orthoimagery, Reference systems and Geographical grids (49)

Main stakeholders: Mapping agencies, EU agencies and entities,
EU and global coordination bodies

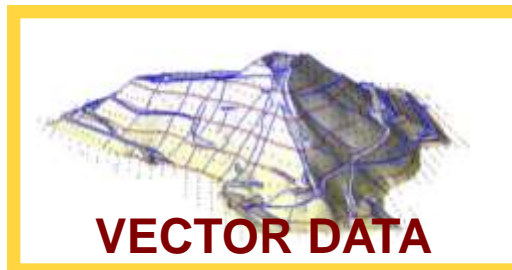
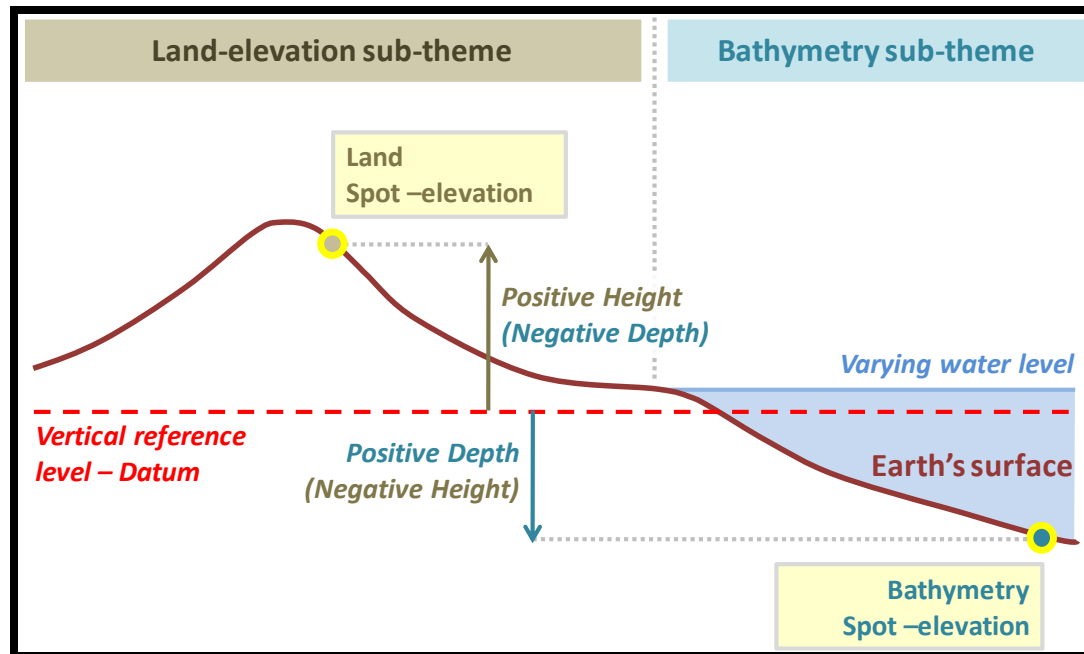
European Environment Agency



	Elevation	(7)
	Orthoimagery	(10)
	Coordinate reference systems	(5)
	Geographical grid systems	(6)

