SHERPA
Rural Science-Society-Policy Interfaces

MAP Position Paper

LAND USE & CLIMATE CHANGE

SHERPA has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 862448.

Authors

CONSULAI | Pompeu Pais Dias, Pedro Santos and Marta Mendes

Contributors

All the members of the MAP

Citation: Pais Dias, P., Santos, P., Mendes M. (2022) MAP Position Paper (Alqueva, Portugal) - Land use and climate change.
DOI: 10.5281/zenodo.7266745

Paper finalised in October 2022

Find out more about the Multi-Actor Platform Alqueva in Portugal!
https://rural-interfaces.eu/maps/portugal-alqueva/

Summary and key messages

This Position Paper provides a consolidated overview of challenges and recommendations emerged by the discussions of Multi-Actor Platform (MAP) Alqueva's members on land use and climate change.

In the Alqueva region, this theme is one of the most important and current issues affecting the region. The reason for this is the vast land use change that happened in the region over the last 25 years. Where before the main land use was cereal production and pastures, nowadays land use has shifted to irrigated crops (such as olive groves, almond orchards and irrigated arable crops, Figure 1) over a surface of 120.000 ha. Change in land use impacted the society and region in various aspects, but one aspect that is crucial to bring to the discussing is climate change and how it can affect the current land use of the region. In addition, another burning question is what the region can do to mitigate and adapt to the reality of climate change.

The MAP Alqueva held two different meetings. The first one was a face-to-face meeting in Beja, Alentejo in EDIA main offices. During this first meeting, the MAP focused on identifying the main topics where land use and climate change were an importance challenge for the region and identifying regional needs. The second meeting was online and pursued the discussion held in the first meeting and focused on developing recommendations for the future of rural policies and research gaps on the topic of land use and climate change.

In the first meeting, the main results obtained were:

Regarding energy transition needs:

1) Promoting adoption of alternative energy sources;

2) Taxation and tax's role of promoting a regional/national energy transition;

3) Floating solar energy generation;

4) Railway;

5) Planning future agricultural land use for the region.

Regarding public opinion on climate change and the role of agriculture:

1) Literacy of the population;

2) Bad examples of land use or agricultural practices should have the same exposure as good examples and practices;

3) Citizens' initiatives that apply pressure to distribution to better utilise inputs and the products they commercialise.

Regarding cooperation between stakeholders and knowledge transfer:

1) Distance from the scientific community and the rest of society and policy makers;

2) Regional extension structure;

3) Funding and investment;

4) Leverage companies willingness to share good/alternative practices.

In the second meeting, the main results obtained were classified at local, regional, and national level. There have been vast contributions on recommendations for rural policies regarding water management, monitoring of indicators, valorisation of short supply chains and circular economy in the different scales. Regarding research gaps, the main needs identified are related to uniform and continuous data collection, multi-factor research to approach the complex issue of land use and climate change, carbon sequestration and research for each crop to provide farmers with good practices fitted to the regional reality.

A regional approach is considered crucial for correct rural policy making, research and stakeholder involvement in the issue of climate change, and specifically on the issue of regional land use for the benefit of the agricultural sector, the Alqueva region, climate change mitigation and adaptation, and public administration.

1. Introduction

For the third cycle of our Multi Actor Platform (MAP) Alqueva, land use and climate change was elected as central topic for a deep analysis at local, regional, and national level.

The Alqueva region is situated in the south of Portugal and was subjected to significant changes over the last 25 years. With the construction of the Alqueva dam and the creation of Alqueva Multipurpose Project (EFMA), this region witnessed, among other changes, significant alterations of its land use and an important boost of the local economy.

