



Editorial

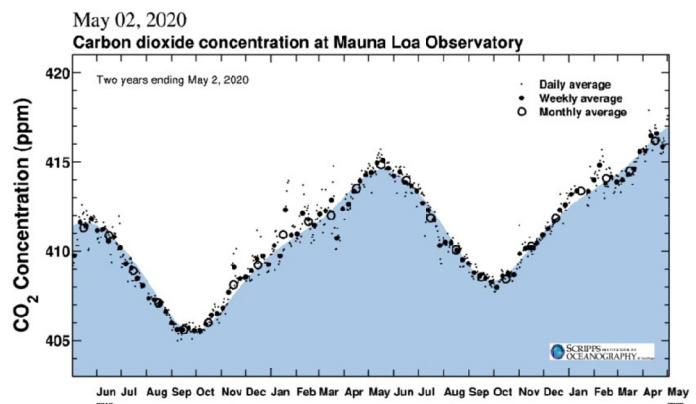
Adaptation to the impacts of climate change is only possible if everyone helps, regardless of the level of income or academic and professional training of each. If one doubts the scientific data of the current climate induced changes or finds it difficult to implement measures to reduce its impact, there will be no hope for rapidly attenuate the greenhouse gas progression curve with the continued consequences on global warming.

The COVID19 health crisis enabled us to note that the reduction in our daily travel activities had, unfortunately, had very little impact on the progression of the atmospheric CO₂ rate and yet there was much less consumption of fossil energy. The inertia of the phenomenon of climate change is therefore noted and over the coming decades we risk not being able to prevent the sectors being affected by torrential rains which erode our soils, droughts amplified by increasingly early heat waves or the rising waters of the seas and oceans due to the melting of the glaciers of the poles and high mountains.

As with COVID19, care must be taken to select measures that help those who will be affected and improve their resilience while waiting for our economic mode to switch to non-greenhouse gas-producing energies.

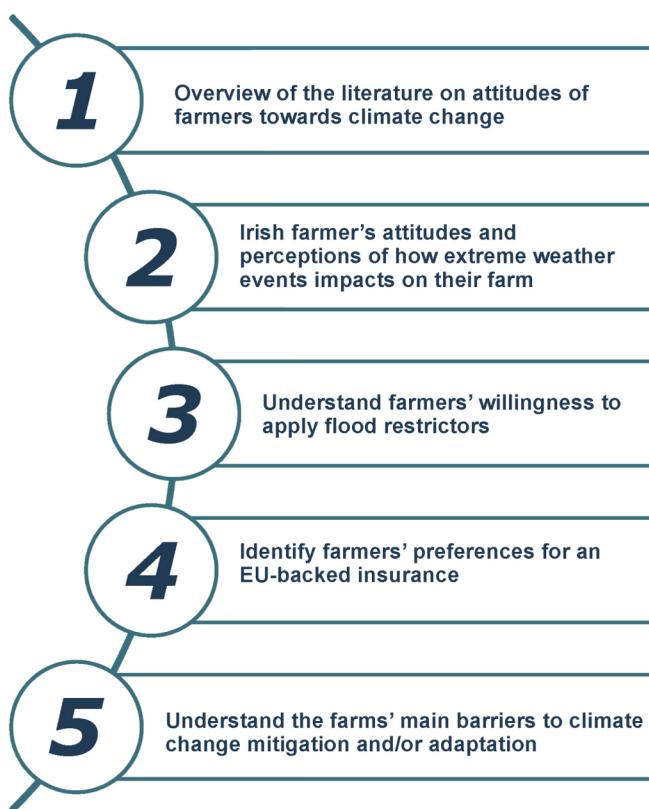
Dr. Jean François Berthoumieu
(ACMG, Project Leader)

It is also necessary to sequester part of the CO₂ from the atmosphere such as natural building up soil carbon stocks or more rapidly by producing low-cost biochar so that farmers can bury it in their soils and thus improve the fertility and the capacity of these soils to store more rain while reducing erosion. However, these technical solutions cannot be applied without the understanding, acceptance and participation of all human groups in this immense action to preserve human life in the midst of a rich biodiversity. The solutions will be sustainable and viable only if they are adapted to the localities and the needs of the different actors. This is where Sociological and Economic investigation and understanding of the decision-making levers, help us to advance our actions. Examples of this type of work has been carried out by three partners in Ireland, Portugal and France of our Risk-AquaSoil project who I invite you to contact and/or meet to perhaps undertake similar initiatives in your life and working group.



Understanding farmers' attitudes towards climate change adaptation

To understand farmers willingness to engage in climate change adaptation a large national survey of Irish farmers was undertaken (N=270) by NUI Galway on behalf of the RiskAquaSoil project. The survey collected information on farmers' attitudes towards climate change and extreme weather events; their willingness to engage in either collective or individual schemes to apply flood restrictors to their land to reduce downstream flooding to local communities and to determine farmers' willingness to buy EU-backed insurance that would protect their farm against extreme weather events caused by climate change. Additionally, qualitative interviews with a small group of farmers were undertaken to provide in-depth analysis of farmers' views on climate change adaptation.