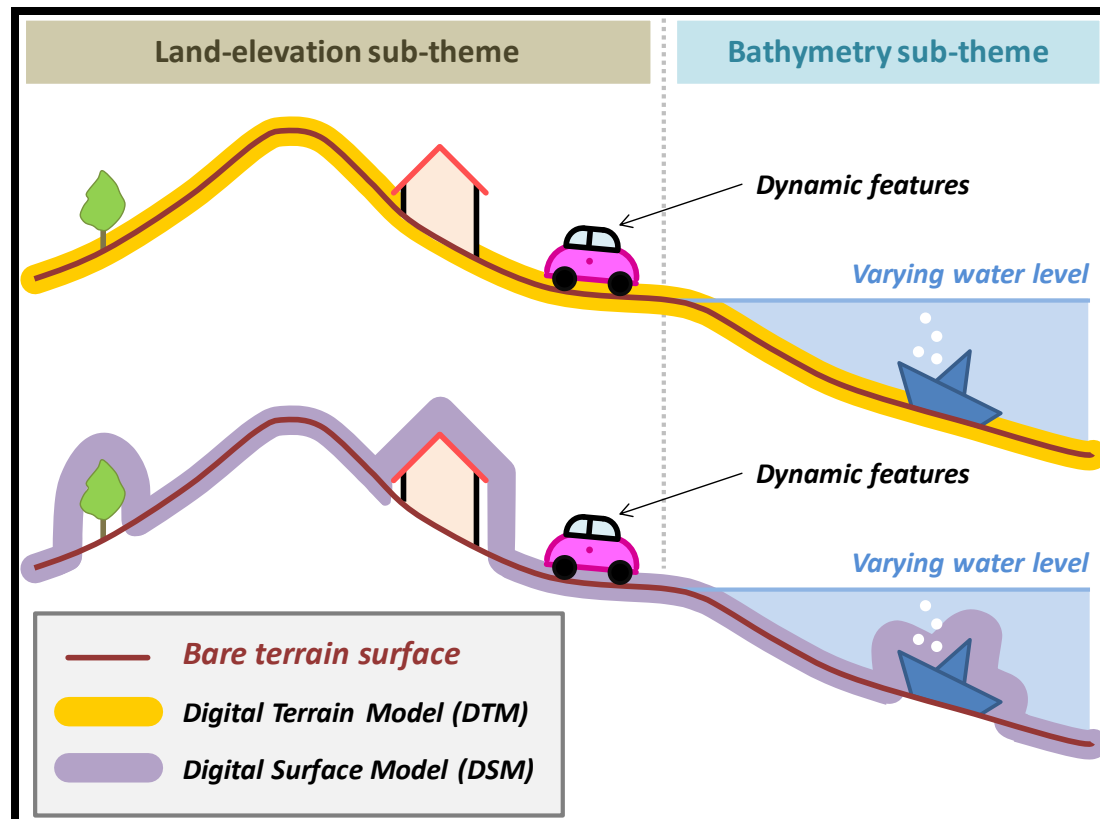
Introduction to Thematic cluster scope

- Digital elevation models for land, ice and ocean surface. Includes terrestrial elevation, bathymetry and shoreline (SR).