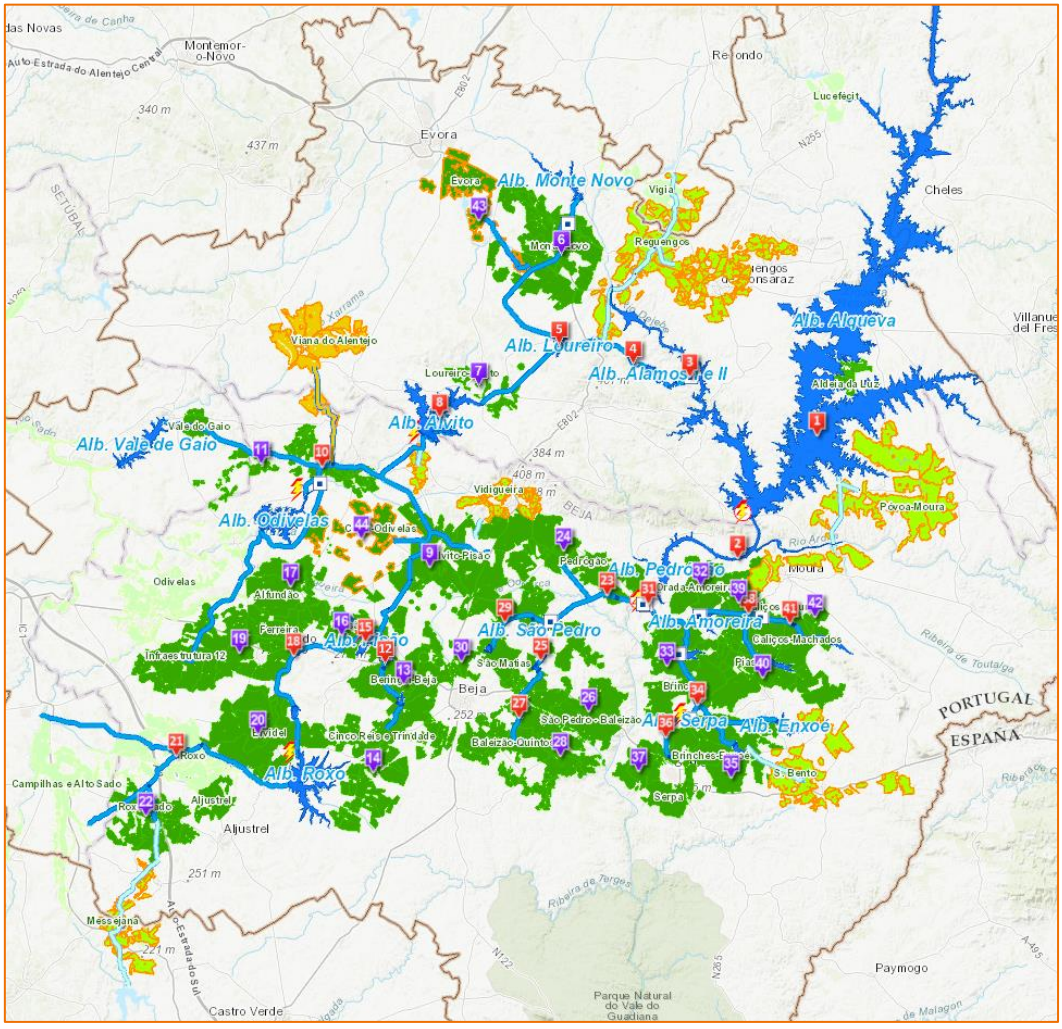


Figure 1 - Alqueva Region, the current irrigation perimeter (green), and corresponding water bodies and water supply infrastructures (blue)

Changes on regional landscape, economy and society raised several concerns from different stakeholders. Our MAP Alqueva aims at bridging among the perspectives of these different stakeholders and reach common ground when identifying needs and suggesting alternative measures.

Our MAP Alqueva held two meetings. One was face-to-face meeting to identify the needs and to discuss projects and initiatives already in place to address land use and climate change. The second meeting was held online and MAP members discussed local, regional and national policies to address climate change and land use, and identified knowledge gaps and research needed to approach this theme in a regional scope.

Regarding land use and climate change, in the scope of regional needs identification, our MAP selected three sub-themes identified in the discussion paper (DP). They were (1) Energy transition, (2) Public opinion on climate change and the role of agriculture, and (3) Cooperation between stakeholders and knowledge transfer. These three sub-themes were chosen and discussed in the first meeting.

Regarding the second meeting, our team facilitated and monitored a discussion that addressed local, regional and national policies on this topic and a discussion to identify knowledge gaps and research needed. In this meeting, stakeholders started off by identifying what has been done so far and where to go next.

2. Current situation based on background research and evidence

According to the Portuguese National Energy And Climate Plan 2021-2030 (NECP 2030), "*the agricultural sector will make an essential contribution toward decarbonising the Portuguese economy, changes are expected to be implemented over the next decade that will make it possible to reduce emissions, with emphasis on more sustainable agriculture*". The main lines of actions evidenced in the document are:

- Disseminating integrated production practices,
- Expanding of organic agriculture uptake,
- Conservation and precision agriculture,
- Reducing emissions associated with animal effluents and the use of synthetic fertilisers,
- Promoting carbon sinks derived from increased organic matter in soils, namely by promoting biodiverse pastures.

In addition, with this plan, Portugal wants to improve the efficient use of water, enabling productivity gains and saving water, which is a scarce commodity that must be preserved. It will also be necessary to investigate new forms of animal diets to obtain improvements in the digestibility of animal feeds, with a consequent positive impact on the reduction of emissions.

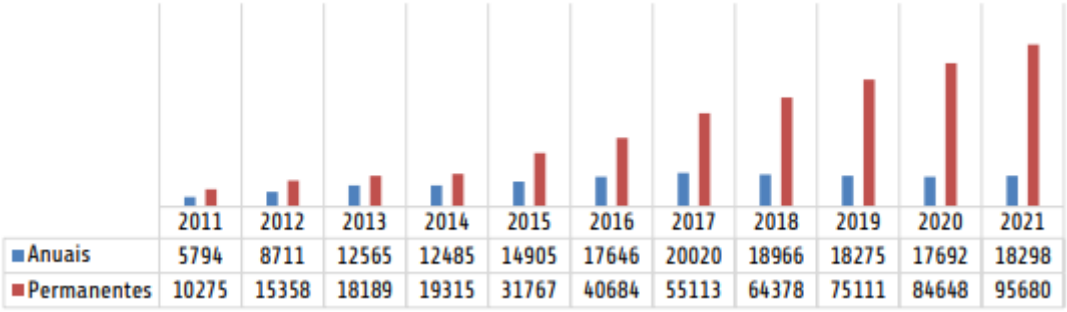
These initiatives translate into substantial changes when the agricultural sector is being analysed and discussed. Whereas past objectives have been to improve competitiveness of the agricultural sector together with environment, society, and economy sustainability, today these objectives need to be reformed. This implies looking closer to land use across the country and rethink our producing methods.

Alqueva Region

Alentejo, in southern Portugal, corresponds to about 1/3 of the territory of mainland Portugal. It is a region with low population density, but with a high agricultural potential. In this region, lack of water has been one of the main constraints for its development, and prevented the modernisation of agriculture and the sustainability of public supply.

Located in Alentejo, the Alqueva Multipurpose Development (EFMA) has its area of direct influence spread over 20 municipalities in the districts of Beja, Évora, Setúbal and Portalegre. EFMA has around 120,000 hectares under irrigation, which makes this project a structuring instrument, mobilising a diversified set of activities, sustained by an integrated development process. In addition to these 120,000 hectares, an expansion plan is being implemented for the second phase of Alqueva, which may reach around 50,000 hectares.

It is important to underline that in 2021 two blocks of this second phase were already concluded, the Cuba-Odivelas and Évora blocks, adding around 5,750 hectares of new irrigated land, which came into operation at the end of the irrigation campaign. At the beginning of 2022, in March, another block in in Viana do Alentejo will be concluded with around 4,600 hectares, thus entering into operation that year.



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Anuais	5794	8711	12565	12485	14905	17646	20020	18966	18275	17692	18298
Permanentes	10275	15358	18189	19315	31767	40684	55113	64378	75111	84648	95680

Figure 2 - Evolution of irrigated area in EFMA segmented by annual and permanent crops (EDIA, 2021)

The Alqueva region is the largest Portuguese irrigation perimeter, with substantial agricultural development over the last few decades, and it is fed by one of the largest strategic water reserves in Europe. However, with predicted decrease in rainfall and permanent crops on the rise, there will be a need for continued water supply for the next decades. The region is committed to a sustainable development of this rural area, and land use is a determining factor when we analyse the impacts of climate change in the region.