The findings from the survey showed that approximately one-third of farmers' were concerned about more frequent severe weather events caused by climate change affecting their farm in the future. A sizeable portion of farmers (over 40%) indicated they would be willing to engage in a collective action scheme to apply flow restrictors to their land to reduce downstream flooding to local communities. Older farmers were less concerned about extreme weather events and they were less willing to engage in either individual or collective action schemes to reduce downstream flooding. Approximately, 70% of farmers indicated a willingness to buy EU-back insurance to protect their farm from severe weather events, such as storms, droughts, wildfires and flooding. Insurance for storm protection was deemed most important by farmers. The results showed that younger farmers, larger farmers (> 50 hectares) and farmers who had previously been affected by extreme weather events were more likely to buy insurance. The qualitative interviews highlighted that farmers' perceived difficulty accessing information related to climate issues and highlighted a lack of understanding of what measures they could implement. Farmers were in favour of local adaptation schemes that were suitable for their local areas with measures explained in accessible language. Economic benefits were perceived as the largest drivers to climate change adaptation, suggesting policy-makers should highlight the economic advantage of adaptation rather than just environmental benefits.

The results from this work will form the basis of a larger report, which will be available on the RiskAquaSoil website.

Authors: Edel Doherty (NUI Galway); Sinead Mellet (NUI Galway);

Climate change communication and social climate action

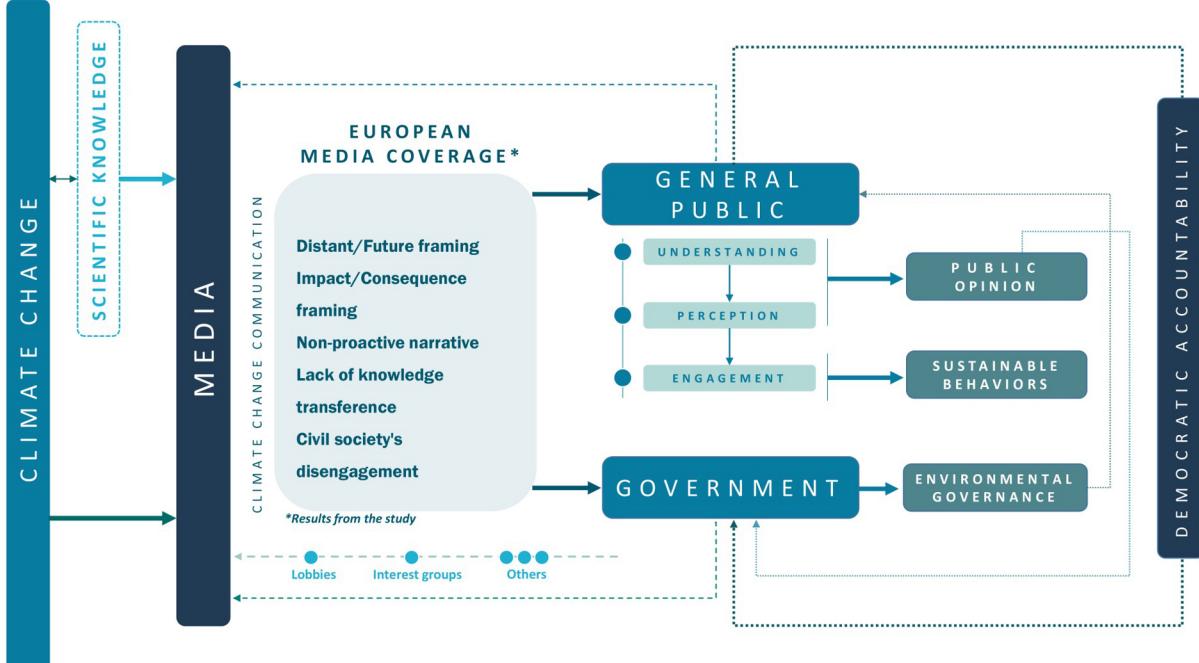
After decades of environmental indifference, 2019 marked a significant turning point in the global fight for climate action. At a scientific level, more than 11,000 scientist signatories from around the world, came to warn humanity that the planet is facing a climate emergency. At the same time, a rise of 'climate emergency' declarations were observed at a political level, with more than a thousand local governments declaring this emergency in 25 countries. It seems that scientists and policy makers come to recognize that climate change urges climate action in several societal spheres, including from common citizens. Yet, a substantial social inertia prevails in our societies, in which is obvious an insufficient public mobilization and engagement to climate change, with individuals not being actively adopting pro-environmental behaviours. Research on the matter, has been showing that the dearth social engagement to the actual environmental crisis, may be related to a poor knowledge/awareness to climate change. At this level, media would play an essential role, as it is considered the primary source of information of the lay audiences.

Considering this essential role of media, the CES Risk AquaSoil research team conducted a content analysis study, on news articles published in Ireland, UK, France, Spain and Portugal ($N=1500$), from 2018 and 2019. The goal was to identify the main weaknesses of climate change media communication to further propose possible opportunities of communication improvements.

