

Newsletter



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The H LanData project aims to demonstrate the feasible European level harmonization of the Land Use and Land Cover datasets taking into account both the data categorization and the data models, for any of their possible uses and users, through the development of user-oriented value-added services.

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The end of the diagnostic phase of H LanData offers the first results of the project

Julián Delgado Hernández

Objectives

Harmonization of information on Land Cover and Land Use at European level is the main objective that guides H LanData project. To achieve this objective a previous analysis of the current state of this information is required, in order to plan efficient and useful methodologies and pilots scheduled in following phases. Indeed, this assessment was the goal of the first phase of the project (Work Package 1: **Diagnostic**) carried out between March and August 2010, led by Instituto Geográfico Nacional (National Geographic Institute, Spain – IGN/CNIG).

Information Collection

The information requested in this study had to reflect all those fundamental aspects in a coordinated harmonization of Land Cover and Land Use (LC/LU) information. The analysis focused mainly on the study of **Databases** and **Users**, because they are the keys for building a successful information structure. Specifically, in relation to databases information about classification methodologies (semantic of classes) and geometric technical characteristics (minimum mapping unit, scale, etc.) were collected. About users, information on their type and nature, the used LC/LU databases and web-services, the frequency with what they use them and the level of satisfaction, and the type of information requested (user requirements) were collected. In addition information about applicable standards on Land Cover and Land Use and methodologies for harmonization was also collected. This information was collected by each H LanData partner taking into account their knowledge on the situation in their respective competence territory, and in close communication with involved users, to avoid interpretation mistakes.

Results

The first results of the diagnostic phase were presented at the Consortium meeting held in Schwechat (AT) in September 2010, and after a joint review by all partners and new

updates, results were distributed to H LanData community in October. The results are described in detail on the H LanData deliverables D1.1, D1.2 and complementary reports.

As summary, the assessment can be considered a good overview of current state of LC/LU information across Europe, because it includes information at European level and at national level from countries represented by the Consortium partners. Two groups of data bases have been identified; the first one at scale 1:100.000 (i.e. CORINE) mainly used by national and European organizations, and the second one at more detailed scale of around 1:25.000 for regional purposes. Majority of studied data bases use a hierarchical classification, because it is the traditional way to represent LC/LU, but in the last years new projects were born with object oriented philosophy, which makes possible more advanced and multicriteria applications.

The most important end users of Land Cover and Land Use data are public institutions, considering these data as essential or very important for their work and reporting obligations, and in general for environment, forest or agriculture thematic areas. CORINE databases are the most used Land Cover and Land Use inventories, but the users level of satisfaction for these databases is not good enough. So it can be deduced that the semantic and spatial resolution of CORINE databases is not always sufficient for them. The scale should be bigger (1:25.000), and the minimum mapping unit should be lower and variable, depending on the class. In addition users consider essential the comparability between future classifications and current CORINE classes, because for the moment CORINE's nomenclature is the only nomenclature that is valid and reached by consensus at European level.

For further details on the results of the Diagnostic phase, look at the Deliverable *D1.1 Diagnostic report* and *D1.2 Users report* on the Results section of the H LanData website.

<http://www.hlandata.eu>

Towards a harmonized land use and land cover information

Isabel Goñi

After the diagnostic phase on data, related harmonization methodologies and users' requirements, the second state of HLandData project was launched, the harmonization phase. Concretely this involves the development of an HLandData Data Model and the HLandData Metadata profile.

The development of this proposal has been strengthened by the presence of HLandData partners as experts in the INSPIRE Thematic Working Groups of Land Cover and Land Use. The process of data harmonization aims to make interoperable the information shared by the different data providers in the HLandData project. This process is defined according to INSPIRE Directive principles, with the aim to meet its objectives of harmonizing, maintaining and sharing information.

The tasks carried out within the harmonization phase are coordinated by TRACASA and have been synchronised with INSPIRE road map in order to plan them as collaborative instead of simultaneous and independent processes. Suggested proposals made by the active collaboration of the HLandData partners have been presented to the INSPIRE TWG and considered as an important and relevant feedback.