3. Position of the Multi-Actor Platform

3.1. Identified needs

MAP Alqueva set its first meeting for this third cycle at Beja, Portugal, on the head offices of EDIA, on 19 July 2022. This first MAP meeting aimed at identifying the main needs and/or challenges regarding land use and climate change (Figure 3).

Given the range of this topic, we firstly centred the MAP discussion on the Discussion Paper (DP) and on the different sub-themes that it introduced. From this discussion, the MAP decided to focus the meeting on three main sub-themes: (1) Energy transition, (2) Public opinion on climate change and the role of agriculture, and (3) Cooperation between stakeholders and knowledge transfer.

Regarding energy transition (Figure 4), MAP Alqueva pointed out the following needs:

- Promoting adoption of alternative energy sources
    - Public policy as a vector. As an example, MAP members discussed a measure taken by California, where they forbade the commercialisation of two-stroke small equipment such as small weeders;
    - Fighting prejudice regarding alternative power sources. This prejudice is a social aspect and hinders the efforts of energy transition;
        - In many applications, electric motors and batteries are already viable at farm level, with acquisition cost at par with conventional equipment however with a lower operational cost;
    - "Stop burning stuff" policies for regional institutions and companies;

- Taxation and tax's role of promoting a regional/national energy transition
    - Incentivise the purchase of electric vehicles at business level (i.e. tractors). Currently, support for acquiring electric vehicles is given exclusively to private individuals;
- Floating solar energy generation
    - Given that Alqueva is one of the more appealing geographies for the use of floating solar parks, there is a need of supporting and expediting the acquisition and licencing of these solar parks;
    - Floating solar is an alternative, already being implemented in the region, that tackles two main challenges: the evaporation losses of water from the reservoirs and an efficient medium where solar panels can maintain optimal working temperatures;
- Promoting good practices starting with policy decision makers
- Railway
    - Collective transport as part of the solution for regional energy transition;
    - Railway as a solution for passenger's transport but also for the transport of goods;
- Planning future agricultural land use for the region

Figure 3 - MAP Alqueva: first meeting of the third cycle

1st meeting | MAP Alqueva
Climate Change and Land Use

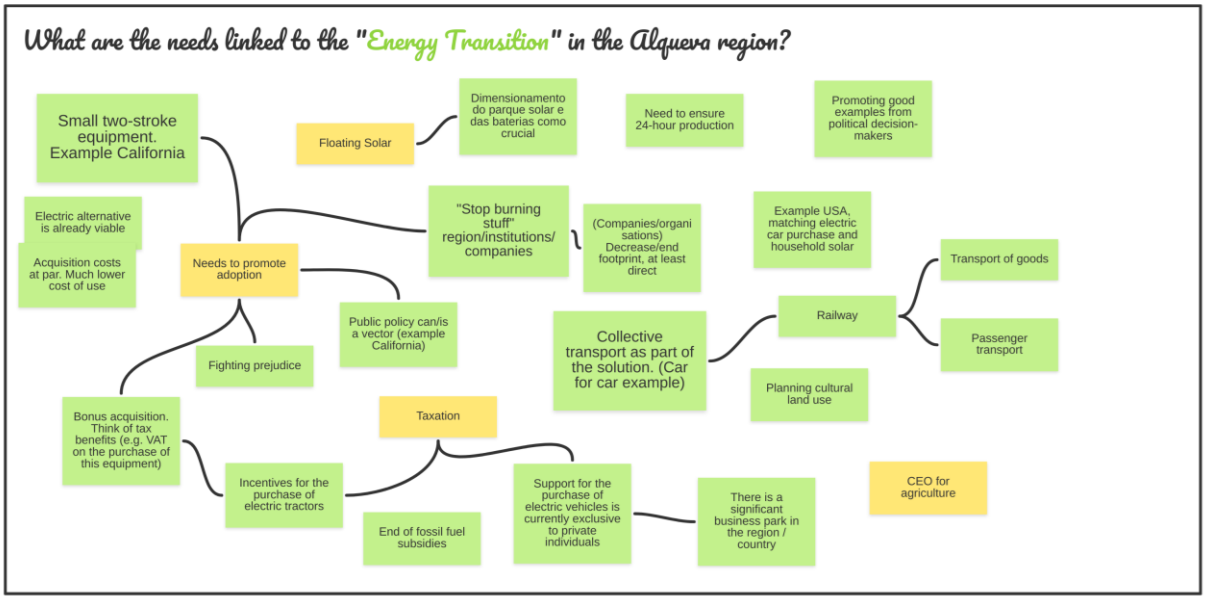


Figure 4 - Dashboard of the needs regarding energy transition identified by the MAP members

Regarding public opinion on climate change and the role of agriculture (Figure 5), MAP Alqueva highlighted the following aspects:

- Literacy of the population
    - Regional population perceives the agricultural sector as part of the problem of climate change and not like a solution for this challenge;
    - There is a need of more informative local networks and broadcast where regional issues are discussed in a way that fits the specificities of the Alqueva region;
    - Awareness raising campaigns that portrait regional challenges with respect to climate change and the role that agriculture and land use management can have in those issues;
- Bad examples of land use, or agricultural practices should have the same exposure as good examples and practices
    - Changing the reviewing and validating process of agriculture projects in order to mitigate the occurrence of bad practices or examples;
- Attract stakeholders with technical expertise to the region;
- Perceive the water body of the Alqueva as a mitigating vector of climate change. For example, this water body has an effect to stabilise local temperature amplitude
- Citizens' initiatives that apply pressure on distribution to better use the inputs and products they commercialise. On this regard, the "Fruta Feia" project was discussed as an example. This project aims at commercialising fruit that is good and safe to eat but, for one of various reasons, was not eligible to be commercialised by traditional retailers.

