

Trajectories In Situ

An interdisciplinary approach to showcase changes of a socio-ecological system in the French Alps



Trajectories of alpine socio-ecological systems in a changing world

During the past century, human societies and the environment have been faced with both global and local changes that have had specific impacts on mountainous areas. In order to understand the complexity of the interaction between the human and environmental spheres in response to these changes, an interdisciplinary approach becomes fully appropriate.

In this context, Grenoble Alps University has created the Trajectories' research program to explore temporal pathways to help mountainous areas to better adapt. Trajectories relies on a team of 100 researchers studying three pilot alpine regions : the Arve Valley, the Maurienne Valley and the Meije region.

Trajectories Jeunes: how to work in interdisciplinarity

Trajectories board gave the opportunity to the 18 PhD and early career scientists involved in the program to create a research team : *Trajectories Jeunes*. Funded by the program and 100% free of managing this team as we wanted, we decided to take this great opportunity forward.

Trajectories Jeunes members come from heterogeneous backgrounds and disciplines such as Ecology, Climatology, Palynology, History, Geography, Computer and Political science. Therefore we soon ended up on an issue : how to succeed to work altogether with such a background diversity but also thesis on different subjects and case studies?

In Situ I : Using field work to promote interdisciplinarity

After a members' works mapping, we found that according to ours background and subjects the best way to work together was to study together a high mountain area scaled between 10 to 100km and studied a with year to decade resolution.

Therefore we chose the "Pays de la Meije" area to organize a 3-day field seminar there. It allowed us to share our respective disciplinary approaches and research methods and to co-analyze the dynamics of a defined area.

Finally, based on each member's specialties, we have reconstructed an interdisciplinary socio-ecological trajectory of the "Pays de la Meije" from 1800 to 2050. The data collected allowed us to structure the analysis around the co-evolutions of the environment and human activities.

To conclude, *In Situ* provided favorable conditions for interdisciplinarity, i. e. sharing a common case study, discovering field together and get to know each other's approaches. The key of *In Situ* success is that we ensured that research questions came out from practical field experience rather than to work on preset issues



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Early career scientists are particularly suited to study complex socio-ecological system changes in mountain environments using interdisciplinarity

Why?

Studying social-ecological evolution requires an integrated interdisciplinary approach.

Early career scientists are **less constrained by academic fields and strategic stakes**, and therefore they can work in interdisciplinarity easily

How?

Step 1 : Create an **autonomous research team** gathering early career scientists from various academic fields

Step 2 : Define a **common case study** and go for a multi-day field trip all-together

Step 3 : Explore surroundings to **confront each others way of understanding landscapes** according to each academic fields approach

Step 4 : Make sure that everybody **understands each-others** point of view

Step 5 : Create **interdisciplinary research questions** as a group

Step 6 : Try to answer them...



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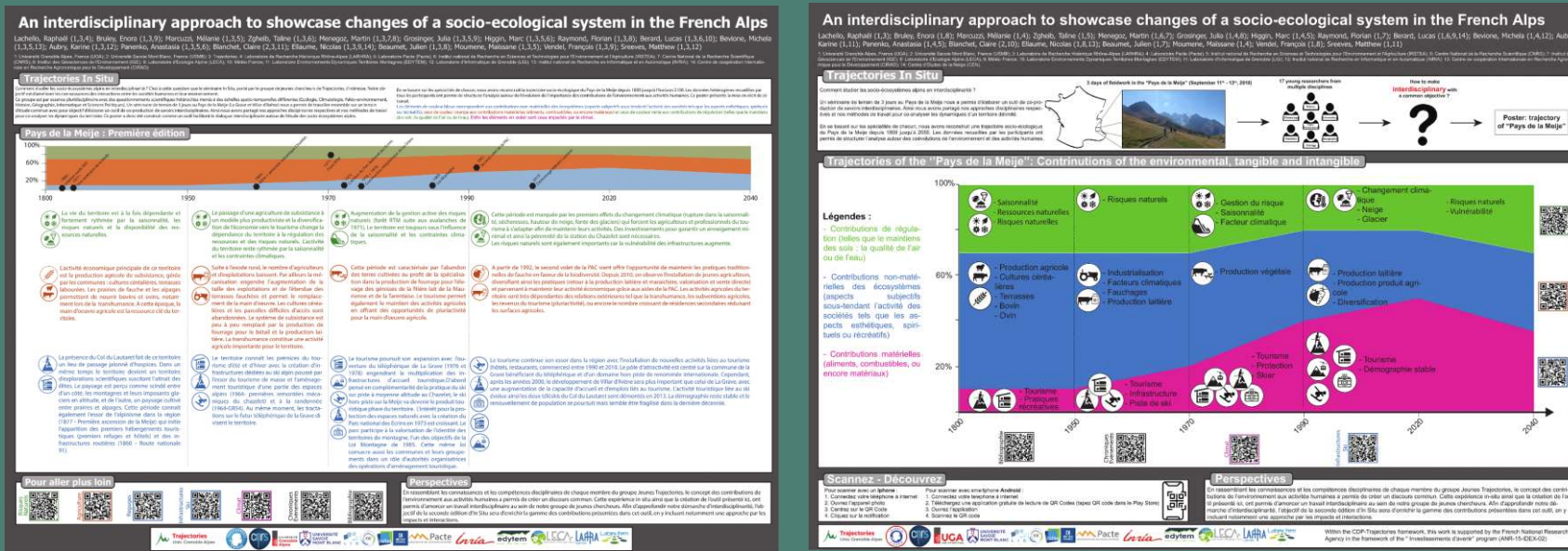
Discover the pros and cons of our In Situ project with our SWOT analysis