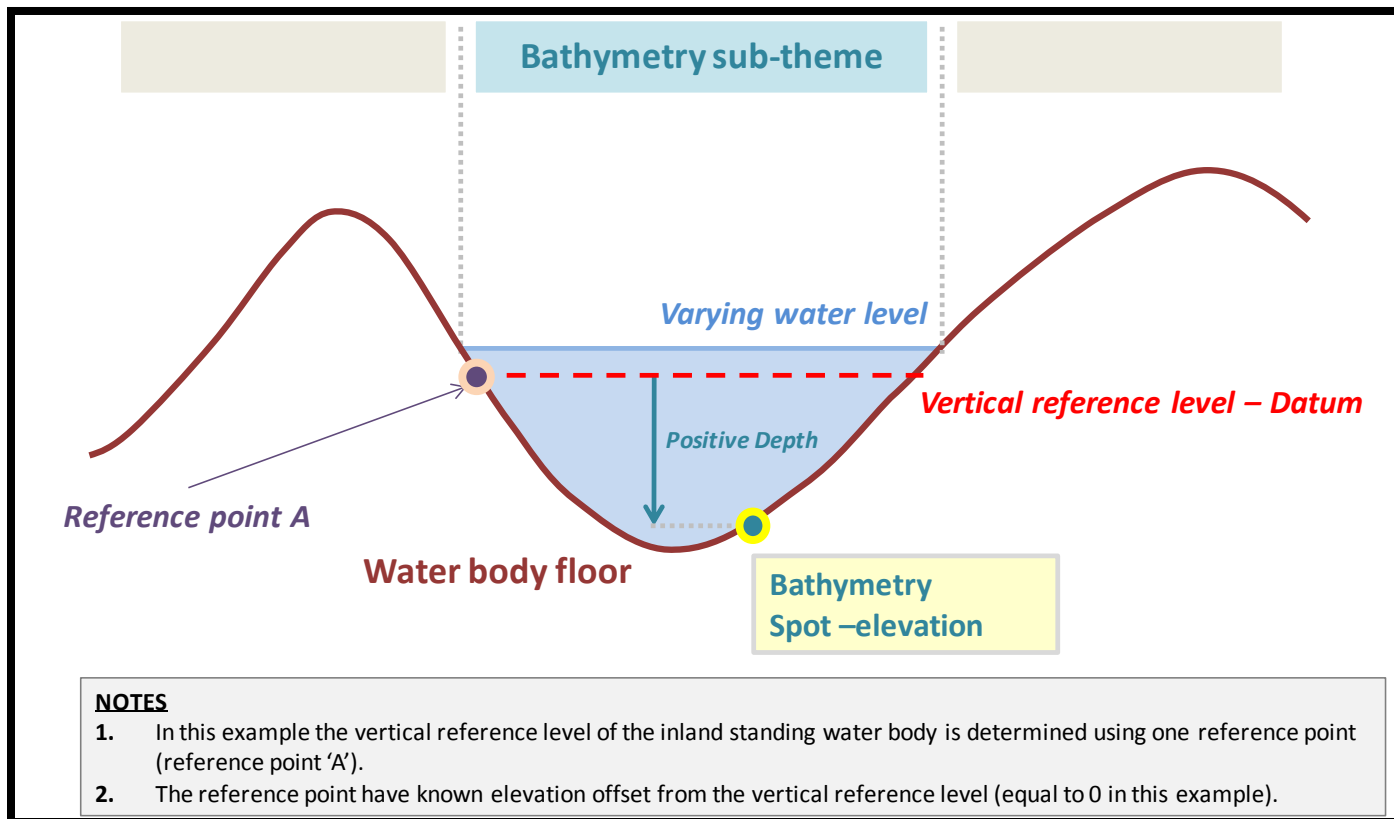
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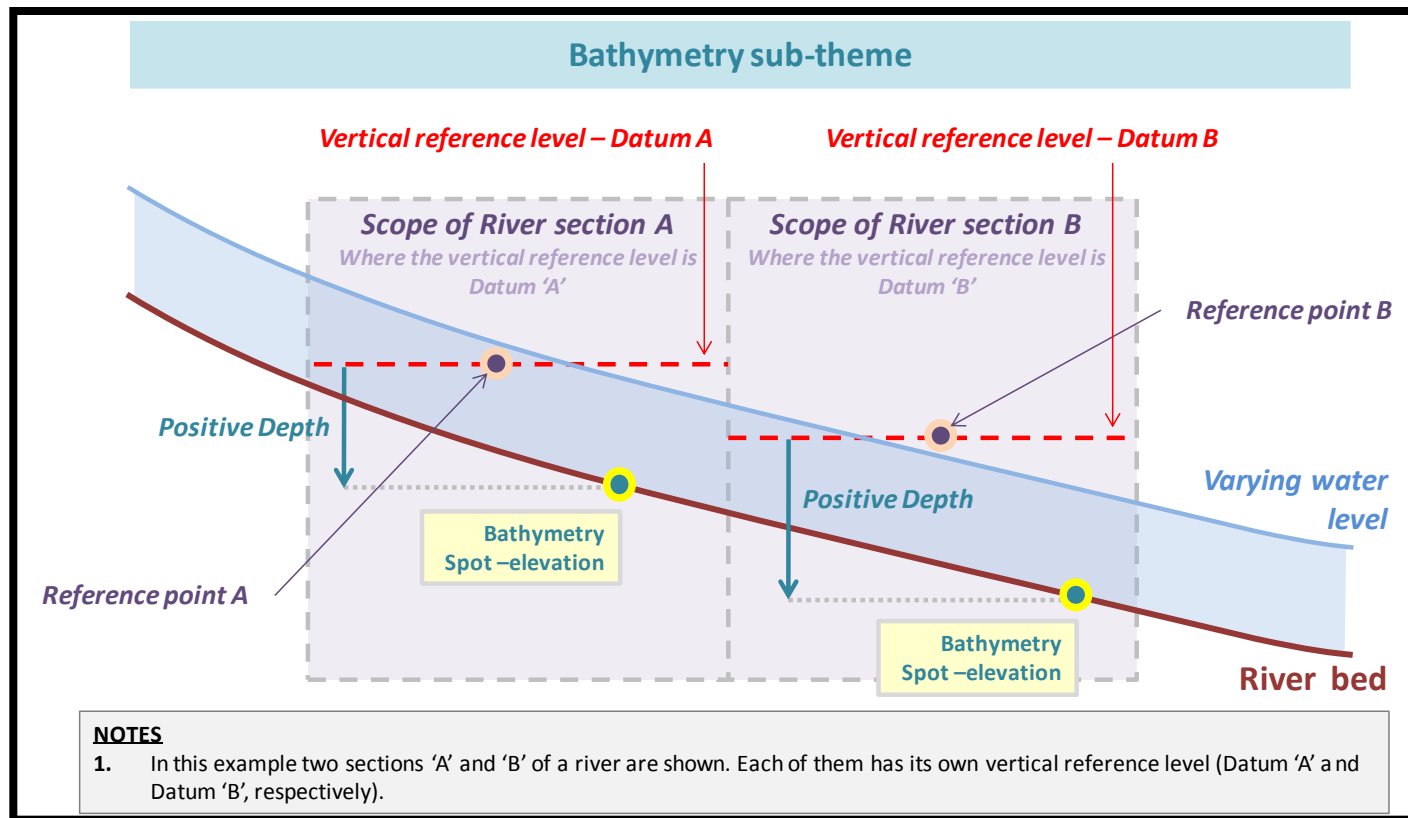
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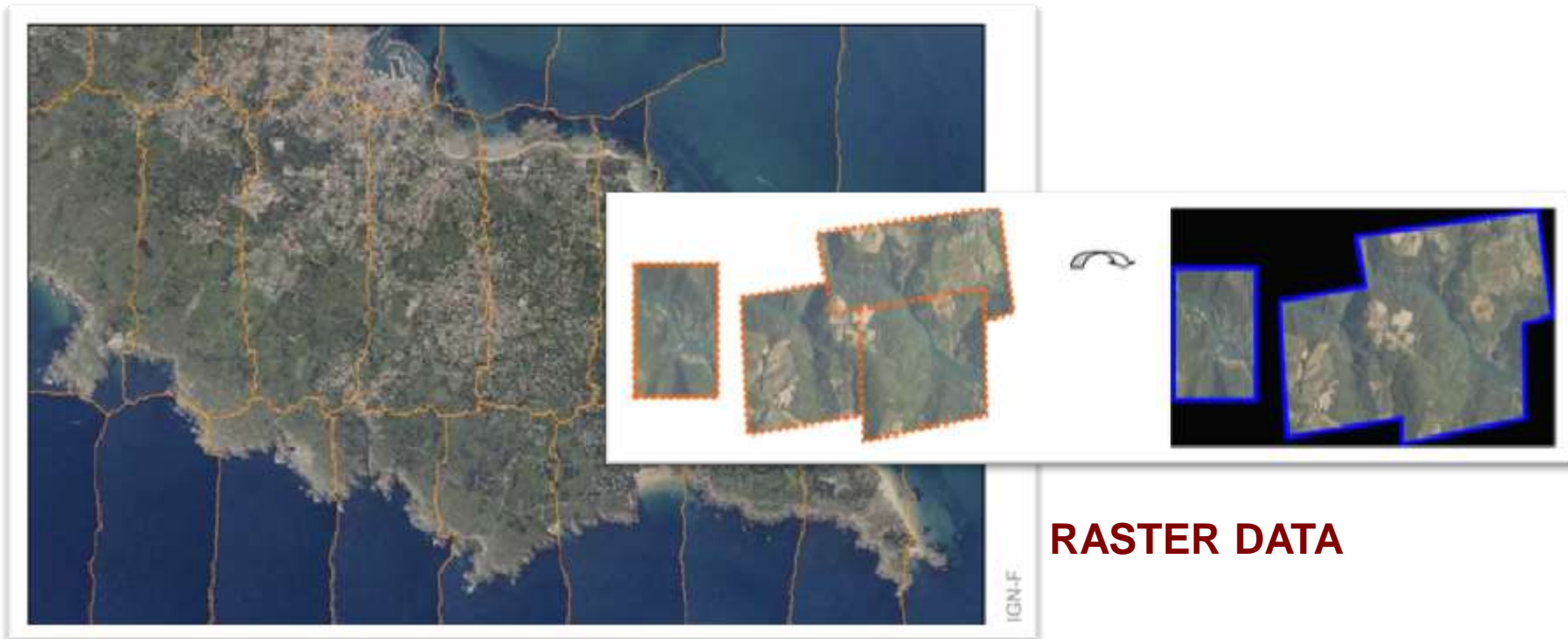
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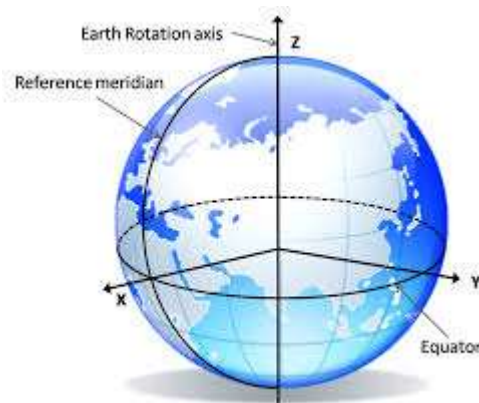
- Geo-referenced image data of the Earth's surface, from either satellite or airborne sensors.