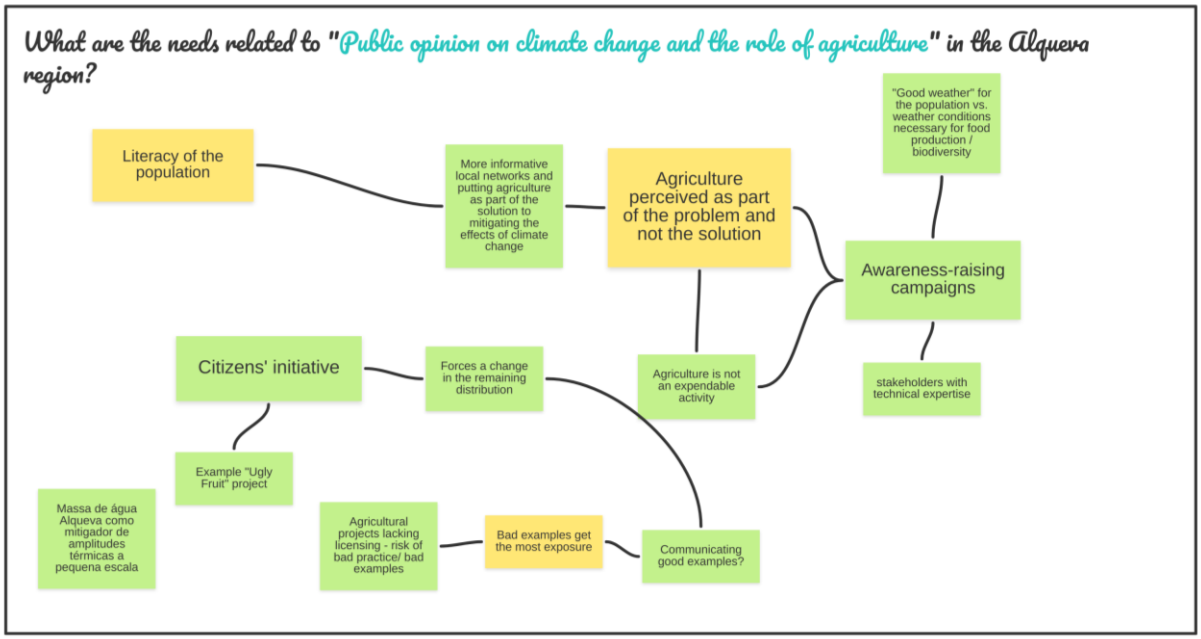


Figure 5 - Dashboard of the needs regarding public opinion on climate change and the role of agriculture identified by the MAP members

Regarding cooperation between stakeholders and knowledge transfer (Figure 6), MAP Alqueva highlighted:

- Distance from the scientific community and the rest of society and policy makers
    - Researchers are valued and their careers are pushed forward by elaborating papers and publish them in first quartile scientific publications. However, the general public does not read these publications. This hinders knowledge transfer from the research being done regionally and the rural areas population;
    - There is a need to restructure the career progress of academic researchers;
    - An example was given regarding the American academic model where there are three types of teaching careers, all of them provide a path to academics to be valued and allows for a better knowledge transfer;
- Regional extension structure
    - Need to be able to demonstrate good and/or alternative practices, involving farmers with onsite trails and demonstrations;
    - It is also important to disseminate and communicate good practices;
    - Existence of technical staff that could be funded by an umbrella association composed by the different sectorial agricultural associations from the region;
    - Avoiding duplication of knowledge generated by different organisations;
    - An example was given for the Sustainability Program of the Alentejo's Wines (PSVA) and its aggregating role in knowledge generation and transfer;
- Funding and investment
    - Need to study minimum effective needs for each crop in the region. For instance, deficit irrigation will be a real necessity in the near future.

- Leverage companies willing to share good/alternative practices. The message passes with substantially more ease when it is passed farmer to farmer.

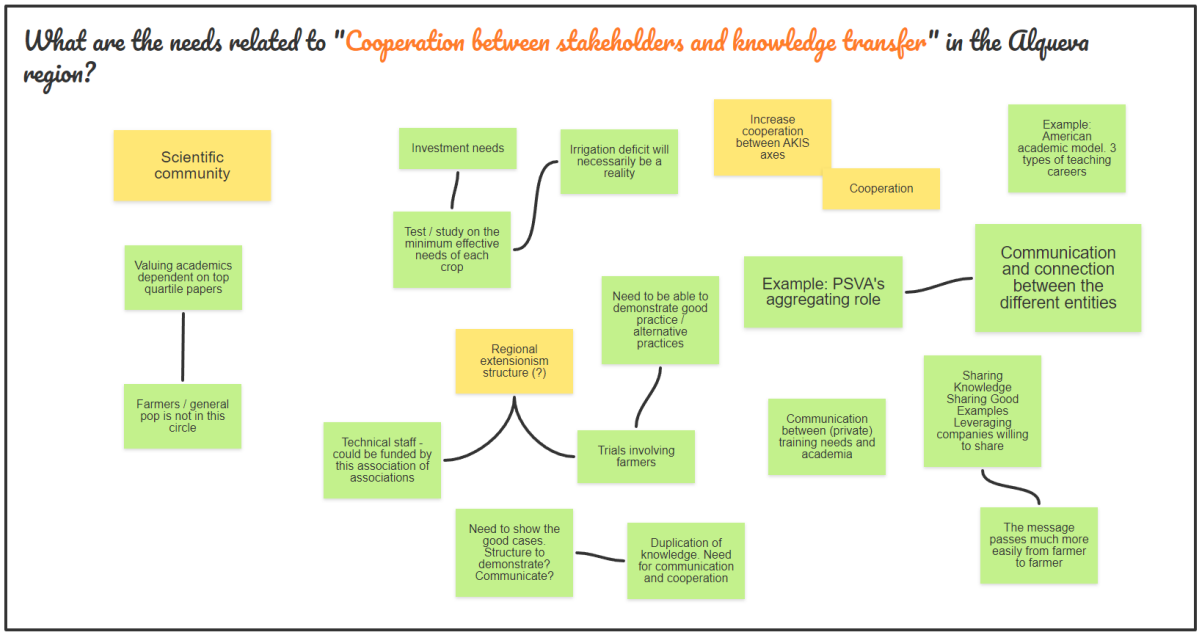


Figure 6 - Dashboard of the needs regarding cooperation between stakeholders and knowledge transfer identified by the MAP members

3.2. Existing interventions and actions

Table 1 – Examples of actions taken by local actors

URSA Project

The URSA project consists in the implementation of an innovative and disruptive business model, undertaken on a community basis, based on the exchange of agricultural by-products for organic fertilizer for agronomic use by farmers, materialising the circular economy of short cycles in the agricultural context.