Therefore HLandData Harmonization proposal is being developed in coordination with the INSPIRE Thematic Working Groups (TWG) on Land Cover and Land Use, in order to join efforts and achieve better results which guarantees the adequacy of the HLandData proposal to the INSPIRE perspective and requirements.

The results of the work carried out within the **Harmonization phase** will be included in:

- HLandData Deliverable 2.1: HLandData Harmonization proposal.
- HLandData Deliverable 2.2: Methodology specification for the harmonization of the available datasets.
- HLandData Deliverable 2.3: Preliminary

design and specifications of the harmonized data sharing infrastructure to be implemented (restricted to HLandData partners and key stakeholders).

- HLandData Deliverable 2.4: Validated harmonized data sharing infrastructure from all data providers.

Deliverable 2.2 Methodology specification for the harmonization of the available datasets is already available on <http://www.hlandata.eu>.

This document represents one of the required steps in order to obtain the needed harmonization. It attempts to give a comprehensive presentation of the HLandData harmonization methodology, understood as the sum of the tools and procedures that data providers could use for accomplishing the harmonization of the available LC and LU datasets.

It represents the achievement of one of the objectives established on the harmonization phase (to provide a methodology for the harmonization of the data) which has a starting point on the results of the diagnostic phase together with other previous harmonization initiatives such as EURADIN, NATURE SDI+, Humboldt and INSPIRE keeping in mind as further horizon the development of harmonized data sharing infrastructure.

The methodology for the Land Use and Land Cover data harmonization will be applied by all partners within the project to harmonize the available geographic information. It is a guide for the translation and remodelling of available datasets into the HLandData metadata profile and data model, and to provide appropriate tools for this transformation. It also gives guidance for the implementation of the generic web services which will be developed in the Common Data Sharing Infrastructure to be implemented at the end of the harmonization phase and will be further implemented in the three Pilot projects that will be developed to test the harmonization results.

TRACASA and CEIT ALANOVA: our technology providers



Trabajos Catastrales, S. A. (TRACASA)

is a public company whose mission is to present services based on the use of Territorial Information and Information and Communication Technologies, for public administrations and private organisations, thereby contributing to innovation and development. Since it was founded in 1982 its successful work has included implementing new solutions making the firm a benchmark in the sector. The experience it has acquired over the years has meant that not only can it exceed its founding expectation and aims, implanting and modernising the Cadastre for Navarra, but it can also work on significant developments in its activity areas.

The central office is located in Pamplona, Navarra. It also has offices in other Spanish provinces, Italy and Latin America. New work centres are set up depending on the projects being developed.

For many years, **Tracasa** has been running large projects involving Cadastre, Mapping and Territorial Information Systems in the European Union and in Latin America.

More than 25 years serving local authorities gave Tracasa continuous growth, increasing quality and the offer of products and services. Tracasa is currently one of the most experienced public companies.

The company works in an ever-changing and evolving environment, and consequently dedicates significant resources to R+D+i as well as offering its employees continuous training. The company has been awarded the most demanding quality certificates, which, along with their own internal control mechanisms, offer an additional guarantee to the satisfaction endorsed by their numerous customers.

TRACASA works on three basic lines complementing one to each other:

- **Software Engineering, Information Systems and Information and Communication Technology**

Tracasa's information systems are capable of meeting administrations and companies' growth needs, being responsible for technical coordination within the solutions developed, for training and their support.

- **Rural Engineering, Cadastre and Mapping**

Tracasa has the capability to process the past, present and future of the great volumes of territorial information which is essential for efficient management within public administrations and private companies. We are a pioneering company in developing urban and rural cadastres with capability to analyse, implant, update, maintain and manage cadastres for local and regional administration. The mapping services carry out complete mapping production cycles, producing digital photogrammetric flights, restitution, generation of orthophotographs, etc.

- **Territorial Information Systems**

Efficiently managing the territory is essential to generate wealth. We are experienced in developing Territorial Information Systems in multiple fields: agriculture, environment, town planning, utilities, defence, etc. Our projects are aimed at administrations and corporations that see geo-referencing information as an opportunity to manage and make decisions more efficiently, being as well real engines to drive regional development.

Land Use and Land Cover are considered by Tracasa as very important topics for which competences are shared by several organizations but should serve for encouraging regional development.

