Session 4: Good Practices of adaptation and mitigation to make the best of climate change

Workshop: Agriculture and forestry

Moderator: Dominique Fayel, FNSEA

FIND HERE THE SUMMARY OF THE TWO INITIATIVES

Initiative 1: ***Climate change and the durability of vineyards in the Douro valley***, Rui Soares, Real Companhia Velha
Initiative 2: ***Adapting Farming Practices to Climate Change (AP3C project)***, Vincent Cailliez (SIDAM)

MAIN LESSONS LEARNT FROM THE TWO INITIATIVES

Initiative 1

In the Douro Valley, the landscape has been heavily modified for centuries as farmers built terraces along the steep mountainous valleys to grow grapes for wine production. Today, the valley and its grapes are particularly susceptible to the increasing temperatures and reduced and unpredictable annual rainfall caused by climate change. Through a public-private collaboration funded privately and through national and European projects, the Real Companhia Velha completed a series of experiments to develop sustainable agricultural practices adapted to climate change. The project found that minimum tillage and mechanization, use of ground cover crops, growth of new grape varieties, and diverse water management schemes can help protect vineyards from climate change and contribute to effective adaptation. For example, ground cover crops increase biodiversity and reduce pesticide use. To create synergies between climate change mitigation and adaptation, research is critical as are patience and effective collaboration. Vineyards are a long-term investment and successful management depends on understanding how climate change will affect grape production over the long-term.

Initiative 2

The initiative found that large scale climate forecasting is unable to predict local level variations in climate caused by climate change. In Creuse, the AP3C project developed local indicators much more useful to farmers than global projections and found that climate change in the region is moving two times faster than global simulations predict. As a result, plants will grow earlier in the harvest season, the harvest season will shorten, production will be concentrated in springtime, thermal and heat stress will increase, and some plants may be able to grow further into the fall. Similar projects can be completed in other areas as long as there is the political and social will and effective collaboration between funders, farmers, governments, and researchers, but projects must be careful not to collect too many indicators. Results must be properly disseminated in ways that are useful and accessible to farmers.

5 KEY MESSAGES OF THE DISCUSSION

Participants discussed in groups and have especially emphasized the below points:

1. Species and species diversity must be promoted and conserved both in agriculture and forestry. This includes the promotion of local varieties and the proper selection of varieties adapted to anticipated new climates and environments altered by climate change.
2. Water management is important for future water security in agriculture and forestry. Effective water storage is particularly important such as to ensure enough water for the irrigation of vineyards or feedstuffs for livestock.
3. There is a need for the collection and use of data on local level climatic variations and conditions that may differ from predictions made in large scale models. Local data is essential for the promotion of effective adaption to the local effects of climate change.
4. In both agriculture and forestry, intersectorial collaboration must be promoted, a range of actors (public and private sectors, research institutions, NGOs) must be mobilized, and the results of studies and research must be effectively and clearly disseminated. Local and traditional knowledge must be incorporated into research and policy.
5. Mountain forests must be conserved and preserved through proper management. This includes educating current and future generations of forest managers, for example about climate change, risks, and sustainability, and encouraging people to live in mountain areas so that there are people available to manage forests (applies to mountain agriculture as well).

ACTION FOR EUROMONTANA

Euromontana should provide an exchange platform for experiences and methods; facilitate scientific collaboration, support local decision makers, and promote the specificities of mountain forestry and agriculture at the EU level.

Session 4: Good Practices of adaptation and mitigation to make the best of climate change

Workshop 2: Sustainable energy and water

Moderator: Danut Gitan, CEFIDEC

FIND **HERE** THE SUMMARY OF THE TWO INITIATIVES

Initiative 1*: The use of green energy to process berries*, Ioan AGAPI, FAM Dorna, Romania
Initiative 2: *A new governance approach: how the community of Tolmin, Slovenia has developed an energy policy to deal with climate change*, Miro KRISTAN, Development Center of Soca Valley, Slovenia

MAIN LESSONS LEARNT FROM THE TWO INITIATIVES

Initiative 1

The project managed to develop a new brand for mountain products in Romania while ensuring the quality of the food and promoting green and sustainable energy production to process the products. Berry picking in these parts of Romania is a seasonal job often accomplished by low-income families. This project has managed to create a social enterprise by providing more secure employment, by structuring the berry supply chain in the region notably with the creation of the brand "Aroma Muntelui" (Mountain flavour) and by implementing a new source of renewable energy. Indeed, the processing unit is powered by a photovoltaic power plant.
This project has proven to be a training opportunity for the local people on the nutritional characteristics of forest products, harvesting and green processing. The publication and dissemination of recommendations and good practices is now underway.