Its objectives are:

- Rehabilitation of soil as a quality agricultural support and as a filtering barrier;
- Favour the efficient use of water and nutrients, reducing the global needs;
- Reduction of the application of mineral fertilizers and increase of agricultural profitability;
- Greater soil cohesion, with less vulnerability to erosion and desertification;
- Conservative circular use of organic by products produced in EFMA;
- Better water quality and less susceptibility to invasive aquatic species;
- Promotion of soil life, fertility regenerator and booster of plant health;
- Carbon sequestration in soil, as opposed to burning, with reduction of greenhouse gases.

Website: https://www.edia.pt/ursa/

Olive groves in Alqueva | Characterisation study| EDIA

Olive grove is the most important crop in Alqueva, being in a way, the symbol of the new irrigated agriculture in the Region. As a result, Portuguese olive growing has dramatically increased its productivity, which has already enabled an export surplus.

In order to technically characterise this sector, a study was produced to understand the real impacts of this culture, in the economic, social and environmental aspects and to identify the conditions to promote its sustainability.

EDIA coordinated this work, which counted with the collaboration of several bodies of the Ministry of Agriculture - the Directorate General for Agriculture and Rural Development (DGADR), the Regional Directorate of Agriculture and Fisheries of the Alentejo (DRAPALE), the National Institute for Agricultural and Veterinary Research (INIAV) and the Directorate General for Agriculture and Veterinary (DGAV).

Website: https://www.edia.pt/pt/o-que-fazemos/olival-em-alqueva-caracterizacao-e-perspetivas/#

Fruta feia project

Fruta Feia's main goal is to reduce tons of good quality food that are thrown back to the land by farmers every year and, also to prevent the unnecessary use of resources on their production, such as water, arable land, energy and working hours. By changing consumption patterns, this project intends that in the future all quality fruits and vegetables are marketed equally, regardless of their size, colour and shape.

Alongside this local impact, this project aims to raise awareness of the population on food waste, as well as on the fact that "ugly food" can be of good quality. This enables people to have access to food that is cheaper and produced locally.

Website: https://frutafeia.pt/en

PSVA - Wines of Alentejo Sustainability Programme

Alentejo Regional Wine Growing Commission - the body that controls, protects and certifies Alentejo wines - decided to develop the Wines of Alentejo Sustainability Programme to make Alentejo a sustainable wine growing region.

This Sustainability Programme initiated in 2013, a pioneer in Portugal, free and voluntary, aims to provide its members with a tool to assess the current state of their activities and provide recommendations for using best practices to increase the competitiveness and sustainability of Alentejo wines. The challenge ahead is to produce quality grapes and wine in a cost-effective manner, whilst protecting the environment and improving relations with employees and neighbours.

The plan follows the standard method of continuous improvement by being an organised system in three distinct sectors (Viticulture; Cellar; Viticulture & Cellar). Division of sectors relates to the type of members present in the Alentejo Regional Wine Growing Commission. The Sustainability Programme consists of thematic chapters with various associated criteria.

Website: https://sustentabilidade.vinhosdoalentejo.pt/en

3.3. Recommendations from the MAP

MAP Alqueva met for the second time on 20 September 2022. This meeting was held online, and it continued the work undertaken during the first meeting.

During this online meeting MAP Alqueva members had, firstly, to identify what policy interventions are recommended to be implemented at local, regional and/or national level and how can the European Union support these interventions.

Then, the MAP Alqueva members were asked to identify and discuss what are the knowledge gaps and what research is needed to address those.

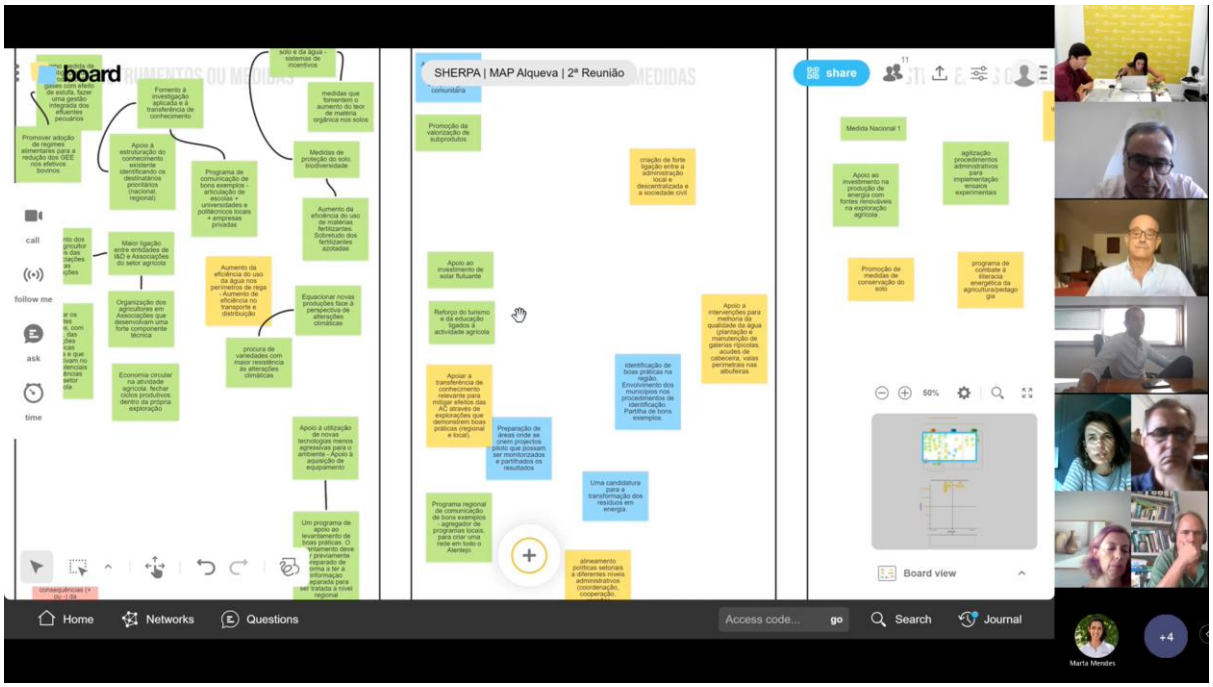


Figure 7 - MAP Alqueva meeting for identifying policy recommendations and knowledge and research gaps

