

Map Design

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Learning objectives



- After this course you will be able to:
 - Design maps using GIS
 - Choose the appropriate legends
 - Choose the appropriate file type, resolution and compression method for maps
 - Use the Styled Layer Descriptor (SLD) standard

Introduction



Maps are an important output from GIS analysis.

- Hardcopy paper maps
- Presentations
- Web (static, dynamic)



Map making in GIS



Desktop GIS software:

- Map canvas for GIS analysis
- Map composer
- for Map design

Which map elements?



Mandatory:

- Title
- Legend
- Scalebar / Graticule
- North arrow

Optional:

- Acknowledgments
- Name of the map projection
- Logo
- Grid

Title Common map elements







- Real objects → Map symbols
- Legend = Key to used symbols
- Intuitive colours and symbols
- Units (m)

• PROGRAM DEFAULTS ARE ALWAYS WRONG!

Point symbology

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Point symbology







Lines



Polygons



Weir

Lines & Polygons

- Pipeline (Water)
- Buildings

• Park/Forrest





Continuous raster



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Continuous raster







Continuous raster



What is high?





• Random colours

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North arrow



Rotated maps



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Inset / Overview map





Font



serif sans-serif

Proportional

Monospaced

Thin Light **Medium Bold**

Times is Formal Fontin is Informal Goudy Old Style is Classic Verdana is Modern Benton Gothic is Light **ChunkFive is Dramatic** Helvetica is Neutral

Map design



To begin with...



Map design











• Make a map **more** neat











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FLOW DIRECTION

Legend flowdir 44.505 359.385 demfill -3.69 1157.85 dem_grass -2.228 1151.93 dem_clip

0.86

1146.14













- Raster and vector files don't contain styles. They are stored in separate files:
 - ArcGIS Layer file (.lyr)
 - QGIS Layer Style File (.qml)
- These formats are not standards and therefore not compatible

• The OGC standard for styling of GIS data: Styled Layer Descriptor (SLD)

Styled Layer Descriptor (SLD)



- A Styled Layer Descriptor (SLD) is an XML schema specified by the Open Geospatial Consortium (OGC) for describing the appearance of map layers (both vector and raster)
- SLDs are used in GeoServer to style WMS/WFS/WCS layers

Create SLD files

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1. Style layer in QGIS

- Vector:
 - -add style
 - -save style as .sld file
- Raster:
 - -add style
 - –use SLD4raster plugin to save style as .sld file or to directly upload to GeoServer

Generate SLD Document	Translate SLD Document
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	Export as SLD
	OR
	Unload to GeoServer

Add SLD to online layers





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