SHERPA
Rural Science-Society-Policy Interfaces

MAP Position Paper

LAND USE & CLIMATE CHANGE

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Authors

CIHEAM - IAMM | Samuel Féret and Jean-Pierre Rolland

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1. Objectives of the 3rd phase of the SHERPA MAP

For this 3rd phase, topic of **development of rural territories in the context of climate change** has been selected with the regional rural network. Indeed, the discussions of the second SHERPA phase have shown that the question of adapting rural territories to climate change remains a major issue for the region, particularly in the context of the implementation of the new French law on resilience and climate. This topic could be the cross-cutting axis of the next LEADER' application. Linking this issue to the LEADER programme and other territorial projects in the South region could indeed provide a concrete response to many of the priorities identified in the previous work of the SHERPA MAP.

New programming period is an opportunity to refer to various general and sectoral policies and strategies relating to the fight against climate change at European, national and, above all, regional level (Green deal, Climate law, Strategic plan Horizon 2021-27, new CAP, Fork to Fork, the national climate plan, the national adaptation strategy, Keeping a COP ahead, the recovery plan, etc.).

The final objective is to promote the adequacy of territorial projects, and in particular LEADER projects, with these documents, in particular the SRADDET (regional spatial planning document), one of whose areas of intervention is the fight against climate change, the climate-resilience law and the regional adaptation strategy " Keeping a COP ahead ". It is also a question of identifying how these policies and programmes do or do not respond to the challenges of adaptation and transition in rural areas and of making planning proposals.

In addition to proposals included within the first SHERPA working document, which were produced by GREC-Sud, we used a summary presentation of the main regional, national and European public policy documents, and used the ADEME transition scenarios for 2050 "Choose now to act for the climate" to facilitate the discussions during this phase.

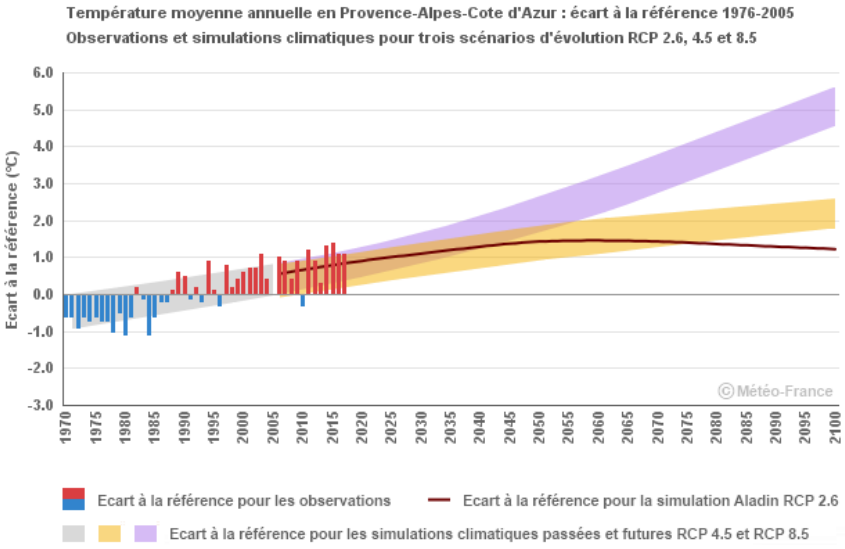
The two workshops of the MAP in June and September allowed to:

- to re-specify and prioritise the main issues and challenges of climate change for the rural territories of the Southern Region
- to identify concrete actions developed in rural territories to respond to the different challenges and to specify which transition and adaptation strategies to develop and implement in order to respond to these issues and
- to make recommendations in terms of public policy improvement and support for the implementation of projects to support these transitions (European, national, regional support, citizen involvement, design of local climate plans).

2. The effects of climate change are expected to increase in a region already heavily impacted

As the GREC reminds us in its overview of the South region, the Mediterranean area is identified as one of the "hotspots" for the impacts of climate change that are already being felt. The current trends are expected to continue and even increase. For example, climate projections show a continuation of annual warming until the 2050s, both during the day and at night, with an increased frequency of heat waves and drought episodes. The number of frost episodes is expected to decrease further, but the impact of late frosts is expected to increase on crops that are increasingly in advance of vegetation. This trend, combined with rising temperatures, will increase the dryness of soils in summer and will have significant long-term consequences on water resource management and on forest fire.

Although there is a great deal of uncertainty, the trend is towards a decrease in summer rainfall for the entire Mediterranean basin, with a lengthening of the number of consecutive days without rainfall, which would be accompanied by a drastic decrease in groundwater reserves[1] . The level of snow cover is expected to continue to decrease, particularly in the low and medium mountains, and the main glaciers will continue to shrink[2].



Furthermore, extreme climatic events are expected to multiply and intensify (heat waves, storms, heavy rainfall, etc.), with the corollary of natural risks faced by a large part of the region's rural areas (forest fires, floods, landslides).

In the rural areas of South region, these effects will have a particular impact (see working document, phase 3):

- water resources
- natural environments and biodiversity
- the agricultural sector
- the tourism sector

[1] GREC-PACA, Provence Alpes Côte d'Azur, a region facing climate change, November 2015
[2] See on this subject the website: https://www.climsnow.com/ on adaptation to climate change and snowfall projections

3. The main challenges of climate change for rural territories in South Region and concrete actions

From exchanges held during the first workshop, it emerged that ADEME scenarios confirm and reinforce a large part of the issues and challenges identified during the previous phases and highlight other themes that had been less addressed (see also Provence Alpes Côte d'Azur MAP, Position paper, Avenir des zones rurales à l'horizon 2040: futurs désirables et gouvernance des transitions, 15 Nov. 2021). Moreover, ADEME scenarios allow to question these issues and challenges through a foresight approach to develop transition strategies to face the effects of climate change in rural territories. The second workshop and the documentary research (See GREC Sud, FNE PACA and Leader France)[3] made it possible to identify concrete actions illustrating the responses developed in rural territories to the various issues or challenges identified.

3.1. Land use planning and biodiversity management

The issue of land use planning is central to achieving carbon neutrality. In particular, the urban sprawling of natural areas and agricultural land must be halted and the boosting land use, particularly for agricultural land use, must be supported (see next point). The key point here is **to help local authorities, and in particular rural municipalities, to reduce the rate of urban sprawling and consumption of natural, agricultural and forest soils by 50% by 2030, in order to achieve the objective of zero net urban sprawling by 2050**, as set out in the Climate Resilience Act and included in SCOTs, SRADDETs and local urban planning documents.

Forest management and, more generally, the preservation of natural areas and biodiversity (in terms of adaptation and mitigation), as well as the enhancement of ecosystem services, are important elements in achieving carbon neutrality. The challenges of climate change and the accelerated loss of biodiversity are intimately linked. The EC and ADEME thus identify nature and the services it provides as an essential asset for rural territories in the fight against the effects of climate change (cf. in particular the major role played by soils as a carbon sink in natural, agricultural and forest areas). The Regional Agency for Biodiversity and the Environment (ARBE[4]) of South Region is an important operator for rural areas to mobilise on biodiversity and ecological transition topics.

Here are two examples of actions that contribute to taking better account of biodiversity in rural areas[5]:

- **The communal biodiversity atlas** set up in Arles, in the framework of a call for expressions of interest from the French Biodiversity Agency, by two associative partners, the CPIE Rhône - Pays d'Arles and the Conservatoire d'Espaces Naturels Provence-Alpes-Côte d'Azur, who have joined forces with the Camargue Regional Nature Park and the municipality of Arles to carry out an Atlas of Communal Biodiversity (ABC) in Arles. This is a participatory inventory of 3 species present in the city: bats, amphibians and butterflies. The inhabitants are invited to inventory the urban biodiversity. Such atlases are also developed in the Verdon NRP.
- **The identification of ecological continuities carried out by the Verdon Natural Regional Park,** in association with the Mediterranean Institute of Ecology and Biodiversity (IMBE/Aix-Marseille University), by combining different approaches and diagnoses (agriculture, pastoralism, forestry,

[3] . GREC SUD, Concrete solutions to engage in transitions in the Provence Alpes Côte d'Azur region, December, 2021
. FNE PACA, Sustainable development objectives: Associations and local authorities acting together in Provence Alpes de Côte d'Azur, January 2020
. LEADER France, French Rural Network, Leader and ecological transitions. Climate, Energy, Biodiversity https://leaderfrance.fr/projets/

[4] ARBE Région, Sud https://www.arbe-regionsud.org/

[5] https://fnepaca.fr/wp-content/uploads/2020/04/20200403-maquette-odd-paca.pdf

landscape, biodiversity), has made it possible to draw up a green and blue grid adapted to the challenges of the territory[6].