3.3.1. Recommendations for future rural policies

One of the challenges issued to the MAP members was to identify recommended policy interventions for the Alqueva region, to be implemented at local, regional and/or national level (Figure 8). The results for this exercise were:

- **Local level:**
  - Promote adoption of feeding regimes for greenhouse gases' reduction in cattle herds as a measure to mitigate the production of greenhouse gases, make an integrated management of livestock effluents;
  - Support for the creation of a network of community composting plants. Aspects as proximity and local extension as crucial;
  - Fostering applied research and knowledge transfer;
  - Soil and water conservation techniques - incentive schemes. Measures to encourage an increase in the organic matter content of soils;
  - Research for crop varieties with greater resistance to climate change;
  - Inform productive agents, with evidence, of present and future climate change and potential consequences for the agricultural sector. Involvement of citizens and farmers through their associations and other organisations;
  - Circular economy in agricultural activity. Closing production cycles within the farm itself;
  - A recurrent evaluation of the consequences (positive or negative) of policy implementation, which requires continuous monitoring of these measures in time and space;

- Support for the use of new technologies less aggressive for the environment;
- Support for the purchase of equipment;
- A programme to support the mapping of good practices. The survey should be prepared in advance in order to have the information ready to be processed at regional level;
- Promotion of a consensual benchmark for farm-scale measurement of carbon balance;

- **Regional level:**
  - Support the structuring of existing knowledge by identifying priority recipients (national, regional);
  - Support for the creation of a network of community composting plants;
  - Support for measures to improve water quality (planting and maintaining riparian galleries, headwater ditches and perimeter ditches in reservoirs;
  - Promotion of the valorisation of by-products;
  - Creation of strong links between local and decentralised administration and civil society;
  - Investment support for floating solar;
  - Regional Strategy articulated with municipal strategies for the creation of the regional food network;
  - Strengthening tourism and education linked to agricultural activity;
  - Support the transfer of relevant knowledge to mitigate the effects of climate change through farms demonstrating good practices (regional and local);
  - Regional programme of communication of good examples- aggregator of local programmes, to create a network throughout the Alentejo;
  - Robust and facilitated financing for energy transition, including tackling energy poverty;
- **National level:**
  - Support for investment in on-farm renewable energy production;
  - Programme to support the electrification and automation of rural machinery;
  - Programme to combat energy illiteracy in agriculture/pedagogy;
  - Streamlining administrative procedures for implementing experimental trials;
  - Creation of a mechanism for the rapid penalisation of bad practices;
  - Structuring the AKIS system itself in Portugal;
  - Promotion of soil conservation measures;
  - National support programme for hydric regularisation (dams, weirs, drills/wells);
  - Renewal and maintenance of the national climate monitoring network (meteorological and hydrometric stations);
  - Creation of a Task Force to combat climate change;
  - Support for Bioenergy;
  - Establishment of a prior notification mechanism for agricultural projects.

