The map resources within a research project: An example of application a multidisciplinary geo-collaboration Web GIS.

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HAL Id: halshs-01677454
https://halshs.archives-ouvertes.fr/halshs-01677454

Submitted on 8 Jan 2018
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The Drome creators project

Project objective: The Drome creators project focuses on the interaction between different informations on the ‘Drôme’ river, the natural dynamics of the basin and practices of residents and public policies of the nineteenth century until today. A special attention is given to sedimentary dynamics of flood flows. They are apprehended through the concept of temporal and geographical frame.

- The institutional and scientific partners of the project APR project Water and Territories’ Ministry of Ecology, CNRS, Cemagref.
- The program written in a continuous monitoring research: Zone Atelier Basan du Rhône (ZABR)’ site Workshop Drome program from 2003 to 2011. The program is coordinated by Gabrielle Boureau, IGRE, Cemagref, UMR G-EAU, Montpellier and Anne Honegger, CNRS UMR 5600, Lyon.
- Research disciplines represented by interdisciplinary team: Geography, Biology, History, Economics, Sociology, Environmental Law, Hydrology.
- Local and regional territorial partners: the ‘Drôme’ river joint union and the Ramieres natural reserve.

Problems statement and research approach

How to use thematic map from GIS Web tool to help research community to better understand the spatial environmental phenomena and the influence of human actions on watershed in the past 200 years?

GIS WEB SERVICES RESOURCES AND THEIR DISTRIBUTION BROADCAST NETWORKS

Arcgis server: architecture and functioning

Objectives, actions, first uses and results

Objectives:
- Sharing information (maps, statistics, archives)
- Development of spatial evolution scenarios.

Actions:
1. Selection of technical solution
   - Installing ArcGIS Server, testing and training solutions for expectations of the end users.

ArcGIS Server will to model the spatial scenarios and communicate them to all partners

2. ArcGIS Server installation, testing and training

3. Contractual arrangements, regulation and building a data structure.

4. Design and elaboration of the selected spatial mapping scenarios based on collected data but also by integrating all the first maps of the atlas project.

5. Testing of different web applications such as geoprocessing tasks.

Variety of uses are mainly focused on a map scenario geovisualization

Operation and utilization of ArcGIS Server

GIS WEB SERVICES RESOURCES AND THEIR DISTRIBUTION BROADCAST NETWORKS

First results:
- Exchange of information among researchers on water research problematic
- All partners have exchanged ideas on cards. It was a major support tool for information exchange and discussion within project consensus.
- Defining of ArcGIS Server requirements
- Setting of multi-contextual scenarios for publication before meeting and discussion the results.
- Relevant territorial water
  - Downloading and data exchange
  - Geovisualisation mapping results
  - Comment and discussion of results
  - Spatial analysis and results synthesis

Conclusion and prospects

Beyond the individual needs or collectives cast, researchers and managers are sensitive to three recurring issues:

1. What data are used and has been used as a data management tool?
2. What methods used and the sample data are determinants.
3. What methods used and the sample data are determinants.
4. What methods used and the sample data are determinants.

Conclusion and future prospects:
- Improving conditions and forms of interface display Web GIS; best Flex API for Arcgis server.
- Using PostGis database, PostgreSQL related to ArcSDE.
- Using the tools based on geoprocessing functions.
- Using data geo cataloging for dissemination to a geo-portal.

Acknowledgements: Melanie Bertrand, PhD Geography, Frederic Liebault, CEMAGREF engineer; Grenoble EtNA team; Katarina Dzubakova, Phd student of physical geography and geoecology, Convexus University in Bratislava, Slovakic Corine Extract, master degree geography student of Geography, University of Lyon II, UMR 5600 EYS;

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The focus of the project and the GIS project’s Web site

Evolution of functional types under different scenarios changing.

The management of sediment transport in the revitalization trenches in the catchment area of the Drome watershed.

The wooded ravines site experimental

Deforestation near Saillans (photography: F. Liébault)

The site of remobilization of ‘Béoux’ river before and after (photography: R. Montagnon 2003)

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