



SHERPA
Rural Science-Society-Policy
Interfaces

A VISION FOR RURAL AREAS

MAP Discussion Paper

LONG-TERM VISION FOR RURAL AREAS: CONTRIBUTION FROM 20 SCIENCE- SOCIETY-POLICY PLATFORMS

MAP DISCUSSION PAPER

SOUTH AEGEAN MAP

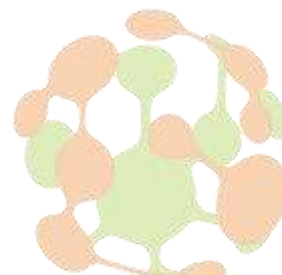
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1. Introduction

The region of South Aegean is one of Greece's thirteen administrative districts. It includes the island clusters of Cyclades and Dodecanese and is located in the southeast of Greece and the European Union. The capital city of the region is Ermoupolis located in the island of Syros. The area of the region is 5,286 km² and covers 4% of the total area of the country. It comprises the regional units of Andros, Thira, Kalimnos, Karpathos, Kea-Kithnos, Kos, Milos, Mykonos, Naxos, Paros, Rodos, Siros, and Tinos.

The MAP of the South Aegean region is made up of a total number of twelve members with two of them (i.e. 16.7%) being representatives of the Science domain, three (i.e. 25%) representing the Policy domain, and the last seven MAP members (namely, 58.3%) representing the Society.



Figure 1: The region of South Aegean

The MAP of the South Aegean region is a multi-actor group consisting of members of the local community that has been assembled for the needs of the research conducted in SHERPA and has not been based on an already existing group of local actors. The discussions with the members of the MAP took place through the implementation of teleconferencing sessions that were held on the 3rd, 4th, and 6th of June 2020. In order to facilitate the process, the discussions were held in the context of three MAP subgroups consisting of four members each. The assignment of the MAP members to each of the subgroups was made on a random basis, however the intention was to have an even representation of all the domains (i.e. Science, Policy, and Society) in each subgroup.

The questions on which the discussions have been based (listed in Annex 2) were sent to the participants of the MAP in advance in order to help them better prepare. A considerable part of the discussions held was dedicated to the topics of demographic shift, climate change, change in production, digitisation in rural areas, infrastructures and basic services, and inequalities. Section 2 provides an outline of the views of the MAP members on the topics mentioned above, whereas a number of indicators relating to these topics are listed in Annex 2 together with the questions used for guiding the discussions. Section 3 provides accounts of the MAP members' thoughts on the challenges and opportunities to be encountered in the region in the next twenty years, their vision for the region of South Aegean, and the challenges needed to be addressed on the way to making this vision become a reality. The present document concludes with a summarisation of the key points highlighted as part of the discussions and interactions held in the context of the MAP, as well as references to the steps to be taken next.

Keywords: *South Aegean, islands, tourism, Agriculture, self-sustainability, environment, infrastructures, services.*

2. Results from desk research

By dedicating a considerable part of the discussions with the MAP members on the topics of demographic shift, climate change, change in production, digitisation in rural areas, infrastructures and basic services, and inequalities, a number of issues and problems were brought up and potential solutions were discussed. More particularly, the MAP participants focused, among others, on women's involvement in entrepreneurial activities, the availability of potable water, demographic shifts, digitisation, the infrastructures available in the healthcare sector, changes in production and the primary sector, the current state of play with regard to universities and technical schools, changes in policy, and how the many (small) islands of the region of the South Aegean can become self-sustainable.

The discussions with the members of the MAP have helped us better comprehend the problems and issues faced by the people living and working in the region, as well as to realise the region's potential for growth and development.

2.1. Review of key trends

The discussion on key trends initiated by making references to the economic crisis of the 2009 - 2019 decade and the impact it has had in terms of local people migrating to the urban centers looking for better jobs and life conditions [1,2]. Despite the fact that the region of the South Aegean is where the university of the South Aegean is based with many students enrolled, and attending courses, in its departments, the great majority of graduate students decide to leave the region and move to the big cities of Greece (or abroad) in a pursuit of a good job and life. However, because of the large number of student enrollments each year, there is an annual increase in the region's population by 500 to 600 people [1].

