

The INSPIRE Directive - A Brief Overview

Introduction

The EU INSPIRE directive lays down a general framework for the establishment of a Spatial Data Infrastructure (SDI) for Europe. Its primary objective is to facilitate data exchange, data sharing and data re-use, for the purposes of effective governance and policy making purposes. It is based on an infrastructure for spatial information, established and operated by the Member States (MS), and requires full implementation by 2019.

INSPIRE is European legislation which was enacted into UK Law December 2009. Regulatory details are contained in a set of Implementing Rules (IR) that are being drafted. UK plans for the implementation

Who will benefit from INSPIRE?

The ability to share and use interoperable spatial data ultimately benefits everyone even if they are not direct users. Although the datasets have an environmental bias, the inclusion of the vital underlying reference information, means that many other organisations will effectively benefit from INSPIRE.

Academics and researchers in a wide range of fields are also likely to make use of data made interoperable in compliance with the Directive. The ability to make seamless connections across the wide range of data types will gradually open up new opportunities for understanding all kinds of change processes and will also enable much easier international comparisons.

"INSPIRE ... will therefore bring great benefits to our community, allowing it to build upon the geospatial data and services already delivered by JISC, and, as a result, be in a position to make real and meaningful contributions to the knowledge economy and to evidence based policy."

JISC Executive Secretary Macloem Read, May 2009.

What does INSPIRE aim to achieve?

The Directive creates the framework for spatial information covered by the themes listed overleaf to be collected, stored, manipulated and made available in a more standardized electronic environment to facilitate sharing of information by public sector organisations, commercial enterprises and citizens.

In a nutshell, the Directive mandates an overriding obligation on Member States to make sure that data is accessible, that it can be shared and used for public tasks that may have an impact on the environment. It should enable data from one Member State to be seamlessly combined, cross-border, with data from all other States. The Directive aims to make it relatively easy to find spatial data using the web through a discovery service (in HFE via the JISC funded GoGeo metadata service), and enable it to be used for a variety of 'value added' purposes such as 'view', 'download' and 'transformation'.

What is a Spatial Data Infrastructure?

An SDI can be defined as a framework for coordinating the collection, use and implementation of spatial information. The UK Location Programme refers to the UK's SDI as the Location Information Infrastructure (LII). INSPIRE seeks to create a European SDI and the INSPIRE Directive defines it thus: "'infrastructure for spatial information' means metadata, spatial data sets and spatial data services; network services and technologies; agreements on sharing, access and use; and coordination and monitoring mechanisms, processes and procedures, established, operated or made available in accordance with this Directive".

Why is spatial information important?

Spatial data can answer 'what if?' questions, especially if the datasets are made interoperable across different systems. It can therefore help to underpin good governance including the protection of the environment; economic and social development; and properly informed public participation.

The initial motivation for creating a European SDI was to enhance the formulation, implementation and monitoring of environmental policies, in the context of cross border environmental impacts and climate change. This environmental orientation has been a main driving force for the Directive and the themes (listed in Annexes) to be covered are listed overleaf

INSPIRE Themes

ANNEX I

Coordinate reference systems
Geographical grid systems
Geographical names
Administrative units
Addresses
Cadastral parcels
Transport networks
Hydrography
Protected sites

ANNEX II

Elevation
Land cover
Identifiers of properties
Orthoimagery
Geology

ANNEX III

Statistical units
Buildings
Soil
Land use
Human health and safety
Utility and governmental services
Environmental monitoring facilities
Production and industrial facilities
Agricultural and aquaculture facilities
Population distribution
Area management/restriction/regulation zones and reporting units
Natural risk zones
Atmospheric conditions
Meteorological geographical features
Oceanographic geographical features
Sea regions
Bio-geographical regions
Habitats and biotopes
Species distribution
Energy resources
Mineral resources

Where are we now?

The HFE sector and HEIs generally have been slow to recognise their obligations and the opportunities afforded by INSPIRE.

The Research Councils (especially NERC and ESRC) have been more proactive and are developing their own strategies.

The University of Edinburgh (EDINA and Records Management) are currently planning a project to assess the level of INSPIRE awareness and readiness across a sample of half a dozen HEIs.

Critical aspects of the required infrastructure are already in place - the GoGeo Portal provides INSPIRE discovery services and the facility to create INSPIRE compliant metadata. Plans for View and Download services to support HEIs are under development.

In conjunction with JISC, EDINA are spearheading briefing and awareness events and are engaging with the wider INSPIRE community and UK Location Strategy to ensure that the HFE sector is prepared.

Whilst academic establishments such as universities are covered by the definition of public authority it is unlikely that much of the geospatial data they hold would fall under Annex I or II.

However, Annex III themes are more likely to be in scope for two reasons.

First, as the focus shifts from the data in the first two annexes to Annex III data, it is possible that data held within universities might come within scope e.g. species distribution, habitats, atmospheric conditions.

Second, studies of environmental change require an understanding of how phenomena change over time. This requires access to historic data and earlier editions of data which may be held only by universities (or rather researchers and research teams within universities). In both cases, Universities will be required to make these data available. The Commission has stated:

“Whether or not a data set falls under the INSPIRE obligations does not depend on the scale, the specificity of the data sets, or the level of government involved in their management. When the data sets, at any level of government, are relevant for developing, implementing or monitoring laws or regulations which may have an impact on the environment, INSPIRE obligations should apply. Such conditions could equally apply to data sets collected by a research project activity as the INSPIRE Directive makes no distinction between 'operational' and 'research' data sets. INSPIRE could be considered a positive incentive to safeguard valuable research data sets after the ending of a project.”

The Commission also stated in April 2008 that it is

“a fundamental right of third parties to enrich the European Spatial Data Infrastructure with data sets currently hidden or difficult to find”.

INSPIRE Adoption Timeline