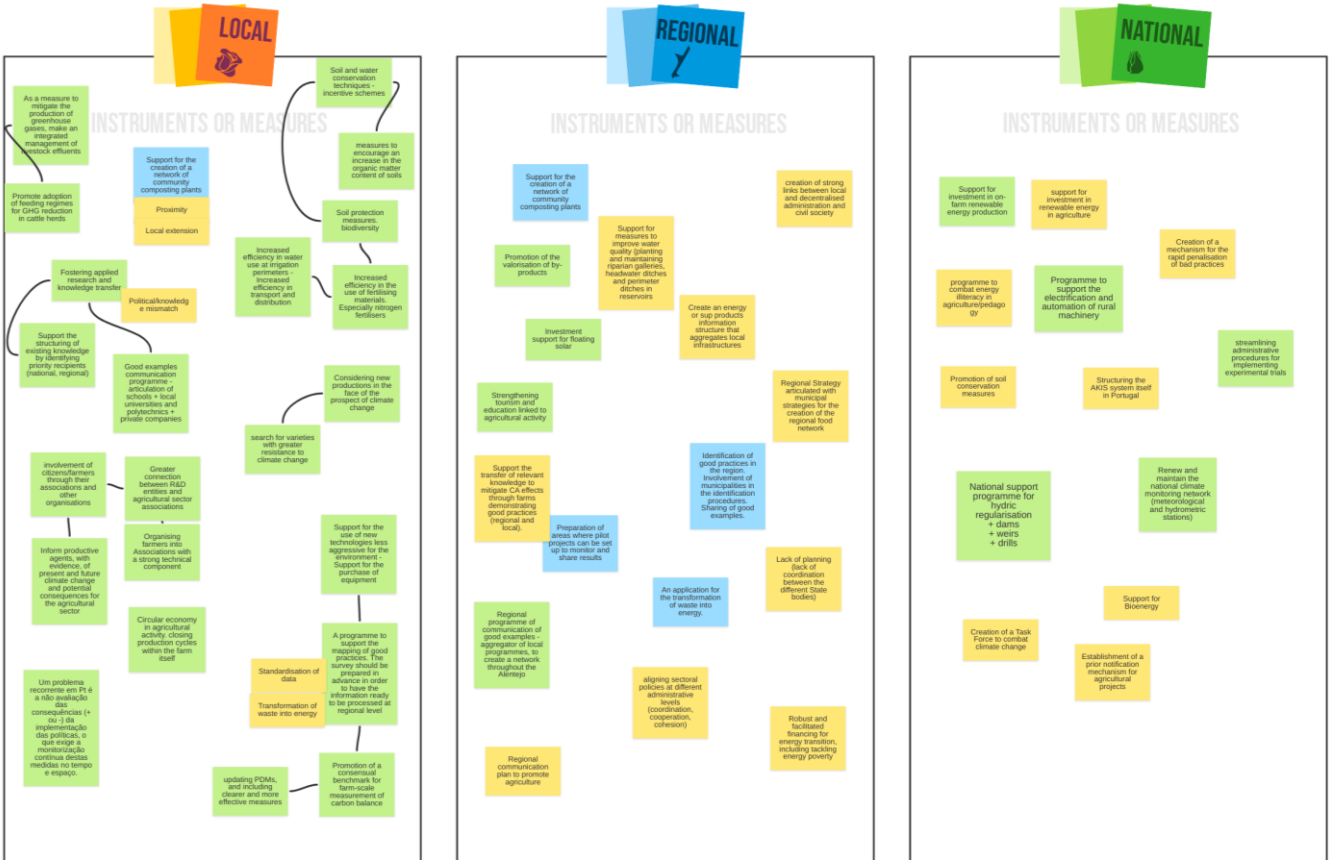


Figure 8 - Dashboard with the contributions of MAP Alqueva members regarding policy interventions on a local, regional and national level

3.3.2. Recommendations for future research agendas

The MAP had the opportunity to discuss and deliver recommendations for future research agendas in the scope of the Alqueva region (Figure 9). MAP Alqueva members identified knowledge gaps and what new research was needed.

The recommendations were distributed in four different categories that had as variables the longevity of the research needed (as necessary time to achieve results) and the importance regarding the regional needs.

The results for this exercise were:

Long-term research:

- + Importance + Longevity
    - Research on measures (best practices) for soil carbon sequestration;

- Need to develop more advanced methodologies to measure more accurately the effect of practices on greenhouse gas reduction;
- Better knowledge of the aspirations and current and future interests of various social actors in the territory, and the potential conflicts between them;
- Monitoring climate change response practices: effects over time (+longevity - Importance);
- Making public data available is essential (+ importance - longevity);

- - Importance + Longevity
  - Always be aware that local contexts are often specific and the same recipe does not work everywhere: this can be solved through research to understand which drivers need to be considered or through continuous monitoring of the success of policy implementation;
  - Do not only do research in incremental but disruptive adaptation;

Short/medium term research:

- + Importance - Longevity
  - Research on emphasising the circular economy;
  - Evaluate the cultural practices. Redundancies should be avoided;
  - Climate change research often requires mono-driver and non-linear modelling, much of the research that needs to be done in the future needs to be multi-driver and accept non-linear responses;
  - Impact of climate change on the main crops of Alqueva: identification of drivers and effects;
- - Importance - longevity
  - Creation of information-sharing platforms among organisations and institutions but also citizens. Structured/organised data collection;
  - Research on interdisciplinary themes (agronomy, environment, economics, social);
  - Data from social sciences;

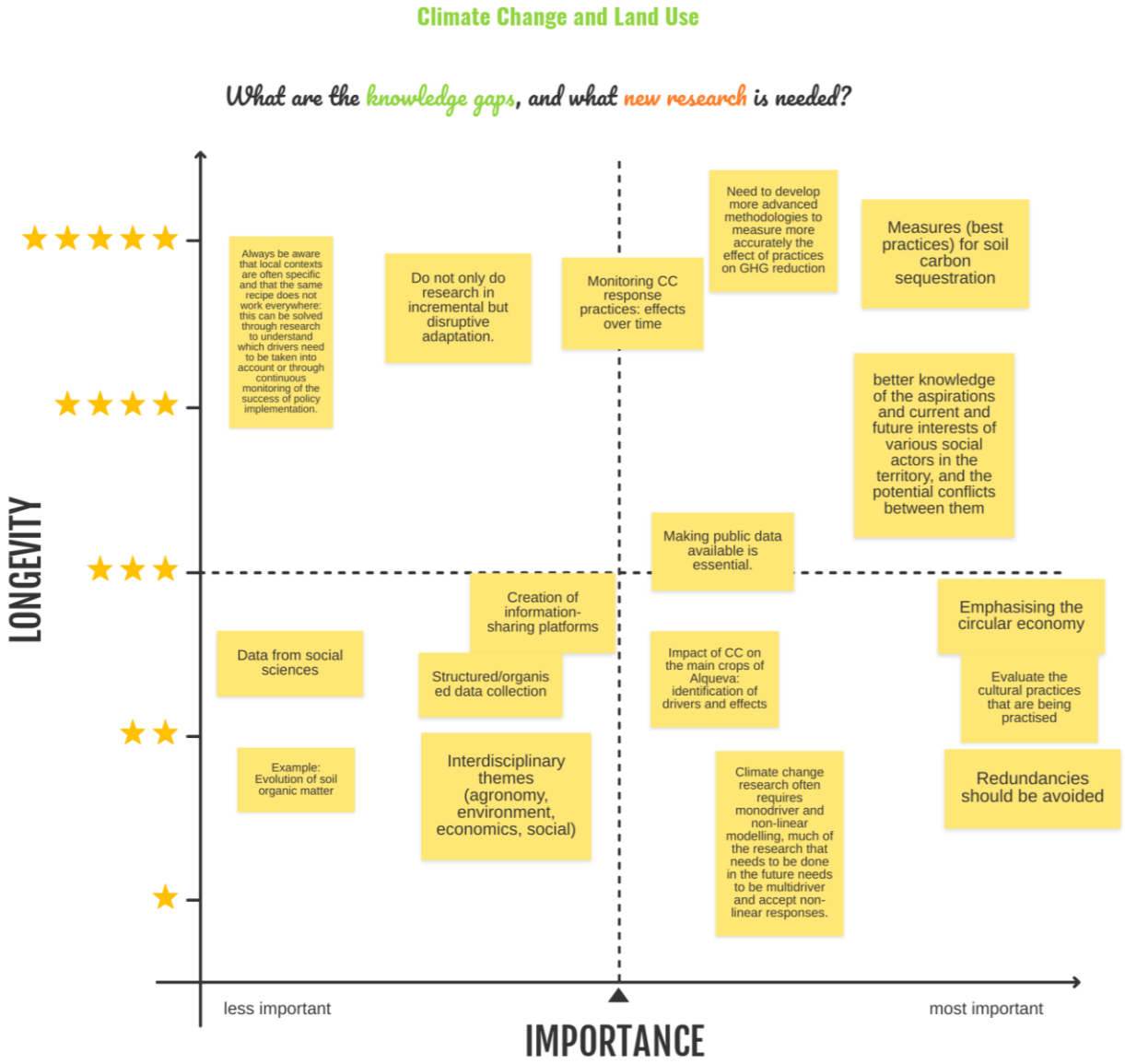


Figure 9 - Dashboard with the contributions of MAP Alqueva members regarding knowledge gaps and research needed

Conclusions

MAP Alqueva is geographically situated in area of Portugal that experiences an important land use change. Several studies were conducted before the infrastructure had been built, however the information we know now regarding climate change, the real evolution of land use and the economic and social challenges that we face today were not fully contemplated 30 years ago.