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First version: way too much text !

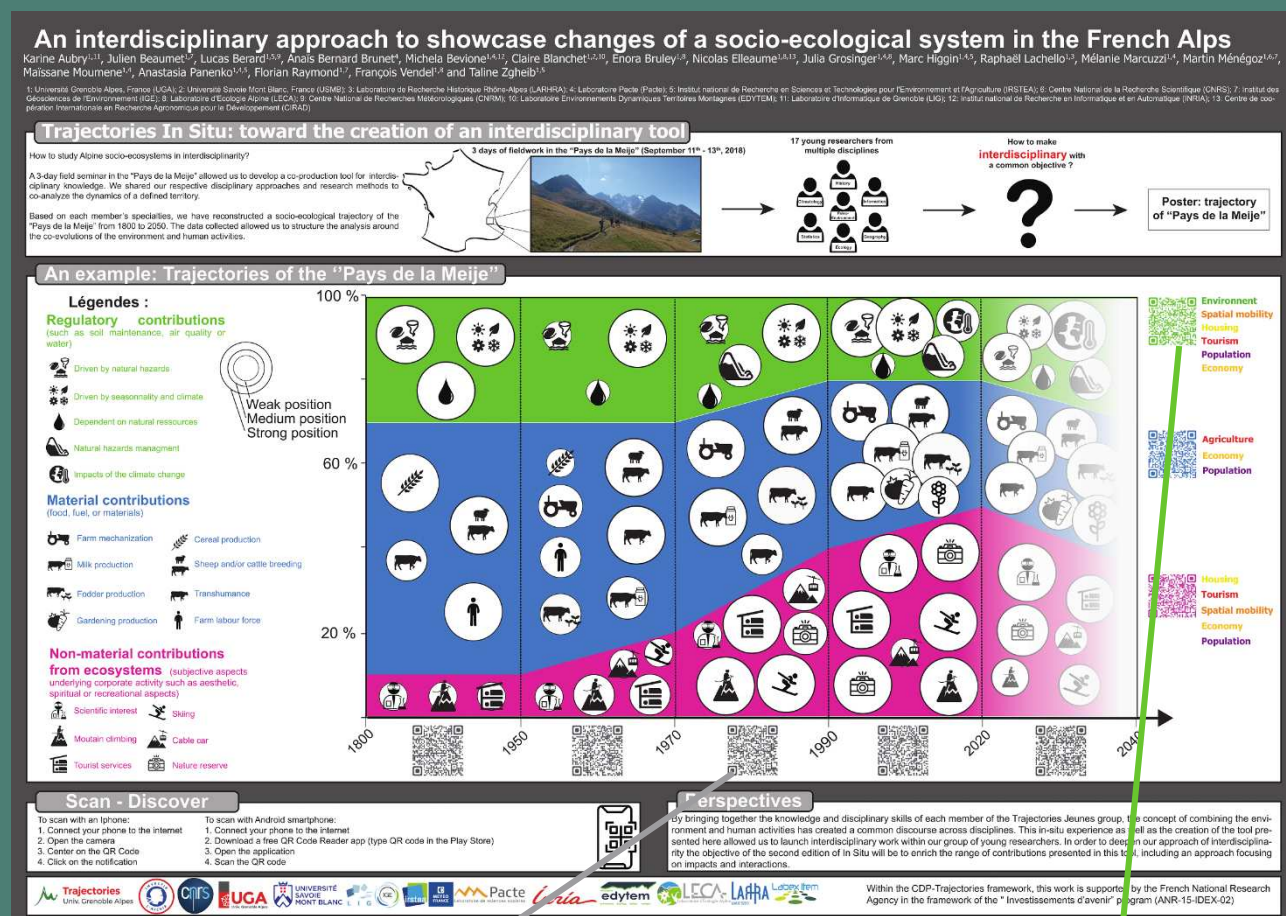


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Next step: - better balance between keywords and icons - Adding some information about the context and methodology



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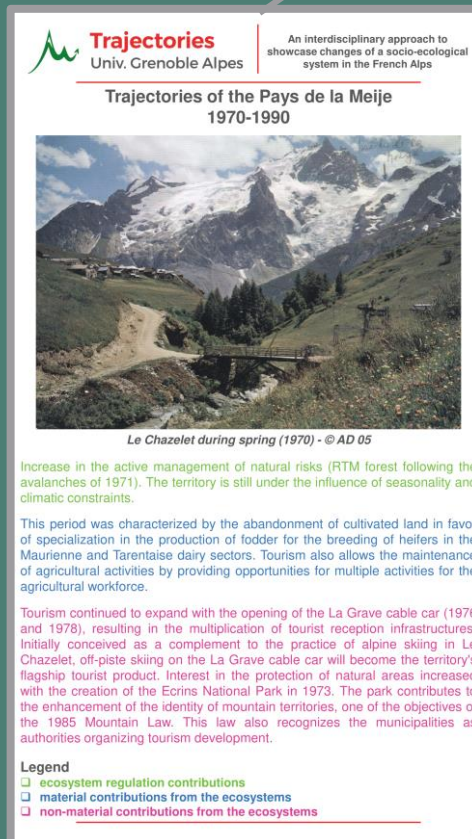
An « almost » final version: icons override keywords



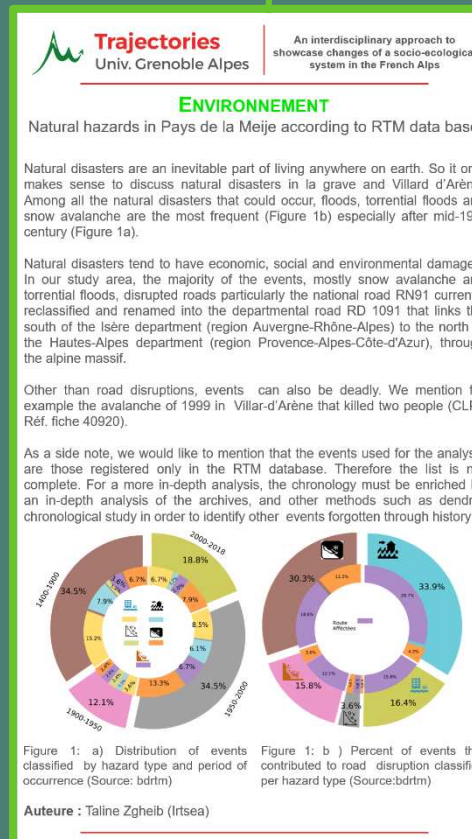
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→ Towards a final version focusing on the methodology rather than on the results

In addition to the poster, thematic sheets develop the results:



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In Situ II : creating and answering research questions with stakeholders

A second edition of In Situ is planned from the 7th to 12th of October. It will take place in Villardrodin-Bourget, a mountainous town of Maurienne valley (Savoie). This field workshop will aim to co-create and co-anwser interdisciplinary research questions with stakeholders.

This year research question will be: which changes for Villardrodin-Bourget forests in the past, present and future ? From there, we will study a wide variety of subjects (climate, pastoralism, water management, natural hazards, tourism...).This event preparation is still ongoing, so we will be happy to discuss about it with you!