With regard to forests, it is, as GREC emphasises, "fundamental to adopt an adaptive management strategy adapted to the specificities of local contexts of altitude, slope, species, etc.". It is also a question of limiting the effects of forest fire risks through better preventive management (brush clearance, controlled fires, grazing, etc.).

Two actions that contribute to the development and implementation of such a strategy can be mentioned here:

- **The observatory of forest-climate relations** located in Roquefort-la-Bédoule (Bouches-du-Rhône) set up by Font-Blanche scientists studies the components of the water and carbon cycles, with a wide range of measurements at the level of the soil, trees and the eco-system[7].
- **The research and development project entitled MEDForFUTUR,** led by the Centre national de la propriété forestière (CNPF) (PACA delegation) in partnership with the ONF and INRAE (supported by Fransylva PACA), aimed to boost the adaptation of management to climate change by proposing innovative silvicultures adapted to the Mediterranean context[8].

3.2. A more responsible and sustainable agricultural sector and food regime

Participants agreed that the agricultural sector and consumer food choices are central to achieving the goal of carbon neutrality by 2050.

The main points identified by the MAP members are the following:

AGRICULTURAL LAND

In order to maintain and develop agricultural activities in rural areas, it is necessary to protect agricultural land (including farm buildings), to reclaim it and to make it more accessible for setting-up new farmers. It is therefore necessary to activate the various existing cooperation tools (public and private land banks and land trusts...) or even pre-empt agricultural land purchase (cf. Pays d'Arles), in order to transfer agricultural land and set-up new producers

It should be noted that, in the context of an objective of zero net urban sprawling by 2050, the land issue must be addressed in a comprehensive manner (agriculture, housing, commerce, networks, etc.) within local urban documents.

EAFRD agricultural project "Protecting and mobilising agricultural land in the Alpilles Regional Natural Park around pilot sites

Regional agriculture contributes to the structuring and preservation of space, risk management, landscape protection, natural heritage management, as well as the economic development of rural areas. Through this project, the Alpilles Regional Natural Park in partnership with the Chamber of Agriculture 13, SAFER PACA, Terre de Liens PACA, ADEAR 13 and CASA 13 are pursuing their efforts to revitalise agricultural land and reclaim wasteland (SAFER PACA).

[6] The Verdon Regional Nature Park facing the challenges of climate change, June 2021

[7] www.inrae.infrawan.fr/actualites/foret-melangee-font-blanche-observatoire-faire-avancer-connaissances-fonctionnement-forets-mediterraneennes

[8] https://paca.cnpf.fr/nos-actions/preservation-de-l-environnement/medforfutur-adaptation-des-forets-aux-changements

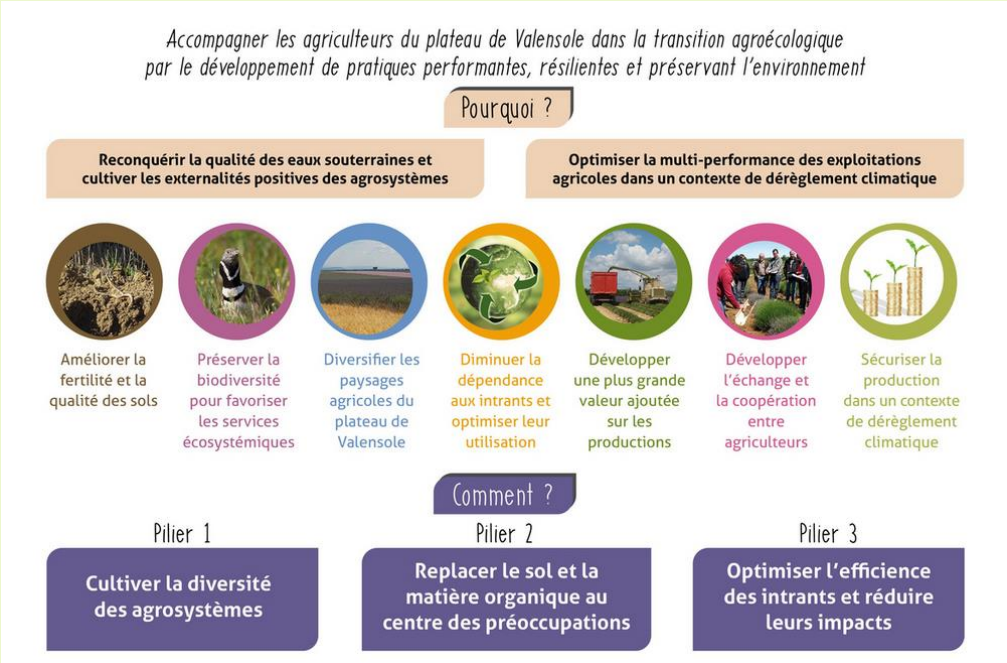
MORE ENVIRONMENTALLY FRIENDLY AGRICULTURAL PRODUCTION METHODS

The aim is to promote more sustainable production methods (organic farming, agro-ecology, agro-forestry, functional agro-biodiversity, pastoralism, etc.), which are less water-intensive, and to develop and adopt species that are more resistant to high temperatures, late frosts and water stress, or even to change crops in certain cases.

In addition to reorienting CAP subsidies in favour of more sustainable production methods, a shift in agricultural education (high schools, agronomy schools) and agronomic research is also a powerful lever.

REGAIN project (Chambre d'agriculture Alpes de Hautes Provence, PNR du Verdon, AgroSYS, SCP)[9]

The REGAIN project is a network of partners at the service of farmers. Its aim is to support them in the evolution of their agricultural practices on the Valensole plateau towards more sustainable agrosystems.



SUSTAINABLE MANAGEMENT OF WATER RESOURCES

For GREC-Sud, the challenge here is to manage tensions in the use of an increasingly constrained resource, while needs are expected to increase with a general increase in activity[10] . It is therefore a question of saving water and managing the sharing of the resource between upstream and downstream, between towns and countryside, between the different sectors of the economy, through solidarity and cooperation between the territories of the same catchment area. This is the role notably of the water development and management schemes (SAGE), such as that of the Durance or that of the Verdon which establishes an upstream-downstream solidarity.

Luberon Regional Natural Park - "Let's save water" project

In 2014, the Luberon Regional Natural Park launched the project "Économisons l'eau" (Let's save water), in partnership with the Gesper association and the Graine Paca, financed by the Rhône-Méditerranée-Corse Water Agency and Europe (Feder). This programme aims to guarantee sustainable access to water

[9] https://paca.chambres-agriculture.fr/la-chambre-dagriculture-des-alpes-de-haute-provence/vous-etes-agriculteur/optimiser-vos-pratiques/la-demarche-regain/

[10] GREC-PACA, Climate and climate change in the Provence-Alpes-Côte d'Azur region, May 2016

for all in the region and to compensate for the increase in drinking water needs due to population growth, without burdening the resources that are already in short supply in certain sectors[11].

(cf. also: Let's save water in the Provence-Alpes-Côte d'Azur region Practical guide for local authorities produced by GESPER)

In agriculture, in addition to choosing crops that consume less water, it is a question of optimising irrigation, in particular by limiting leaks and wastage, supporting farmers for "intelligent" irrigation, or even by recovering rainwater and reprocessing wastewater.

"G of Water

Eight farms in the Alpes de Hautes-Provence have joined the GIEE "G de l'eau" in 2019 for a total surface area of 685 ha, "The farms involved in this approach are isolated farms in deficit areas. They are particularly sensitive to water resources and the impact of their discharge into the environment. They must set up water saving systems, rainwater recovery and wastewater treatment[12].

The ClimAgri (ADEME) and Agrybalise tools[13]

ClimAgri® is a tool and an approach for diagnosing energy and greenhouse gases for agriculture and forestry, at the territorial level, distributed by ADEME. Agrybalise is a method that provides indicators of the environmental impact of products, including all the stages involved in the manufacture of products (from the field to the plate) and taking into account various environmental issues (climate, water, air, soil, etc.). These tools make it possible, as is the case in the Pays d'Apt-Luberon, to support farmers and other stakeholders in territorial food systems in the development of a territorial agricultural and food transition.

RELOCATION OF AGRICULTURAL PRODUCTION AND PROCESSING

The relocation of agricultural production and processing, combined with the strengthening of short supply chains, contributes to improving the food security of the territories and, by limiting intermediaries, favours better remuneration for producers and processors and finally limits travel and therefore greenhouse gas emissions.