This position paper contains a multi-actor view on the region and their needs regarding climate change and land use.

Energy transition is clearly a prioritised challenge from all stakeholders involved. These stakeholders envision several opportunities that lay in the region such as promoting alternative energy sources, taxation and its impact on climate, floating solar taking advantage of the vast water body that exist in Alqueva, improving and utilising the regional railway, and a better and well-suited land use planning for the future.

Regarding public opinion on climate change and agriculture, the MAP identified different areas of intervention such as communication and information for the general public, dissemination of what is currently done in the agricultural level and the need to promoted citizen initiatives to improve value chain sustainability.

As for cooperation between stakeholders and knowledge transfer, MAP members identified different limiting factors. Among these: the distance between the scientific community and the rest of society (due to the different career objectives and goals that researchers are obligated to pursue); the importance of the existence of regional agricultural extension; and leveraging the willingness farms and companies to assist and collaborate on regional research.

The main recommendations presented targeted the above-mentioned needs and research gaps. The MAP Alqueva did an effort to rank and to prioritise recommendations on different geographical scales, but also regarding future research agendas. MAP members sorted the different recommendations classifying them for the time that those initiatives would demand for having the first results and the importance of each research initiative for the region of Alqueva and in the scope of land use and climate change.

Acknowledgements

We would like to thank all the MAP Members who promptly responded to all the proposed challenges throughout this third cycle of the MAP Alqueva.

We would also like to thank EDIA for being the host of this cycle first MAP meeting.

This third cycle coincided with the period of reformulations and discussions at the level of territorial development policies and with the summer holiday period, which hampered the involvement and engagement of the different sector agents throughout the cycle. However, it is important to highlight the quality and rationale put forward by MAP members in all the proposed challenges, culminating in this position paper, which clearly reflects the perspectives of those on the field and those who fight daily for the Alqueva region to achieve a sustainable future in a period of changing climate conditions and policy definition.

References

EDIA – Empresa de desevolvimento e Infra-estruturas do Alqueva (2022). Anuário Agrícola de Alqueva 2021. Retrieved from https://www.edia.pt/wp-content/uploads/2022/03/AnuarioAgricolaAlqueva2021.pdf

Portuguese National Energy and Climate Plan 2021-2030 (NECP 2030). Retrieved from: https://energy.ec.europa.eu/system/files/2020-06/pt_final_necp_main_en_0.pdf

Annex 1 Methodology used by the MAP

Table 2 - Summary of the key information about the MAP

Key data	Description
Name and location of the MAP (country and region)	MAP Alqueva Beja | Alentejo Region | Portugal
Composition of the MAP	24 MAP Members 6 policy | 9 science | 10 society
Name of Facilitator	Pompeu Pais Dias
Name of Monitor	Marta Mendes
Valid period	2021-2023

Working methods and planned activities for the 3rd MAP cycle

Working methods

1. Sharing of support documents for the development of the 3rd Cycle
2. Periodic communication with MAP Members with the aim of maintaining their involvement and interaction in the MAP
3. 1st Meeting | Face-to-face group discussion
4. 2nd Meeting | Online group discussion
5. Validation of the Position Paper with MAP members

Planned activities for the 3rd MAP cycle

- *Sharing of documents supporting the development of the cycle*

The cycle's work plan started when all the documents that support MAP development was shared with the MAP Members, namely the SHERPA Discussion Paper, as well as other bibliography essential for understanding the objectives of this cycle. All these documents were translated into Portuguese and sent by email.

- *1st Meeting | Face-to-face group discussion*

Organisation of a group meeting, in an exclusively face-to-face format, if the COVID pandemic allows it, with the aim of sharing knowledge, experiences and perspectives of the different local agents, linked to policy, science and society. This meeting was organised in one group session, with the objective of answering all the objectives foreseen for this cycle. Thus, we share below some topics of the draft agenda:

- ✓ SHERPA Discussion Paper: Summary & Main goal
- ✓ SHERPA Discussion Paper: Background
- ✓ Selection of key sub-themes to be discussed in the meeting regarding Land Use and Climate Change

- ✓ Group discussion| Klaxoon platform: What are the needs of the area covered by the MAP in relation to (1) Energy transition, (2) Public opinion on climate change and the role of agriculture, and (3) Cooperation between stakeholders and knowledge transfer?

- *2nd Meeting | Online meeting*

To give continuity to the work developed by the MAP Members in the first meeting, and once the main needs of the Alqueva region had been identified, the MAP was to discuss and recommend policies for rural areas, as well as research needed. The meeting was structure as follows:

- ✓ Main results of the 1st MAP meeting - Identification of needs
- ✓ Recommendations for future Rural policies in a Klaxoon dashboard
- ✓ Knowledge gaps and recommendations for future research in a Klaxoon dashboard

- *MAP Position Paper*

After the second face-to-face meeting, all collected inputs were analysed, resulting in a MAP Alqueva Position Paper.

- *Sharing the SHERPA Position Paper*

Once the SHERPA Position Paper is finalised, it is shared by email with all MAP members.

SHERPA
Rural Science-Society-Policy Interfaces

www.rural-interfaces.eu

SHERPA has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 862448. The content of the document does not reflect the official opinion of the European Union. Responsibility for the information and views expressed therein lies entirely with the author(s).