Initiative 2

Five municipalities of North-West Slovenia came together to create a regional Low Carbon Strategy, following a bottom-up approach. This allowed a diverse set of stakeholders to participate in the development of the Low Carbon Strategy document that would be supported by stakeholders across sectors, energy being a very transversal thematic. The regional level is important because it allows the bottom-up approach mentioned beforehand with the involvement of locale stakeholders, but also because it provides tangible results in the transport sector for example, but also infrastructure, public lighting, etc.
The transferability of the project depends on the motivation of the stakeholders and their involvement, which is why the process is the important part of this project, not only the results. Little steps must be taken to progressively achieve a change in behaviours. Moreover, financing a project is always an issue but means exist to overcome it and this issue should not be seen as a barrier.

KEY MESSAGES OF THE DISCUSSION

Sustainable water management

1. Allocate profits of companies to a fund dedicated to mountain support.
2. Find a way to compensate ecosystem services, to compensate both the resources and the work of mountain people providing those services.
3. Find a balance between the protection of upstream watershed basins and energy production; some rivers must remain wild but the development of renewable energies must also continue to be promoted.

Renewable energies

1. Develop energy savings, including with small-scale projects at local level.
2. Encourage schemes to renovate buildings and improve energy efficiency.
3. Install charging stations for electric cars in mountainous regions (with clean energy sources!).
4. Improve research and investments in the field of energy storage.

ACTION FOR EUROMONTANA

Euromontana should facilitate the exchange of best practices between members of the network and promote these ideas at EU level.

Session 4: Good Practices of adaptation and mitigation to make the best of climate change

Workshop: Biodiversity and protected areas

Moderator: Thierry Percie du Sert, ARPE

FIND **HERE** THE SUMMARY OF THE TWO INITIATIVES

Initiative 1: ***Better to conserve than reintroduce. Lessons from species reintroductions in mountain ecosystems and the importance of performing feasibility assessments: the case of the Mountain Grey Partridge***, José María Fernández-García, HAZI
Initiative 2: ***Payments for Ecosystem Services in Natura 2000 sites in Lombardy***, Bruna Comini, ERSAF

MAIN LESSONS LEARNT FROM THE TWO INITIATIVES

Initiative 1:

- Wild species restoration/reintroduction techniques are complex and difficult, and the results are uncertain. In terms of efficacy, the conservation of threatened population should be resolved before their decline becomes irreversible (danger of extinction).
- (Successful or failed) attempts to reintroduce species should be better documented and published.
- Preliminary feasibility studies (with clearly defined indicators) should always be carried out before embarking on a project to reintroduce species.
- Reintroduction projects are long and should be secured by policies and financial support for the long term (in the case of the Gallypyr projects, 3 years was too short a period).

Initiative 2:

- The experimentation with the payment system for ecosystem services in the 9 Natura 2000 sites in Lombardy made it possible to test a new model for regional management of natural resources.
- The success of the project encouraged the possibility of transferring this mode of management to other regions.
- A new programme for payment of ecosystem services on a larger scale is planned in most of the 260 Natura 2000 sites of Lombardy, thanks to a new LIFE project.
- The difficulty lies above all in raising awareness among the population about the importance of the services provided by the Natura 2000 sites and therefore the relevance of payments.
- The role of mediators to facilitate awareness raising among the population is a key to success, where communication and the dissemination of information are particularly important approaches.
- The assessment methodology must be deepened.

5 KEY MESSAGES OF THE DISCUSSION

Participants discussed in groups and have especially emphasized the below points:

1. *Preservation of biodiversity in the face of climate change:*
   Set up projects to preserve (or restore) the ecological corridors between the various biological reservoirs of mountain ranges, by promoting more particularly **cross border synergies.**

2. *Promoting the mountain economy by relying on the local diversity:*
   Develop the **local consumption** by capitalising on the local diversity:
   - Example of the use of local wood in the nature reserve of the Ariège Pyrenees region through the deployment of mobile sawmills;
   - Use of platforms of local agricultural products by the local public authorities (example of school canteens);

   The use of local resources creates a direct link with the effects on climate change by **reducing travel** between producers / processors and consumers.