Introduction to Thematic cluster scope

- Systems for uniquely referencing spatial information in space as a set of coordinates (x, y, z) and/or latitude and longitude and height, based on a geodetic horizontal and vertical datum.

NO DATA



ETRS89 – EVRS + Hydrographic references

ETRS89
Geodetic coordinates



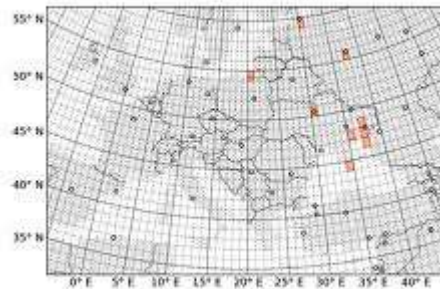
MAP PROJECTIONS

ETRS89
LCC / LAEA / TMzn

Introduction to Thematic cluster scope

- Harmonised multi-resolution grid with a common point of origin and standardised location and size of grid cells.

NO DATA



GEOGRAPHICAL GRIDS

Grid_ETRS89-LAEA (Equal Area Grid) / Grid_ETRS89-GRS80 (Zoned Geographic Grid)

Thematic cluster/sub-group best practices

Best practices & Pan-European products

- [EuroDEM](#)
- [EU-DEM](#)
- [PNOT](#) (Spain):
[PNOA](#) (Ortho/DTM) / [PNT](#) (Remote sensing) / [SIOSE](#) (LC)
- [EuroGeographics INSPIRE KEN](#)
NMCAs strategy to implement INSPIRE specifications
Webinars on implementation issues, tools, etc.
Workshops on data transformation



Projects

- [ELF](#)
- [CRS-EU](#)
- ISO CRS Registry



CRSEU

Coordinate Reference Systems
in Europe



Thematic cluster main group discussions

Categories

- Elevation, Orthoimagery, Reference Systems and Geographical Grids Cluster Categories
 - Thematic use case 0
 - Data model/scope 0
 - Common terminology 1
 - Encoding 5
 - Data quality 3
 - Evolution - Thematic extensions 0
 - Portrayal 0
 - EU Thematic databases 4
 - S/W tools 5
 - Member State issues 8
 - Platform utilisation 0
 - Political/organisational framework 3
 - Codelists 0
 - Best Practice 3
 - Interoperability 4
 - Data provision 3
 - Data used for e-reporting 1

Common topics (Elevation, Orthoimagery)

Data model

- Management of PID and temporal aspects

Encoding / Delivery

- Issues encoding INSPIRE EL and OI coverages (GML COV) – cross-cluster issue
- Domain extent of (ISO 19123) INSPIRE coverages using gml:boundedBy - GML best practice
- WCS as an INSPIRE download service option

S/W tools

- Transformation of raster data using FME
- Experiences using other transformation software

Validation and testing

- Existing validation tools (e.g. Schematron, JAVA)

Thematic cluster sub-group discussions

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Elevation

Thematic use cases / Interoperability

- Resolution needed for a pan-European DEM (e.g. EuroDEM, EU-DEM)
- EuroDEM and the ELF Project (migration to automatic interoperability)
- EU-DEM usability (INSPIRE conformance / Need for updating)
- Usefulness of (vector) contour lines transformed to EVRS from national EL RS

Encoding

- Use of the OGC SWE Quantity constraint

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Orthoimagery

Interoperability

- Misalignments between orthoimages produced by different data providers

Coordinate reference systems

Interoperability

- Order of coordinate axes in the Transverse Mercator projection (ETRS89-TMzn)
- Support to CRS transformation in Europe
- Need for an official CRS and geodetic parameters registry in Europe
- ISO CRS Registry

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Geographical grids

Thematic use cases / Interoperability

- Transformation of gridded reporting data from national grids to the INSPIRE 'Equal Area Grid'
- Use of the 'Equal Area Grid' (Grid_ETRS89-LAEA)
- Usability of the 'Zoned Geographic Grid' (Grid_ETRS89-GRS80)

Questions?