We have the responsibility of maintaining up-to-date and coordinate information regarding Land Use and Land Cover in Navarra, working for the creation and provision of such information (graphic and alphanumeric) for the Government of Navarre, that can be used later on by several institutions, organizations or users and retrieved at the Territorial Information System of Navarre (SITNA: sitna.navarra.es).

"Tracasa – the means and the way to innovation and development."

www.tracasa.es



CEIT ALANOVA
 Institute of Urbanism,
 Transport, Environment
 and Information Society

Urbanism, Transport, Environment, Information Society

CEIT ALANOVA is an applied research institute which acts complementarily with existing organizations and in close cooperation with scientific and research institutions, enterprises and public administrations to ensure the flow of knowledge between research and practical application.

The team consists of planners, geographers and technicians. All of them have worked in international teams, have published in international journals and magazines and are committed to the vision of CEIT ALANOVA to advance the City of Schwechat (the "mobility hub") to become a "knowledge hub" in the near future.

Fields of action

- Urban, Environmental and Transport Technologies
- Information Society
- Sustainability and Resource Management
- Urban Planning and Regional Development
- Geographic Information Technologies and Spatial Scientific Management , GIS

Projects

CEIT Alanova has been involved in several projects both at the EU and at the national level. Relevant projects:

- AIRCLIP: A research study Airports and Climate Preservation.
- Busstop 3.0: Project on the future of public transportation stops.
- Airport Cities: Study on airports' strategic role in regional development.
- CentropeMAP/CentropeSTATISTICS: Portal with datasets from local authorities of Centrope.

- Plan4all: The harmonisation of spatial planning data according to the INSPIRE Directive.
- HLanData: Harmonization of spatial planning data for Land Use and Land Cover.
- AmauroMap: Interactive digital map for blind or visually impaired.
- MAI: Mobility Pass for Residential Real Estate.
- Holodeck: Measures and steps for technology based instruments and methods in urban and transport planning.

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**First Technical Meeting in Vienna
23. November 2010**



Venue of the Technical Meeting



Welcome Words by the Mayor of
Schwechat



The Consortium

Upcoming Events - 2011

Date	Location
10 May 2011 Workshop: Removing the roadblocks to a pan European market for Public Sector Information re-use	Brussels, BE
18 May 2011 REAL CORP 2011	Essen, DE
23 May 2011 GI2011-X-border-SDI/GDI Symposium EUROPE OF BORDER REGIONS	Bad Schandau, DE - Decin, CZ
26 May 2011 Séminaire de clôture de la convention 2008-2011 du SIGRS	Colmar, FR
5 Jun 2011 Vespucci Summer school: Volunteered Geographic Information	Florence, I
7 Jun 2011 INSPIRE Essentials Training Course Snowflake Software	Southampton, UK
15 Jun 2011 Geoinformatics 2011	Muenster, DE
20 Jun 2011 Cities, Technologies and Planning (CTP 11)	Santander, ES
27 Jun 2011 INSPIRE Conference 2011	Edinburgh, UK
5 Jul 2011 GI_Forum 2011	Salzburg, AT
11 Jul 2011 WCCA/EFITA conference	Praha, CZ
14 Sep 2011 3rd Croatian NSDI and INSPIRE Day and the Cartography and Geoinformation Conference	Split, CRO
21 Sept 2011 HLANDATA Seminar Committee of the Regions	Brussels, BE
27 Sep 2011 InterGEO	Nürnberg, DE
10 Oct 2011 OPEN DAYS 2011	Brussels, BE
12-13 Oct 2011 Final Conference Plan4all	Brussels, BE

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TEHNOLOĢIJU ATTĪSTĪBAS FORUMS
TECHNOLOGY DEVELOPMENT FORUM



ISOCARP

Gobierno de Navarra (GN)

GISAT

Trabajos Catastrales S.A. (TRACASA)

Technology Development Forum (TDF)

Instituto Geográfico Nacional (IGN) –
Centro Nacional de Información Geo-
gráfica (CNIG)

Slovak Environmental Agency (SEA)

CEIT ALANOVA

Institute of Aerial Geodesy (AGI)

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Project HLanData

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