Since January 2022, the French National Research Agency funds the project PARCEDES ANR, which aims to study the organisation and evolution of agrarian plots of land from Protohistory to the present day, based on four French (Vendée, Nîmes), Italian (Grosseto) and English (South-Hamp) areas where we cross several types of historical, geographical, archaeological, etc. data. The aim is to identify and characterise the possible links between changes in the history of these plots and some societal and/or geographical parameters, and to propose a model of the observable phenomena of the resilience of field boundaries in the long term. For this, data will be managed inside GIS to create “archaeogeographical maps”.

Besides the scientific aims of the PARCEDES project, the objective is also to valorise and store the data produced in order to provide access to them and to help future research in these areas. This aim implies several geomatic developments, held by a research engineer expert in the field of GIS. Indeed, Geographic Information Systems (GIS) are crucial in this project for mapping and analysing the forms of the landscapes as the plots of land, and they allow to valorise and disseminate the results of a research to the scientific community and the general public.

The PARCEDES WebGIS

The geomatic data used or created will be accessible in four WebGIS, for each study area, that will be entirely open and free. We use the tools of ESRI inside the environment ArcGIS Online, but each webGIS will be entirely open and free. The data are organised inside 4 different categories compiling several shapes or rasters:

1. Aerial and satellite imagery (recent and old)
2. Historical maps
3. Current geographical data
4. Geohistorical vectorisations (for ex. plots of land from the Napoleonic cadastre).

The PARCEDES WebGIS will meet current standards for collaborative research and dissemination:

- Map and Data Visualization: users can view maps with different layers of spatial data, such as roads, land use, elevation, satellite imagery, archaeological data, etc.
- Data Query and Analysis: users can perform queries and analysis on the displayed data, such as searching for specific features, calculating distances, creating buffers, generating thematic maps, and conducting spatial analyses.
- Data Sharing and Collaboration: WebGIS facilitate the sharing of spatial data and maps across different users and organizations. This makes it easier for stakeholders to collaborate and make informed decisions based on the same set of data.
- Remote Access: users can access WebGIS from various devices with internet connectivity, including computers, tablets, and smartphones, making it convenient for fieldwork and on-the-go data access.

At last, the described list of these data is given in a data management plan that will be freely accessible from the end of the project (2025 on https://dmp.opidor.fr/).

The PARCEDES StoryMaps

As all the scientific projects, the scientific results are disseminated thanks to academic papers and talks. But the results of PARCEDES will be also valorised through several “StoryMaps”, a tool of storytelling proposed by ArcGIS Online. A story map in the context of cartography refers to a method of presenting information and data using maps as the primary medium. It’s a way to tell a narrative or convey information by combining geographic data, maps, images, multimedia content, text, etc., in a visually compelling manner to educate audiences about a specific location or topic, to communicate spatial relationships, highlight trends, give historical narratives or some information for tourism, etc.

For the PARCEDES project, each of the four research fields will have a StoryMap in order to synthesise the results of the research and to give access to the webGIS of each area. They will be accessible from the blog as, yet, for the Italian area. These StoryMaps represent a powerful tool for scientific dissemination, but above all towards a larger public, for instance in a museographic project (numerical tool to put in context the archaeological discoveries) or for educational purposes (to teach what is the story of the construction of a landscape).

The PARCEDES WebGIS is available at https://dmp.opidor.fr/ and the StoryMaps can be found at https://parcedes.hypotheses.org/.

The webGIS built and freely accessible, as well as the StoryMaps written and published, will enable the research data produced by ANR PARCEDES to be shared and the results obtained to be widely valorised.

The aim is to promote innovative research on land parcels, combining a variety of data, particularly archaeological and planimetric data, from a long-term perspective. In addition, these data, results and geomatics tools can be used to develop expertise for use in planning policies (urban development, environmental risk management, improving the quality of life, etc.), for cultural, and tourist development (to justify historical zoning, develop mediation initiatives) and for archaeological heritage management (to document the context of sites and the planimetric links between them).

Conclusion

The best way to appreciate a StoryMap is to see it on your smartphone!!

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