Covid crisis has accentuated the development of alternative distribution systems and short supply chains: the rise of local and solidarity-based initiatives for the sale of products and direct contact between producers and consumers (farm drives, farmers' markets, AMAPs, food platforms, click and collect, online sales, etc.); the rise of collective approaches (mutualisation of distribution and delivery methods, grouping of farmers, etc.); the establishment of collaborations with large-scale distributors for the sale of products and services.); the rise of collective approaches (mutualisation of distribution and delivery channels, grouping of farmers, etc.); the establishment of collaborations with large-scale retailors for the sale of products that cannot be sold through their usual sales channels (listing of local producers, promotion of festive products, promotion of French products).

The TFP network in South Region

Territorial food projects (TFPs) make it possible to develop a global approach to territorial food systems that includes the agricultural sector. Their objective is to relocate agriculture and food in the territories by supporting the installation of farmers, short circuits or local products in the canteens[14]. This network is led by the Rural Network, the South Provence-Alpes-Côte d'Azur Region, the DRAAF, the DREETS, the

[11] https://www.parcduluberon.fr/un-quotidien-a-preserver/milieux-naturels-et-biodiversite/eaux-et-rivieres/economisons-leau/
[12] https://paca.chambres-agriculture.fr/les-actualites-proches-de-vous/detail-de-lactualite/actualites/8-fermes-engagees-dans-le-giee-g-de-leau/
[13] https://expertises.ademe.fr/agriculture-foret/production-agricole/passer-a-laction/dossier/levaluation-environnementale-agriculture/loutil-climagri
[14] https://agriculture.gouv.fr/quest-ce-quun-projet-alimentaire-territorial

ADEME and the Regional Chamber of Agriculture. It currently includes 28 TFPs, 25 of which are emerging, and six TFPs are also being considered, thus covering almost the entire territory. It allows exchanges and the pooling of tools between the various actors involved[15].

STRENGTHENING MEASURES AND SUPPORT FOR THE AGRICULTURAL SECTOR TO FIGHT NATURAL RISKS

In order to address agricultural risks, it is first of all important to reduce bare soil in order to limit the risks of erosion, runoff and landslides.

It is also a question of revaluing agri-environmental aids to maintain rural territories and to value solutions based on nature and ecosystem services in these support schemes. For example, the amount of aid could be linked to existing risks (see risk map[16])

It is also a question of taking into account, as for the forest, the multiple functions of agriculture, including risk protection, and not only its productive function (multifunctionality). Thus, support to pastoralism as a "tool" for land maintenance and risk management in rural areas should be encouraged.

CHANGING FOOD CONSUMPTION PATTERNS

Food consumption patterns are also an important lever for achieving the objective of carbon neutrality and, more generally, for a sustainable ecological transition, via a reduction in meat consumption, the fight against food waste (cf. SOLAAL association which facilitates unsold food donations from farmgate), but also the development of the consumption of local products and environmentally friendly products, including in collective catering, as well as the use of short supply chains (cf. previous point). These developments also respond to new societal demands for healthier and more environmentally friendly agriculture, fisheries and food, which pays producers and fishermen. Raising awareness and educating people about food issues, particularly in schools, is an important lever for changing consumption patterns.

It is also a question of taking into account the inequalities in access to healthy, quality food, which have increased with the health crisis and are worsening with price inflation (development of solidarity baskets).

Régalim PACA

The regional network to fight against food loss and waste, REGALIM PACA, initiated by the DRAAF, the ADEME and the Provence-Alpes-Côte d'Azur Region, allows regional actors from different families to meet and exchange ideas: agricultural production, processing of agricultural and food products, distribution, consumption (collective catering and the general public). It deals with 4 main subjects: raising awareness among the general public, quantifying waste in PACA, the fight against waste in the catering sector and agricultural and food donations[17].

The REGAL Network

This network brings together actors in the region (agricultural and agri-food companies, schools, local authorities, citizens) and projects (organised territories) around a common ambition: to develop local and quality food in school and collective catering based on sustainable and plural agriculture anchored in the territory. It enables the development of new cooperations on the territory, new regulations between economic actors (agricultural producers, processing companies, chefs, managers, ...) who agree on the modalities of their exchanges according to their reciprocal constraints in a logic of co-construction of channels[18].

[15] https://reseaurural.maregionsud.fr/chantiers/projet-alimentaire-territorial/le-reseau-des-pat-en-region-sud/

[16] See in particular the regional observatory of major risks http://observatoire-regional-risques-paca.fr/ and https://www.georisques.gouv.fr/

[17] https://draaf.paca.agriculture.gouv.fr/regalim-paca-reseau-regional-de-lutte-contre-les-pertes-et-le-gaspillage-r548.html

[18] https://draaf.paca.agriculture.gouv.fr/IMG/pdf/REGAL_V_cle0215a6.pdf

The agricultural sector is also important in terms of mitigation thanks to the capture of carbon by soils, hence the importance of changing production methods and the choice of crops to develop carbon sinks (agroecology, grasslands, etc.). Bioenergy production can also be an important lever in terms of mitigation (see next point).

3.3. Reduced or regulated mobilities

The transport sector is a major emitter of GHGs, so mobility is seen as a major challenge to achieving carbon neutrality in rural areas. This is about:

REDUCING TRAVELS

To achieve this, it is necessary to relocate some production and activity in rural areas (cf. "demobility", limiting commuting), develop short supply chains (agriculture but also other goods and services), mobile services and rely on the growth of digital technology (development of teleworking, coworking, third places, etc.).

DEVELOP ALTERNATIVE TRANSPORT SERVICES TO INDIVIDUAL CAR IN RURAL AREAS

The aim is to unlock public transport, buses and shuttles, transport on demand, car-sharing, car-pooling, solidarity transport, electric or non-electric bicycles, etc., in rural areas, in particular via multimodal transport platformss in small and medium-sized towns, and to implement rural mobility plans and cycling schemes, when topography makes them possible and accessible.

PROMOTE AND ASSIST THE REPLACEMENT OF COMBUSTION VEHICLES WITH ELECTRIC VEHICLES

The aim is to promote the substitution of collective and individual travels (especially car-sharing) thermic transport vehicles by electric vehicles. For personal vehicles, this substitution should be based on a system of fair and equitable differentiated subsidies which could also benefit the acquisition of more environmentally friendly modes of transport (e.g. bicycles, electric bikes).

IMPROVING COORDINATION AND TRANSPORT LINKS BETWEEN THE DIFFERENT TERRITORIES

This network must allow access to all the territories and therefore fight against isolation. It requires coordination of the various territorial mobility plans at regional level.

Moving differently in the Alps[19]

"The Mobil'Hautes-Alpes collective was born at the end of 2020 out of the need to promote a project that would offer the people of the Hautes-Alpes, but not only, alternatives to the use of private cars. Providing a real response to the needs of the territory and protecting our exceptional environment are the two compasses that guide our actions. The project aims to promote a mobility network to reduce the use of private cars.

Rural mobility plan for the territory of the Southern Luberon Territorial Community (COTELUB)[20]

In 2016, COTELUB adopted its rural mobility plan and eighteen associated action sheets that deal with all modes of travel: public transport, carpooling, active modes, etc. The priorities include the development of shared cars: multimodal exchange hubs and carpooling and the development of soft mobility. Among the many initiatives: local hitchhiking, organised by the Rezo Pouce cooperative society (www.rezopouce.fr), aimed at a mostly young and/or non-motorised public.

[19] https://www.mobilhautesalpes.com/
[20] https://www.cotelub.fr/images/5-Documents/Documents_Structurels/Sch%C3%A9ma_de_Mobilit%C3%A9_Rurale.pdf

3.4. Reducing energy demand: a key factor

All MAP members agree that reducing energy demand is the key factor in achieving carbon neutrality. This energy demand, as ADEME points out, depends more globally on the demand for goods and services. While technological innovations can contribute to limiting energy demand and improving energy efficiency, MAP members promote greater sobriety. This means, on the one hand, changes in lifestyles, more or less important, towards more frugality (cf. in particular food, mobility...), on the other hand, less energy-consuming modes of production (cf. in particular the industrial sector, but also the agricultural sector, services) and finally promoting the circular economy. Energy demand also concerns housing, both in terms of new construction and adaptation of existing buildings (see next point). More sobriety should not make us forget the need for low-cost energy access for the most disadvantaged.

