QUESTIONING IRRIGATION FOR CLIMATE CHANGE ADAPTATION IN NAVARRA

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Agricultural expansion and intensification are among the most important global land-use changes of this and the last century. They have contributed to the increase of food production, but have also altered the biotic interactions and patterns of resource availability in ecosystems. Further, they bring potential for serious multi-scale consequences such as increased greenhouse gas emissions, water pollution and biodiversity loss (Godfray et al., 2010). All of these dimensions interplay in unique and increasingly important ways within the current context of global climate change.

Top down initiatives using modernity, productivity and, recently, climate change vulnerability, are questioned in this proposal. We argue that when focusing on particular cases studies such as the transformation of the Canal de Navarra, we find pluriactive rural residents as well as highly production- oriented farmers holding different perceptions and valuations about how rural development and climate risks and hazards should be faced. Those differences can lead to conflicts. This proposal suggests paying more attention to illuminating these differing interests and better understanding what they may mean for responding to climate change.

(1) a grarian socio-ecological systems, (4) human behaviour, education and public policies role

Proposal justification

Today, there are a number of projects (ex. many advocating for modernization) that are presumed to be a-priori neutral and positive, however these programs can have co-lateral and unexpected effects. Accounting for heterogeneity among affected stakeholders by such projects may offer more effective, efficient and fair policy contributions. A people-centred approach focuses on what matters to people and on understanding the differences between groups of people. At the same time, considering multiple involved ecosystem services helps to avoid risk of maximizing just a single service at the expense of others (e.g. soil carbon retention) (De Groot et al., 2010) and one group's preference at the cost of others.

Some of the questions that are undertaken include:

Is irrigation a mal-adaptation option in the Canal de Navarra case study?
How does irrigation shape farmers and owners vulnerability to multiple stressors?

Challenges and opportunities of rural áreas to face climate change in Euskadi

The presented case study is a closed context that gives an opportunity for in-depth assessment into how the countryside has changed in the Basque Country, how the needs of the cities and rural areas have changed, and whether plans and policies proposed by formal institutions fit with local necessities, or if not, why those mismatches exist.

Which transformations are necessary?

Stakeholders' integration in rural policy development
Agro-biodiversity as an alternative for food security

Understanding and managing rural areas to face climate change

Existing studies are normally mono-sectorial and do not often encompass socio-ecological diversity. Rare are studies that integrate environmental impacts, social perception and valuation of those managing agrarian land, as well as official institutions that determine the opportunities and restrictions of rural paths of development. It is necessary to utilize a bottom-up approach to understand why certain projects are not effective and how they also have the potential to increase inequalities and losses of rights (water and communal land access). It is necessary to bring stakeholders such as famers, owners, scientists and policy makers together in a forum where they are able to freely debate all these questions and search for balanced solutions.

References

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