3. *Promoting mediation between stakeholders:*
   Promote better awareness by the population and the public in general of favourable environmental effects generated by mountain farmers and foresters. Develop an appropriate communication to **recognise** such effects.
   Bring "farmers" and "environmentalists" closer together to **promote dialogue** between the various stakeholders of biodiversity. Farmers could benefit from the contribution of naturalist experts and the latter could in turn gain better knowledge of the realities in the farming world.

4. *Maintaining biodiversity needs funds:*
   Climate change is gaining a foothold for the long term, so financial programmes that can **be applied in the long term** are needed. Most (current) short-term financing cannot sustain efficiently long-term actions geared to conserving biodiversity.

5. *Paying for ecosystem services (example of the Lombardy Region):*
   The results of payments for such ecosystem services must be transparent so that payers are assured




Session 4: Good Practices of adaptation and mitigation to make the best of climate change

Workshop: Tourism: from snow business to four seasons tourism

Moderator: Jon-Andreas Kolderup, Buskerud County Council and Vice-President of Euromontana

FIND HERE THE SUMMARY OF THE TWO INITIATIVES

Initiative 1: ***A new alternative to winter tourism: Recovering alpine pastures through the promotion of quality food products***, Andreja Borec, University of Maribor
Initiative 2: ***Developing sustainable tourism destinations in Geilo***, Pål Knutsson Medhus, Visit Geilo

MAIN LESSONS LEARNT FROM THE TWO INITIATIVES

Initiative 1

The Slovenian ski station of Rogla has had to diversify its activities to adapt to the decrease of snow and ski revenues. Recovering of alpine pastures during summer time to produce quality mountain products is one possible solution, combining tourism, natural conservation and rural development. The "Tastes of Rogla" label was created to promote those products and is now an essential component of the agritouristic activities in that region. The tourism sector has developed summer offers and guided tours to attract more tourists over that period.

Initiative 2

Geilo is an official sustainable destination, recognized as such with a Norwegian label. This is the result of a standardized process to integrate sustainability in local economy and identity. Indeed, thanks to the involvement of public and private stakeholders, sustainability has been integrated in all economic sectors of the community from the food business to the organization of events. This sustainable label has helped Geilo to boost its touristic strategy and promote local identity and values.

5 KEY MESSAGES OF THE DISCUSSION

1. The profile of tourists is not fixed. They are individuals, second home owners, skiers, hikers etc. The message is therefore to be more precise in the marketing approach and the different offers for the different kinds of tourists (adapted offers for the different target groups)

2. Transport is a vital deal. Sustainable transportation both to arrive at a destination as well as to operate within the destination is necessary. Developing electric cars and trains is necessary to encourage sustainable transport.

3. Labelling and certification came up as important, but they are not organized yet under a coherent framework such as the guiding principles for sustainable tourism of the UN World Tourism Organization. Tourist operators reports through a survey that it is valuable to have a visible tool for sustainability (60% of respondents) and that the importance of a visible certification will increase in the next 5 years (71% of respondents)

4. Local food products – both in restaurants and shops – are now part of the sustainable touristic offer, combining local development and diversification from winter activities.

5. Involvement of locals and promoting the local values and identity is part of sustainable tourism.

ACTION FOR EUROMONTANA

Work towards a standardized international certification for sustainable destinations.

Session 4: Good Practices of adaptation and mitigation to make the best of climate change

Workshop: Accessibility of mountain areas: developing sustainable transport and ICT services

Moderator: Audrey Sinclair, Scottish Council

FIND **HERE** THE SUMMARY OF THE TWO INITIATIVES

Initiative 1: ***Micropol: encourage teleworking in rural area***, Jean-Dimas Malot, Nièvre Numerique
Initiative 2: ***Move on Green: sustainable transport in rural and mountain areas***, Luis Munoz, Provincial Government of Teruel

MAIN LESSONS LEARNT FROM THE TWO INITIATIVES

Initiative 1

The lack of high speed broadband is a key factor in preventing the growth of businesses in mountain areas. Isolation is also a barrier to young people deciding to stay or return to the mountain areas, with the knock on effect this has with falling school roles and loss of other facilities. This trend can be reversed by providing units such as Smart Work Centres (SWC) which have not only good broadband but provide an opportunity for cooperation and in-house business support, leading to increased productivity. The SWCs are especially effective when shared between public and private sectors.