Finally, beyond demand, it is also about replacing fossil fuels with renewable energies (solar, wind, bioenergy, etc.). The development of bioenergy, but also of solar energy on agricultural land, raises the question of possible competition with food production. In the rural areas of South Region, community energy power plants are being developed. These are local companies with citizen governance that carry out projects in favour of the energy transition by being part of a territorial logic. They bring together citizens, local authorities and companies and contribute to energy objectives by taking into account cross-cutting territorial issues (local economic development, landscape integration, social links, etc.). [21]

The Queyras village power plant project[22]

In 2013, the Queyras regional natural park drew up a Territorial Climate and Energy Plan, which aims to make the Queyras self-sufficient in energy by 2050 and is committed to supporting citizen renewable energy projects in its climate and energy plan. The Ener'guil association was created by the inhabitants, supported by the park, in order to install photovoltaic roofs on public and private buildings in the Queyras-Guillestrois. In June 2015, it became a Société Coopérative d'Intérêt Collectif (SCIC) to launch calls for shareholders: citizens, companies and local authorities responded. Today the energy is sold to Enercoop and EDF with a 20-year buy-back contract. In 2021, the SCIC had 263 members, including 13 local authorities, with 20 roofs installed generating the equivalent of the consumption of 100 households in electricity excluding heating.

3.5. More resilient housing

Renovation and rehabilitation of existing housing (or even deconstruction/reconstruction) is an important issue in terms of energy sobriety, while taking into account the constraint of heritage preservation. This concerns in particular the thermic flaws which require an ambitious plan at national and regional level aimed at owners and co-owners, in particular the less well-off, and social real estates (combination of national and regional incentives to owners).

Apart from the existing buildings, it is also about promoting sustainable building methods in the image of the new building charter in Marseille[23] , in particular by using materials of lasting quality, preferably natural or bio-sourced; by favouring short supply chains and the reuse of materials to reduce the carbon impact of building; by favouring the use of natural air conditioned and devices that favour summer comfort, excluding electric air-conditioning and mechanical cooling devices...

In the case of the renovation of old buildings, the constraints of *Bâtiments de France* sometimes make it difficult to carry out any renovation work in heritage-driven village protection areas.

[21] https://www.centralesvillageoises.fr/

[22] https://www.pnr-queyras.fr/energies-renouvelables-lexemple-denerguil/
https://www.energuil.centralesvillageoises.fr/

[23] City of Marseille, Building the city together, Sustainable Construction Charter, Oct. 2021

It is also about asking why and how to live in rural areas tomorrow:

- What new buildings and what types (single-family homes, collective housing, shared housing/cohabitation, etc.), in the context of the implementation of the objective of zero net artificialization by 2050 (link with local spational planning documents);
- Should the buildings of secondary homes, evelopment of short-term rentals and tourist homes be regulated?
- What about the use of vacant houses and secondary homes and tourist accommodation that are not occupied outside the tourism periods?

Mediterranean Sustainable Building (BDM): a local and collaborative approach

The BDM (Bâtiment Durable Méditerranéen) approach is an environmental quality approach for buildings supported by the Envirobat-BDM association of building professionals. The approach, which was specially created for the specific characteristics of Mediterranean construction and climate, was launched in 2008 in the PACA region and has been rapidly deployed around the Mediterranean. This label guarantees a level of energy and environmental quality. It promotes bioclimatism, minimises the impact of materials, reduces water and energy consumption to preserve the comfort and health of occupants, while taking into account social and economic issues[24].

3.6. Adapting the tourism sector

The tourism sector is very important for the region's rural territories and is strongly impacted by the effects of climate change. It is urgent to propose, especially in mountain areas, a new tourism offer that takes into account the existing and future effects of climate change, as well as new societal demands. It is also important to work on changes in tourist behaviour when visiting natural areas (limiting visitor numbers, raising awareness of climate and biodiversity preservation issues, etc.) as well as on the social acceptability of tourism in order to limit conflicts in the territories.

Mobility facilities and networks must be rethought so that it is more resilient and in line with the attractiveness and transition of tourism sector, and take into account tourist flows' trend induced by climate change (see for example the increase in the number of tourists in the Alps during the heat wave during the 2022 Summer).

Finally, the management of the supply of tourists accommodation, second homes and the upgrading of old accommodation (see previous point) are also important issues. (see previous point).

The Tourism Economy Growth Plan[25]

The Tourism Economy Growth Plan also takes into account the climate constraint and provides for specific actions to adapt the mountain offer. It is also a question of relying on the new definition of rural areas to reorient public policies and to create tourism data, with the re-edition of the tourism memento as a result.

The Espaces Valléens programme at a time of climate change

Since 2007, within the framework of an interregional approach that determines strategic orientations on the scale of the Massif des Alpes (Convention Interrégionale du Massif des Alpes and Programme Opérationnel Interrégional du Massif des Alpes), the State and the Regions of Provence-Alpes-Côte d'Azur and Auvergne Rhône Alpes have been supporting the development of tourism in the Alpine territories within the framework of the "Espace valléen" programme. In the Communauté de communes Alpes

[24] https://www.envirobatbdm.eu/sites/default/files/2019-06/4_guide_demarche_BDM_201901.pdf

[25] Growth plan for the development of the tourism economy, Growth plan for the tourism economy, Schéma Régional de Développement Touristique 2017-2022, South Region

Provence Verdon, it has contributed to the diversification of the tourist offer in order to establish a sustainable tourist position all year round.

As part of the bid for the 2021-27 period, the updating of the tourism diversification strategy and the resulting action programme, which are the basis for the "Espace Valléen" selection, were redefined in 2021, incorporating the new challenges defined by the Massif partnership: adaptation to climate change, taking into account new customer expectations and territorial coherence[26].

Soft mobility in the Natural Regional Parks - Cheminsdesparcs.fr

www.cheminsdesparcs.fr is the reference site for hiking in the region's parks. Innovative and bilingual, it offers a selection of walks and hikes and promotes soft mobility in the Regional Nature Parks of the Southern Region. Each itinerary includes practical information (cartography, duration, difficulty, altitude difference, etc.) and provides information on remarkable points of interest such as natural, cultural or landscape heritage.

3.7. Maintaining and strengthening access to services and promoting more resilient economic activities in rural areas

Although this topic has been less discussed during this 3rd cycle, it remains essential in the context of adaptation to climate change and is the subject of many requests from rural territories in the framework of the LEADER 2023/27 call for projects.

As we mentioned in the previous phases, the economic and social vitality and attractiveness of rural areas depend on the local economy patterns (shops, crafts, SMEs, personal services, cultural services, etc.). Access to local services at the level of the catchment areas is an essential issue, in particular concerning: primary schools, general practitioners and local services/shops (cafés, bakeries, bank branches, etc.) which are also places of conviviality. However, we are witnessing a decline in public services, including the closure of classes and/or schools, massive retirements of general practitioners who are difficult to replace, and the closure of local shops. If we want attractive rural areas and encourage the relocation of production and thus limit travel (see also previous point), it is important to reinvest in local services

In terms of employment, the development of the green economy and the circular economy (agro-ecological transition, waste management, renewable energy production and housing insulation), but also of the social and solidarity economy, which is already strongly established in the region's rural territories, should also be a priority. These are important sources of new activities and jobs and generally more sustainable and resilient activities that also respond to the challenges of climate change.

Finally, the development of digital technology planned throughout the region can be a tremendous asset for activity in rural areas. Even if the negative externalities in terms of energy expenditure must be taken into account, it is a source of competitiveness and innovation and favours local employment, via the development of teleworking and the emergence of new forms of collaborative work.

The Bistrot de Pays Label[27]

The Bistrots de Pays are friendly places that offer local services and celebrate local gastronomy by cooking fresh, local, seasonal products in short circuits.

Maison France service itinérant - CBE (Comité de bassin d'emploi) Sud-Luberon/Val Durance[28]

[26] https://ccapv.fr/tourisme/programme-espace-valleen

[27] https://www.bistrotdepays.com/bistrots

[28] http://www.cbesudluberon.com/maison-france-services-itinerante/

The CBE Sud Luberon/Val De Durance has set up an itinerant Maison France Service in order to offer local access to public services. A relay is offered every week in 6 communes of the territory.

LEADER LAG Sisteron Buëch project: creation of a multi-professional paramedical practice

At the end of 2019, in order to improve the local and regional health care offer, the Sisteron Buëch Community of Municipalities financed, within the framework of the LEADER programme, the installation of a multi-professional paramedical practice. This practice is a place shared by health professionals who pool premises, high-level technical resources and human resources[29].