It was verified that media tends to report climate change by using distant (e.g., future-focused) and outcome (e.g., threatening messages) framings, based on non-resilient, scientific and political narratives, whilst overlooking the role of civil society on adaption. Instead of promoting society's climate action, media may be contributing to a widespread social apathy regarding climate change and the disengagement of individuals to environment-related matters.

Contrarily to the actual communication praxis, climate change communication should narrow the challenge of climate change to the audiences' context, making climate change a present and personally-relevant issue. More salience to solution-focused messages and climate success stories should be given, in order to increase individuals' self-efficacy and trigger climate action.

Authors: Neide Areia (CES-UC); Alexandre Tavares (CES-UC)



#BreakSLIP

The #BreakSLIP is an event organised by the Dordogne Chamber of Agriculture and is part of the transnational cooperation project Risk AquaSoil.

The event consisted in setting up an experimental and scientific protocol on different soil types in the Dordogne in order to raise awareness among farmers and the general public about the role of soil in a context of climate change. A living soil will be more resistant to climate change (floods, frost, drought, etc.).

What are the objectives and challenges of the #BreakSLIP?

1) To create a trigger: It involves burying 100% cotton pants in the soil for 8 weeks in order to check its agro-nomic activity and to demonstrate that soil quality can be one of the elements in the response to climatic challenges.

2) Demonstrate the impact of agricultural practices on soil quality: In Dordogne, the Chamber of Agriculture decided to rely on the farmers involved in the DEPHY network to implement this protocol as well as on its reference technicians in agronomy. A partnership has been initiated with the organic cotton lingerie brand Olly.

The pants were buried in Bergeracois, Sarladais and Périgord Vert in soils with presumed biological activities more or less intense to demonstrate the interest of a healthy soil in a context of climate change.

An offbeat communication campaign

A communication campaign called #BreakSLIP was carried by the Dordogne Chamber of Agriculture in an offbeat tone to promote the burying and exhumation operations in the presence of the various partners of the event and many others.

This led to the production of a video to raise public awareness of the importance of soil conservation and soil resilience to the hazards of climate change. Thanks to an unexpected regional and national media impact, a staggered communication campaign made it possible to raise awareness of the work undertaken in the RiskaquaSoil project and of the major transition expected in the agricultural world to meet environmental and societal requirements. The vitality of our soils remains a key and a lever to resist and accompany all changes and fight against erosion phenomena increased by repeated climatic hazards.

Authors: Nicolas Fedou (CDA24)



Farmers surveys in Southern France

Understanding the needs in face of climate hazards makes possible to improve resilience and to propose appropriate and sustainable measures. 40 farmers were surveyed for two main reasons: agricultural plots cover about 60% of the Lot et Garonne watersheds, and the farmer is an asset for adaptation. Mayors are the hinge between the local and the global; understanding their current role in risk management helps to position them in the adaptation process.

Farmers were questioned with open-ended questions to grasp sensitivity: their profession and their person are inseparable. 40 mayors were asked about the climate and then had to choose from adaptation scenarios. The farmer was questioned as an individual/actor and the mayor as a function.

Farmers are experiencing climate change, 85% of them are impacted by "extremes", the word extreme represents the powerlessness in the face of risk. 90% of farmers say they are adapting: changing crops, organising work differently, improving irrigation. Plant cover and tillage are rarely mentioned by farmers. 36% of them imagine changing crops within 10 years, 15% imagine giving up the profession.

A change in the territorial economy and landscapes is in progress. Creating a landscape linking the actors is necessary. Mayors have a heterogeneous vision of climate change, each one defines it differently, includes it differently in the measures. Climate change is not or poorly defined locally, there is a difficulty in appropriating it. In an imaginary financing situation, they are moving towards mitigation rather than adaptation.

A new culture of risk reintegrating individuals as actors and not as factors is needed. Communication and awareness-raising are keys. Maps of soil erosion and thermal zones make the risk visible and make it possible to bring together all the players around climate.

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Risk AquaSoil in the Media

The Risk AquaSoil project, always had an important social vector since its inception. Since the beginning of the project, the research teams have disseminated its results through the media to reach general public.

Previously, the studies on water quality after the Portuguese forest fires of 2017, the meeting between the Risk AquaSoil partners and the victims' association of the mentioned fires, as well as, the climate change communication by the Iberian media, have been highlighted on multiple news sources.

This year alone the Risk AquaSoil project has also been featured by the media. As in March of 2020, Ireland's National Television and Radio Broadcaster presented an article on the research on the media role in shaping individuals' reaction to climate change. By May, CES Risk AquaSoil member, Neide P. Areia, was on the Portuguese radio, explaining the study process and results of the Iberian media coverage on climate change.

These media highlights and more can be reviewed on the Risk AquaSoil project website (<https://www.riskaquasoil.eu/>) on the clipping section.



Project website

<https://www.riskaquasoil.eu/>