Initiative 2

Living in mountain areas is very difficult without access to a car, especially since most of these areas have poor public transport. Mobility is required for travel not only from rural to urban areas, but also between different rural areas, especially for older people. Starting with the Good Practices and policy guidelines, the successful solutions will be those which match the circumstances of particular areas, and often innovative ideas have to be considered and applied.

5 KEY MESSAGES OF THE DISCUSSION

Participants discussed in groups and have especially emphasized the below points:

1. Empowering the most appropriate level of decision making to deliver innovative transport solutions for all. Transport on-demand, sharing vehicles are interesting solutions to developed at local and regional levels.

2. Not only reducing the number of empty vehicles, but trying to reduce the total number of journeys to avoid CO2 emissions: the use of ICT alternatives can bring new solutions (for instance develop telemedicine in order not to have to go to the doctor).

3. Supporting High Speed Broadband in all mountain areas with some minimum standards for everyone (domestic, public and commercial).

4. Providing digital tools and training to realise the full benefits of improved broadband (benefits such as telemedicine and collection of detailed data on climate change).

5. Providing facilities like the Smart Work Centres and opportunities for young people to live, study, work and succeed in mountain and rural areas.

ACTION FOR EUROMONTANA

Euromontana should promote the expansion of the use of electric cars (at the research and at the practitioner level).

It should also encourage communities to look for their own solutions to overcoming the accessibility problems of mountain areas, trying to think out of the box to find the most adequate solution adapted to their needs.

Session 4: Good Practices of adaptation and mitigation to make the best of climate change

Workshop: Innovation linked to the management of natural hazards

Moderator: Aashild Kjelsnes, Sogn of Fjordane

FIND HERE THE SUMMARY OF THE TWO INITIATIVES

Initiative 1: ***Land-use planning and physical infrastructure: Planning for increased or decreased climate change vulnerability?***, Carlo Aall, Head of research at Western Norway Research Institute, Professor II in Sustainable Development at the Sogn og Fjordane University College

Initiative 2: ***FORRISK and PLURIFOR: Innovative risk management in Basque forests***, *Alejandro Cantero, HAZI*

MAIN LESSONS LEARNT FROM THE TWO INITIATIVES

Initiative 1

While there has been an increase in heavy precipitation and the likelihood of natural hazard events in Norway in the last few decades, there has been a simultaneous decrease in land-use planning capacity in small and medium sized municipalities. This project sought to identify whether poor land-use planning, climate change, or a combination was responsible for natural hazard events. Of 10 events analysed, 8-9 could have been mitigated by better planning, suggesting that land-use planning must do a better job of incorporating climate change into decision making. In order to achieve this, national laws and regulations must better incorporate climate change into land-use plans and infrastructure development, local planning capacity and control must be increased, better data quality is required, political priorities must better incorporate climate change, and knowledge at all levels regarding climate change and risk must be increased.

Initiative 2

FORRISK brought together 12 public partners from Portugal, Spain, France, and the UK to examine the risks (pests and pathogens, forest fires, wind damage, increased temperatures) posed to forests by climate change. Activities included growing species beyond their natural range, comparing current forestry practices with other climate change adaptation techniques, and setting up a data collection system and database to monitor forest growth, health, and biological cycles. The project produced a risk analysis, modelling tools, and decision support tools for forest managers. Forests are at risk, but with proper collaboration between the public and private sector, funding, research, and management, these risks can be mitigated.

5 KEY MESSAGES OF THE DISCUSSION

Participants discussed in groups and have especially emphasized the below points:

1. Small municipalities often have small budgets and low capacity to deal with natural hazards, both in terms of mitigation, adaptation, and response. Funding, training, and human resources are needed especially in mountain areas.
2. Access to free common data across sectors and disciplines regarding risks and natural hazards would allow for better land-use planning and risk management.
3. Current and future generations must be educated about risks, natural hazards, and climate change mitigation and adaptation in mountain areas. This includes educating a new generation of risk managers and climate change experts and incorporating climate change into studies across disciplines.
4. Climate change must be incorporated into risk management analysis, preparation, and response at all levels.
5. Risks and natural hazards and their relationship to climate change must be addressed at the EU level and resources must be directed specifically towards mountain areas where risks and natural hazards also pose a threat to lowland areas, for example by threatening water resources.

ACTION FOR EUROMONTANA

Euromontana should be a clear voice for incorporation of mountain areas into EU level policies and programs regarding climate change adaptation, education, and risk management. Euromontana should emphasize at the EU level that the risks and natural hazards linked to climate change in mountain areas also threaten lowland areas.