Ma boutique à l'essai - LEADER INHA project Pays Serre Ponçon Ubaye Durance- LAG

The INHA (Initiative Nord Hautes Alpes), accompanied by the Pays Serre Ponçon Ubaye Durance, has implemented the "Ma boutique à l'essai" scheme on the territory of the Community of Municipalities of Serre-Ponçon in order to support business creators and to instil a new dynamic in the town centres. The aim is to revitalise town and village centres, to provide long-term support for project leaders, to combat rural desertification and to enable a region to take control of economic development[30].

4. Main European, national and regional public policies and ADEME's foresight exercise

The development and implementation of territorial projects is part of an institutional context, both European, national and regional, which is summarised in the following diagram and which aims to limit the effects of climate change and the emission of greenhouse gases.

Figure 1: Multi-layer overview of some policies and strategies affecting rural areas, Féret, 2022.

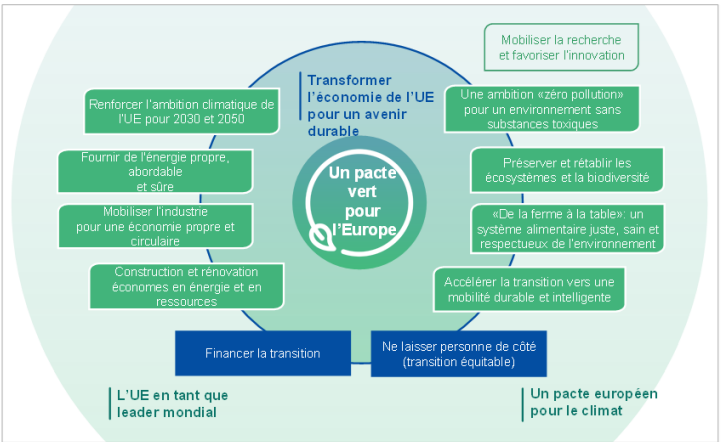
[29] https://www.sisteronais-buech.fr/economie-et-tourisme/leader/les-projets-finances-par-leader/

[30] https://accessr.eu/projets/ma-boutique-a-lessai/

4.1. Public policies at European level

EUROPEAN GREEN DEAL: AMBITION TO MAKE EUROPE CARBON NEUTRAL BY 2050[31]

In response to the climate challenge, the EU's Green Deal aims to make the EU a carbon-neutral continent by 2050, **with at least a 55% reduction in GHG emissions by 2030 compared to 1990**. It becomes the reference framework for establishing sustainability in all EU policies.



EC COMMUNICATION: LONG TERM VISION FOR RURAL AREAS (2021)

In this communication[32] , the EC underlines that "**rural areas play an active role in the EU's green and digital transitions**. Through sustainable food production, **biodiversity conservation and the fight against climate change**, rural areas play a key role in achieving the objectives of the Green Pact for Europe, the Farm to Table Strategy[33] and the EU Biodiversity Strategy[34] . While rural areas face specific challenges related to climate change and environmental degradation, they have a central role to play in both adaptation and mitigation.

In its vision for rural areas in 2040, the EC imagines resilient rural areas that promote well-being. "**Preservation of natural resources, restoration of landscapes, including cultural landscapes, greening of agricultural activities and shortening of supply chains will strengthen the resilience of rural areas to climate change, natural risks and economic crises**. As providers of ecosystem protection services and solutions to achieve carbon neutrality, rural areas have an increasingly important role to play in climate change mitigation and in the sustainable bioeconomy and circular economy. Rural areas should rely on sustainable economic activities in agriculture, forestry and agri-food, as well as on a diverse range of greener economic activities[35] that promote carbon storage in agricultural soils and high quality local and community production. "

Finally, the Commission stresses that "the increased focus on climate change mitigation, including through **renewable energy production**, is an opportunity for rural areas to tackle fuel poverty, provided that ecosystem services are appropriately valued and economic models retain their value in rural communities.

[31] European Commission, "The Green Deal for Europe" [COM(2019) 640 final].
[32] European Commission, "A long-term vision for the EU's rural areas - towards stronger, connected, resilient and prosperous rural areas by 2040" [COM(2021) 345 final].
[33] European Commission, "A Farm to Fork Strategy" [COM(2020) 381 final].
[34] European Commission, "EU Biodiversity Strategy 2030" (COM(2020) 380 final).
[35] European Commission, "Action Plan for the Development of Organic Production" [COM(2021) 141 final].

4.2. National and regional policies and initiatives

THE CLIMATE AND RESILIENCE ACT[36]

The "Climate and Resilience" law, enacted on 24 August 2021, translates part of the 146 proposals of the Citizens' Climate Convention. It has more than 300 articles after its vote by Parliament. Its very first article, resulting from the parliamentary debate, requires the State to commit to the European objective of reducing greenhouse gas (GHG) emissions by at least 55% by 2030. The law is structured around five main themes: consumption, production and work, transport, housing and food.

Among these key measures are: better insulated housing; less polluted cities; fewer planes, more trains; less packaged boxes for purchased products; less urban sprawling (ZAN in 2050); support for renewable energies and the strengthening of judicial protection of the environment.

THE SOUTH REGION'S CLIMATE PLAN 2 "KEEPING A COP AHEAD" (2021-2027)

The new Climate Plan "Keeping a COP ahead", voted on 23 April 2021, is the continuation of the environmental policy of the Southern Region. It is structured around 6 axes: Air, Sea, Land, Energy, Waste and At home, every day and contains 141 measures, including:

- Reduce greenhouse gases in the transport sector by 28% by 2026 (compared to 2012); Infrastructure and services adapted to intermodality and sustainable mobility (15% modal shift by 2030); Deploy new mobility solutions in sparsely populated areas (carpooling, carsharing, transport on demand).
- Preserve and restore marine biodiversity; Protect and sustainably manage 50% of marine areas; Preserve 70% of aquatic environments in good condition...
- Certify 50% of agricultural land as High environmental value or Organic Agriculture by 2028; Preserve agricultural land and increase irrigated areas by 15% within the next 10 years; Promote healthy, quality food and encourage direct sales; Protect and develop biodiversity; Plant 3 million trees and double the number of Regional Guard personnel to fight fire...
- Achieving carbon neutrality by 2050 (decarbonised mobility, sobriety and energy autonomy in buildings, zero smoke in industry); Multiplying by 5 the production of renewable energy; Producing 28,000 tons of hydrogen; Reducing greenhouse gases in the transport sector by 28% by 2026...
- Putting the circular economy to work for citizens and creating a regional market for quality secondary raw materials...

To implement it, 40% of the Region's budget is dedicated to this new climate plan and European funds (ERDF, ESF, EAFRD, etc.), particularly within the framework of the Green Deal, will be mobilised in the amount of of 800 million euros over the period 2021-2027. It is also about supporting municipalities and groups of municipalities in the ecological transition through "climate territory contracts". It also involves devoting 50% of the economy's budget to the fight against climate change, developing the social and solidarity economy and ecotourism. It implies a modification of the SRADDET accordingly.

THE SRADDET SOUTH REGION[37]

Created by a national law in 2015, the Regional Plan for Planning, Sustainable Development and Territorial Equality (SRADDET), deploys the strategy of the South Region 2030 and 2050, for the future of territories. This scheme of schemes is integrative and prescriptive, to go beyond sectoral intervention logics.

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[36] Ministry of Ecological Transition and Territorial Cohesion, Ministry of Energy Transition, Climate and Resilience Law: Ecology in our lives, 24 August 2021

[37] South Region, Regional Plan for Sustainable Development and Territorial Equality (SRADDET), Summary of the Project adopted on 18 October 2018

This ambitious plan introduces a real breakthrough at the heart of the regional strategy. It aims at:

- Reinventing the territorial development model for an attractive region for businesses and the population
- Breaking with the logic of extensive consumption of natural resources for a solidary and resilient region
- Mitigating the competition between territories

The SRADDET thus coordinates regional action in 11 areas defined by the law, including the fight against climate change. To improve the resilience of the territory in the face of risks and climate change and to combat the effects of climate change, the SRADDET deploys a strategy aimed at: (i) combating climate change by reducing energy consumption, emissions and pollution; (ii) improving the resilience of the territory by protecting the population, biodiversity and natural areas, which are CO2 storage sinks

Axis 3, Strengthening the environmental and energy transition: towards a resource-based economy, includes many of the SRADDET's objectives relating to this issue. The main objectives of the SRADDET relating to the issue of climate change concern :

- Energy and decarbonisation (carbon neutrality by 2050, 100% of energy consumption from renewable sources by 2050)
- Mobility: shift towards more collective and sustainable modes of mobility (15% by 2030) and deployment of clean modes of transport and development of new mobilities
- Housing: thermic and energy renovation of 50% of oldest buildings by 2050
- Management of natural resources: preservation of water resources, aquatic environments and wetlands; sustainable and dynamic management of forests, preservation and promotion of biodiversity, green and blue networks and the ecological functions of environments;
- Production and consumption methods: support for the transition to new agricultural and food production and consumption methods; development of digital technology to promote territorial balance and equality;
- Land use planning: limiting the consumption of agricultural, natural and forest areas to 50% by 2030 and zero loss of irrigated agricultural land; concentrating new developments in urban areas; preserving the quality of rural and natural areas and access to services in local centres;
- Waste: reducing waste production; promoting recycling and developing the circular economy.

4.3. ADEME's foresight exercise: "Transition(s) 2050, choose now, act for the climate [38]

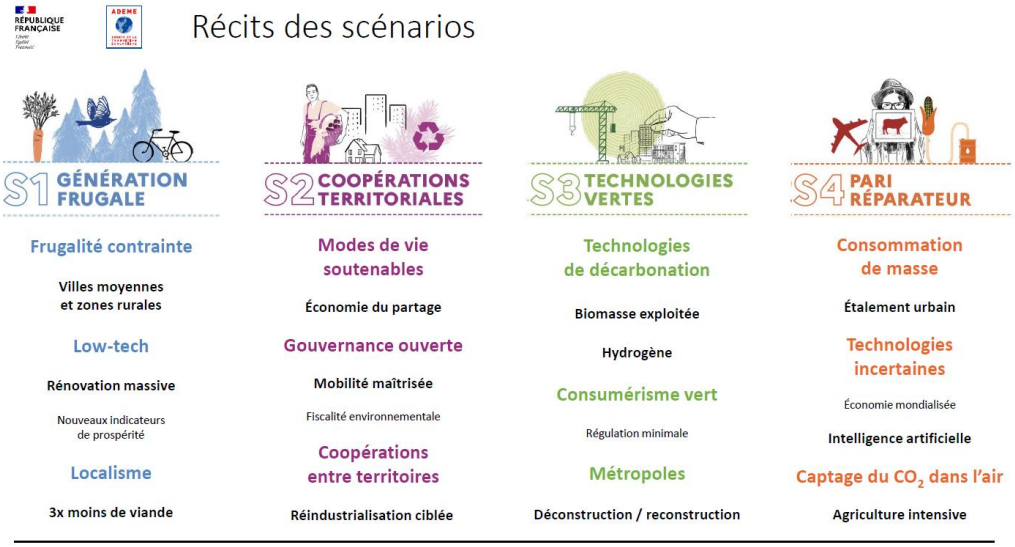
In 2019, France signed into law the objective of carbon neutrality in 2050. ADEME has conducted two years of foresight work to propose scenarios for achieving this objective. This work is intended to contribute to the public debate and to shed light on the essential decisions to be taken in the short and medium term.

ADEME proposed four « typical scenarios for achieving the objective of carbon neutrality in 2050, inspired by the scenarios of global socio-economic evolution used by the IPCC in its 2018 special 1.5°C report. Each highly contrasting scenario offers a particular trajectory illustrating the range of possible options in the long-term and informing the essential decisions to be made in the short-term.

Each covers: lifestyles (society, food, housing, mobility), the relationship with progress, governance, territories, and the economy (macro-economy, industry), as summarised in the following diagram. The proposed scenarios range from one based on constrained frugality, implying strong changes in lifestyles, to

[38] ADEME, Transition(s) 2050, Choosing now to act for climate, Report and Synthesis

one based on a strong mobilisation of technologies, some of which have yet to be developed (see also Annex 1).



This work has produced 9 key messages:

- All the scenarios are difficult and require orchestrated planning of transformations involving the central government, territories, the economic agents and citizens
- Achieving carbon neutrality is based on strong commitments
- For all scenarios, it is imperative to act quickly
- The reduction of energy demand, linked to the demand for goods and services, is the key factor
- The industry will have to transform itself
- The living world is one of the main assets of this transition
- Adaptation of forests and agriculture is therefore becoming an absolute priority in the fight against climate change.
- In all scenarios, more than 70% of the energy supply in 2050 is based on renewable energies

This exercise puts five main issues up for debate: the degree of sobriety, the importance of carbon sinks, the sustainable diet, the building economy and the industrial model (see also annex 2).

Within this framework, ADEME has also prepared several thematic serials, including the "Feuilleton Territoires" of Transition(s) 2050[39] which aims to:

- Stimulate the interest of the territories in Transition(s) 2050 and the prospective exercises towards carbon neutrality;
- Give territories the elements to "appropriate" the Transition(s) 2050 by focusing on the governance of the transition towards carbon neutrality;
- To share the main lessons learned from foresight exercises conducted in the territories and to give some concrete and inspiring examples to launch a foresight process.)

[39] ADEME, Transition(s) 2050, Choosing now to act for climate, Territory soap opera

5. What are the preferred transition strategies and what support is needed to develop and implement them?

On the basis of ADEME's work and the main challenges of climate change for rural territories, the members of the SHERPA MAP have made the following recommendations regarding desirable transition strategies for these territories and support for their development and implementation.

5.1. More frugality and sobriety

While there are interesting proposals in all the scenarios proposed by ADEME, changes in lifestyles towards more sobriety and frugality are necessary, but social acceptance of this change must be taken into account and inequalities must be considered.

Technological solutions should not be excluded, but they are not sufficient, especially as they are sometimes uncertain in terms of feasibility, effectiveness and cost (see scenario 4 in particular). Moreover, choosing the adaptation and mitigation strategy solely on technological solutions, without changing production and consumption patterns, does not allow to address causes of climate change and postpones the urgent implementation of more permanent decisions ("non-action"), making it unlikely that the objective of carbon neutrality by 2050 will be achieved.

5.2. A "just transition" for rural areas

The notions of equality, equity and social justice were mentioned several times by MAP members. For being accepted by all, transition must be fair and therefore must take into account inequalities between social groups, and in particular inequalities in access to resources, but also territorial inequalities.

For being socially acceptable, transition must also contribute to greater social justice. This implies, on the one hand, that wealthiest populations should contribute more and, on the other hand, that accompanying measures should be provided to enable the less well-endowed populations to adapt so no one is left behind.

Similarly, at the regional level, cooperation between the various rural and urban territories that make up the region is essential. On the one hand, the effects of climate change do not stop at the border of a territory and the response provided by this territory will have an impact on neighbouring territories (cf. for example the management of water resources). On the other hand, the transition must promote greater equity between unequally endowed but complementary territories (cf. for example, mountain territories rich in water resources and biodiversity, but isolated, with complicated access to services and with limited mobility offer with very good access to services, a complete mobility offer, and which depend on the water of the Durance). It is a question here of promoting cooperation and solidarity between the different territories as is the case in the framework of the Verdon SAGE for example.

Finally, as ADEME[40] indicates, "to achieve a desirable and feasible ecological transition, efforts must be shared between actors and not rest solely on citizens. For the respondents, it is up to the State, and more broadly to political decision-makers, to drive the transformations through an ambitious political will, whatever the scenarios. Companies whose activities have a greater environmental impact than households also have a role to play. More specifically, some respondents consider that the State should first help companies to reduce their impacts, even if it means taxing those that do not play the game.

To be accepted, in addition to greater involvement and information of rural dwellers, a just transition pathway should be based on environmental and climatic impact measurements throughout the regional territories,

[40] ADEME, Transition(s) 2050, Choosing now to act for climate, Lifestyles series

weighting the efforts to be made among actors and among territories (urban/rural territories, companies/citizens, etc.).

5.3. Territorialising the issues and designing territorial projects

As underlined by MAP members, it is up to the rural territories to build their own vision and strategy and thus to be less dependent from a certain "urban domination" on rural areas. During the first phase of the SHERPA project, it was acknowledged that there is not one rurality but many diverse ruralities; it is therefore essential to territorialise the issues related to climate change and to develop approaches based on territorial diagnoses to identify vulnerabilities and adaptation capacities. The reflections carried out within the framework of the Shift Project's "Territorial Resilience Strategies" project, which aim in particular to support local elected officials "in their reflection and in their transition to action" are also interesting to mobilise here[41]..

Thus, MAP members agree, as ADEME points out, that whatever scenario is chosen, "a systemic approach is necessary because of the interdependence between the sectors". It is necessary to go beyond a thematic approach and define territorial projects (see next point), which also implies taking into account the temporality of the decisions to be implemented and planning them (short-term emergencies, medium and long-term actions).

At the level of a group of municipalities, the Territorial Climate Air and Energy Plan (PCAET), integrating biodiversity issues, should be the territorial ecological transition framework that can serve as the basis for the governmental Contract for Recovery and Ecological Transition (CRTE). However, at the beginning of 2022 only 10 PCAETs had been adopted in the South Region out of the 35 required. PCAET requires an initial diagnosis of the energy situation, territorial emissions of greenhouse gases and atmospheric pollutants, and the territory's vulnerability to the effects of climate change. On this basis, a strategy is drawn up which specifies ambitious and realistic objectives, responding to the main issues identified previously, including in terms of biodiversity, and an action plan to achieve them. For each concrete action, the implementation and financing methods are specified, including LEADER actions and initiatives financed under the ERDF and ESF. The natural regional park charter is an important element to be taken into account here (see next point)

Reconnecting guidelines and strategies defined at European, national and regional level for rural areas to realities on the ground for a sound implementation is also crucial. The right level for territorial action is the one at which it is carried out, which can be the commune, the group of communes, the department or the region, depending on the project implemented and the area of responsibility. This also presupposes that the means to act and the political will to do so are available at all levels of decision-making (see next point).

5.4. The importance of territorial governance and cooperation

A territorial project or contract (cf. Plan climat Région Sud "Gardons une COP d'avance") is first and foremost a societal project that involves the broad support of all stakeholders: institutions, public decision-makers, economic agents, but also citizens. As ADEME points out, "beyond concrete practices, it is also values, "world views" and in particular approaches to "living together" and the organisation of social life that explain the support or reluctance to adopt certain scenarios[42] ". In the words of the SHERPA project, it is a question of collectively building "a desirable future".

By appropriating this foresight exercise, as proposed by ADEME, local and regional authorities can co-construct "a sustainable ecological transition project that has not been subjected to the same conditions". At the territorial level, the LAGs, which are a major added value of the LEADER mechanism, must actively contribute to this exercise, particularly in order to bring out rural projects that contribute to the objectives

[41] The Shift Project, Climate, crises: how to transform our territories, The "Territorial Resilience" booklet, October 2012 and the booklets by territory, in particular: countryside, mountains and coastlines.
[42] ADEME, Transition(s) 2050, Choosing now to act for climate, Territory soap opera

of the territorial project. However, these scenarios are currently very macro and must be adapted to the level of the territories so that they can be appropriated.

Because of their mission and governance, natural regional parks encourage dialogue and exchange on the future of rural territories and on the major issues they face, particularly those related to climate change. Through their charter and the provision of local engineering, these natural parks have an important role to play as a privileged territorial tool to accompany the ecological transition in the South region.

In the end, it matters to take into account the diversity of ruralities, the multiplicity of structures, strategies and existing support instruments, in order to achieve a comprehensive network that is inclusive and integrates the interstitial areas between territories (i.e. functional linkages between rural and urban areas).

At regional level, the SRADDET is the key spatial planning document that must ensure the coherence and complementarity of the various regional strategies, but also of the projects of the territories that make it up, as well as of the available instruments, including national and European ones. It is currently being rewritten and must therefore be reviewed in the light of the challenges of climate change and the foresight exercise developed by ADEME. It must also encourage cooperation between the various territories that make up the region.

As we indicated during the second SHERPA phase, "citizen involvement must also be strengthened in order to move from a simple involvement to a co-construction of public policies for a renewed territorial approach. Thus, the development, implementation and monitoring of the territorial project or contract must be inclusive and involve all stakeholders, in order to encourage proposals from the territories themselves[43] . Spaces for exchange and co-construction, involving citizens, are necessary. Furthermore, training and awareness-raising of the populations of rural areas on climate and environmental issues is essential, as is taking into consideration all the knowledge possessed by all the actors in the area (local authorities, associations, citizens, etc.).

Similarly, it is urgent that public decision-makers in our rural territories, in particular municipal councillors, are better trained and informed about these issues, about the different schemes and strategies that exist to respond to them and about the different funding and tools that can be mobilised.

5.5. Rural engineering needs in the territories and adapted financing

As already mentioned in the previous phases, engineering and project management support will be crucial to "accompany municipalities and groups of municipalities in the implementation of the ecological transition through "Climate Territory Contracts" as indicated by the Region in its new Climate Plan.

This engineering capacities already exist (ADEME, ARBE, CEREMA, development agencies, PNR, ANAH, Banque des territoires, UNADEL[44]etc.), but it is not always known, poorly coordinated or seems inaccessible. It should be made available to municipalities, but also to other local actors (associative structures, citizens' groups, development agencies, etc.) and shared in rural areas. In this context, the challenge is also "to be able to supplement expert engineering (technical, legal) with animation and cooperation engineering, capable of supporting a multi-actor collective dynamic". This should be one of the main tasks of the National Agency for Territorial Cohesion, which first of all plays the role of a "project fabric" to enable local authorities to carry out their projects, by pooling the skills of the departmental public engineering agencies, the region or even independent support structures.

It should also be recalled that the Rural Action Plan in the framework of the Long-Term Vision for Rural Areas refers to "support for rural municipalities in the energy transition and the fight against climate change, based in particular on the Covenant of Mayors for Climate and Energy".

[43] Plateforme Région Provence Alpes Côte d'Azur, Position paper, Avenir des zones rurales à l'horizon 2040 : futurs désirables et gouvernance des transitions, 15 Nov. 2021

[44] National Union of Local Development Actors, https://unadel.org/

In order to implement their transition strategy, rural territories must be able to benefit from the appropriate tools and funding, as has already been raised in previous phases.

Thus, the 5% share of the EAFRD budget dedicated to rurality should be increased to meet the ambition of the European Commission in its long-term vision for rural areas.

It is essential to strengthen the LEADER programme, which makes it possible to promote innovative and sustainable projects that meet the expectations of the territories and have manageable and bearable financial amounts for the project leaders. Programme coordination through the LAGs, which enables the expectations of rural areas to be brought to the fore and thus to build appropriate projects, is a major added value of the LEADER programme. This function must be strengthened (in terms of budget and skills) in order to ensure the continuity of the programme in the territory and the quality of the service offered. Larger funding lines for operations, but also for animation, training and information and education actions are necessary and specific funding tools should be developed for hybrid projects that take into account and enhance the social utility of these projects.

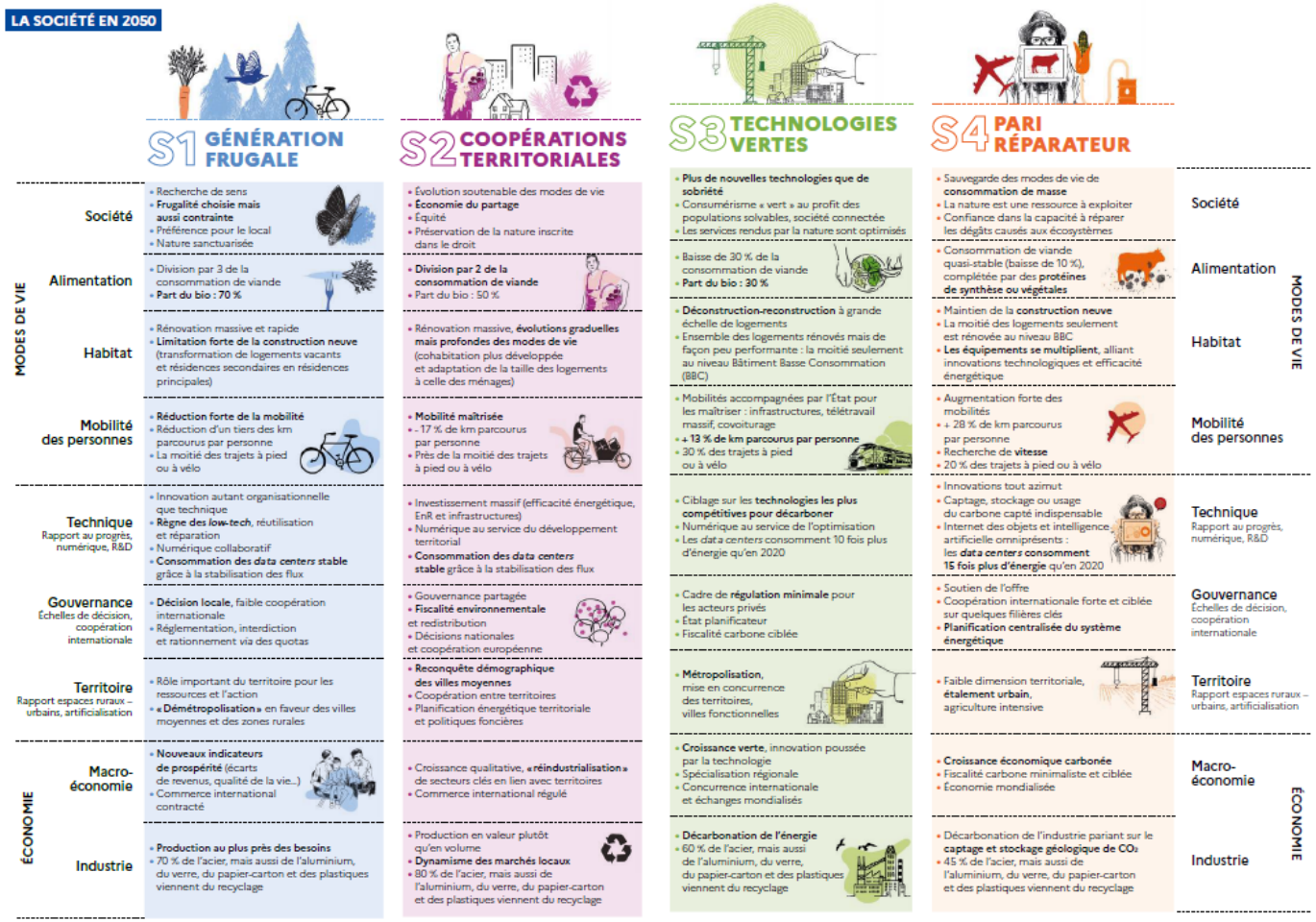
It is also urgent that the European Commission, the State and the Region work together with project leaders to simplify administrative and financial procedures that are too costly and complex. The pre-financing of projects is also a major issue for small project leaders, given the amounts involved and the payment times. As mentioned in the previous phase, the involvement of the Banque des Territoires, which is a partner of the ANCT, or the Agence France Locale, which is also a partner of the ANCT, could be a possible solution. Pre-financing or bridging loans by a private bank could also be envisaged, with a guarantee from the Region or the State.

Apart from the LEADER programme and CAP subsidies (see next point), the managing authorities (regions) should mobilise all available European funding mechanisms that can be targeted on rurality depending on topics and cross-cutting issues. This is the particular case of rural-oriented ERDF measures, notably to meet some needs highlighted by the spatial regional planning challenges.

Finally, concerning more specifically the transition of rural areas to more sustainable agriculture and food, this requires significant changes of the CAP, in particular through subsidies linked to the workforce employed and no longer to surface areas, and more substantial incentives for environmentally friendly production (organic farming, agro-ecology, etc.).

Annexes

Annex 1 - ADEME scenarios



Annex 2 ADEME's main key messages

9 messages clés

01

Les quatre voies présentées, chacune dotée de sa propre cohérence, permettent à la France d'atteindre la neutralité carbone en 2050. **Mais toutes sont difficiles et nécessitent une planification orchestrée des transformations, associant État, territoires, acteurs économiques et citoyens.**

02

Atteindre la neutralité repose sur des paris forts, aussi bien sur le plan humain (changements de comportements) que technologique (puits de carbone en particulier). Tous les scénarios comportent donc une part de risque. Mais tous n'entraînent pas les mêmes conséquences environnementales, sociales et économiques.

03

Pour tous les scénarios, il est impératif d'agir rapidement : les transformations socio-techniques à mener sont d'une telle ampleur qu'elles mettront du temps à produire leurs effets. Il faut entreprendre dès cette décennie la planification et la transformation profonde des modes de consommation, de l'aménagement du territoire, des technologies et des investissements productifs.

04

La réduction de la demande en énergie, elle-même liée à la demande de biens et de services, est le facteur clé pour atteindre la neutralité carbone. Cette réduction peut aller de 23 % à 55 % par rapport à 2015 suivant les scénarios, chacun reposant sur un équilibre différent entre sobriété et efficacité énergétique.

05

L'industrie va devoir se transformer non seulement pour s'adapter à une demande en profonde mutation mais également pour décarboner sa production. Cela nécessitera des plans d'investissements de grande ampleur et un effort de l'ensemble de la société pour accompagner les territoires en mutation et former les salariés aux nouveaux métiers.

06

Le vivant est l'un des atouts principaux de cette transition permettant de combiner trois leviers stratégiques : le stockage de carbone, la production de biomasse et la réduction des gaz à effet de serre. Il est donc indispensable de maintenir un équilibre entre les usages alimentaires et énergétiques de la biomasse avec la préservation des fonctions écologiques, comme la biodiversité et le stockage de carbone grâce à une approche globale de la bioéconomie.

07

L'adaptation des forêts et de l'agriculture devient donc absolument prioritaire pour lutter contre le changement climatique. La résilience des écosystèmes est d'autant plus cruciale qu'ils en subissent de plus en plus fortement les impacts.

08

La pression sur les ressources naturelles varie considérablement d'un scénario à l'autre. C'est particulièrement le cas pour l'eau d'irrigation ou les matériaux de construction, dont les volumes consommés varient d'un facteur 2 entre certains scénarios.

09

Dans tous les scénarios, en 2050 l'approvisionnement énergétique repose à plus de 70 % sur les énergies renouvelables et l'électricité est le principal vecteur énergétique. Pour autant, cela ne peut en aucun cas légitimer le gaspillage d'énergies, afin de limiter la pression sur les ressources.

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List of SHERPA MAP members - Southern Region

- **CIHEAM**
  - Jean-Pierre ROLLAND: facilitator
  - Samuel FERET: Coordinator
  - Tristan BERCHOUX
- **Rural Network - Southern Region**
  - Christelle CASO
  - Christel FRANCART
- **Researchers**
  - Maud HIRCZAK - Senior Lecturer Aix-Marseille University, LEST CNRS UMR 7317
  - Lucie GERVASONE: PhD student in sociology - Aix-Marseille University, Population Environment Development Laboratory
- **Representatives of citizens or local businesses**
  - Sandrine PERCHEVAL: ADRETS, study and resource centre for the development of public services in the Alps and in rural areas
  - Bastien GIRAUD: Director - National Federation of Country Bistros
  - Marie-Paule CHAUVET: Agricultural producer, member of the Leader Pays d'Arles programming committee
- **Representatives of policy makers**
  - Éric BLOT - Director of the Alpilles Nature Park
  - Nicolas BOUEDEC - Luberon Nature Park
  - Sophie CROQUETTE- Project Manager - Pôle d'équilibre territorial et rural du pays d'Arles
  - Julien MATELLINI - Director - Alpes de Hautes Provence Development Agency
  - Géraldine POLLET - Director of Agriculture, Forestry and Water, Southern Region
  - Jean-Paul DAVID - Regional Councillor, Chairman of the Agriculture, Rurality, Livestock and Forestry Commission and Mayor of Guillaumes
  - Gérald MARTINEZ - Mayor of Saint Léger les Mélèzes
  - Lionel TARDY - Southern Region and Mayor of Rosans
- **Representatives of institutions**

  Southern Region
  - Boris COURANT - Biodiversity, Parks and Territories Department [2]
  - Sandrine ANDREANI, LEADER and NRP Project Officer Regional Programmes Coordination Service
  - Quentin DILASSER,
  - Isabelle POMPIDOU - EAFRD Department
  - Florence CICALINI, European Territorial Cooperation Department
  - Barbara COTTAIS, Florence CICALINI - Regional Programmes Coordination Department
  - Agnès VERDEAU - Territorial knowledge department

- Christine LOUSSERT, SCOPE Department

Department of Alpes de Hautes de Provence

- Pascale BONNAFOUX - Territorial Development Strategies Department

INSEE PACA

- Benjamin MEREAU
- Benjamin SAKAROVITCH - INSEE
- Frédéric CHATEL - INSEE

GREC-SUD

- Philippe ROSSELLO - Coordinator and leader of GREC-SUD
- Julie GATTACECCA

Regional Chamber of Agriculture

- Alice RABINE

Regional Directorate of Food, Agriculture and Forestry Provence Alpes Côte d'Azur (DRAAF PACA)

- Patrice FAUCHIER - DRAAF/PACA

- **LAG representatives**
  - Romain FRANCOU - GAL Pays Gapençais
  - Olivier JOURDAN - GAL Sisteronais Buëch
  - Pauline MELKA - GAL Vallée de l'Ubaye Serre-Ponçon
  - Caroline MACLE - GAL Pays Briançonnais
  - Jonas LAFARGE - COTELUB Pays d'Apt Lubéron
  - Cécile PROVOST - GAL Provence Verte Sainte-Baume.
  - Gaëlle RIO - Dignois LAG and Durance Provence LAG
  - Marine TULLIACH - Gal Alpes et Préalpes Azur

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