A key trend mentioned during the discussions relates to changes in production and the primary sector. For many years the main source of income for the majority of professionals in the region of South Aegean has been tourism. Agriculture is also a considerable financial activity; yet, the land's morphology does not allow for large agricultural properties. The majority of local farmers are small holders striving to achieve a financial balance. This problem becomes bigger because of the fact that the parents do not encourage their children to start an Agriculture-related job. The chairman of the agricultural association in the island of Syros has characteristically mentioned that *'the parents think that a job in Agriculture is not prestigious and they aspire that their children will be able to get a well-paid job in a big company'*. The majority of the agricultural workers in the South Aegean region are immigrants, because the locals do not want to get involved in Agriculture-related jobs. The agricultural production has also changed significantly. At this moment, there are three Protected Denomination of Origin (PDO) agricultural products of excellent quality. In addition, women can significantly contribute to the agricultural production as well. There are women involved in agricultural work and entrepreneurial activities by running their own businesses. However, the primary production sector in the region needs to be strengthened. There is a need for professional staff such as agricultural engineers, veterinarians, as well as researchers in the field of Agriculture in order to consult farmers with regard to the adoption of efficient, technology-enabled Agriculture-related solutions (e.g. precision agriculture) to increase production.

Climate change is evident worldwide and the region of South Aegean suffers also from its effects. This fact has been confirmed by the members of the MAP representing agricultural associations located in the island clusters of Cyclades and Dodecanese. It has been mentioned that the ambient temperature has increased; yet, the relative humidity is low due to the sea and as a result the agricultural products can still grow normally. Everyday we witness severe damages in the agricultural production happening as the result of the climate change and the extreme weather conditions relating to it [3]. However, in the case of the region of the South Aegean, some of the climate change effects may prove to be beneficial for the quality of some agricultural products. For example the quality of figs that do not get irrigated on a frequent basis is better.

The South Aegean region, as many island areas in the world, faces the problem of not having adequate quantities of fresh, potable water. Seawater desalination systems can provide an efficient solution to this problem by producing potable water from the sea. There are more than 50 desalination units installed and operating in the region of South Aegean. Despite the fact that the quality of the fresh water produced by the desalination units is excellent, the quality of the water in the sink is not that good because of the old and poorly maintained water pipe network in use [4]. This fact causes a number of problems in cultivation. In addition to that, the level of the aquifer has significantly lowered in the past years and, thus, the limited amount of the fresh water available gets mixed with the seawater. This leads to a distortion of the fresh water's constitution in nutrient elements, which, in turn, may harm the crops when using it for irrigation.

Another issue discussed related to the deficiencies of the healthcare sector and system in the region of South Aegean. More particularly, there is a lack of healthcare infrastructures and medical staff. The region of the South Aegean is constituted by a big number of small, isolated islands. In some of them there are

medical centres, which, in most cases, underperform. In many cases, patients have to be transported from one island to another by a vessel. Infrequent itineraries and the bad weather conditions, which tend to be the norm in winter, make the provision of quality healthcare services to local people a hard target to achieve. Apart from that, there is a lack of medical staff, mostly due to the unwillingness of professionals in healthcare to get transferred to medical units in the region of South Aegean and offer their services there. According to recent studies, the region of South Aegean has 8 public hospitals, 14 health centers, 1 private medical clinic, and 1400 hospital beds in total [5]. However, many of these hospitals and medical centers are not adequately staffed with medical personnel and equipped with medical equipment.

As far as the digitisation of the specific region is concerned, a number of recent studies have indicated that 69% of households in the region of South Aegean (and Crete) have access to the Internet [5-7]. This percentage has increased in the last year, especially during the Covid-19 pandemic period. One of the main reasons for this raise has been the isolation experienced by the island residents. Apart from the raise in Internet use, it has been noticed that the exploitation of e-commerce applications is particularly high in the region of South Aegean. In 2018, nearly half of the total electronic transactions in Greece (45%) were conducted from the South Aegean region [6]. As the representatives of the Society domain have specifically pointed out, there will be a further increase in the utilisation of e-commerce services and applications in the future. This is a trend that needs to be meticulously considered by the local retailers, who should become familiar with this type of commercial activity and interaction with the customers. In order to help the local retail professionals set their own e-shops up, coordinated training efforts and programs need to be designed and implemented.

2.2. Review of main challenges and opportunities

Focusing on the main challenges and opportunities in the South Aegean region, it has been observed that the female population works mainly in the sectors of industry (e.g. processing and packaging) and tourism, and considerably less in the agricultural sector. A number of actions already taken in the region to boost Agriculture, such as the establishment of a producers cooperative in the island of Syros, may significantly contribute to women's further involvement in Agriculture. The investment in infrastructures is also critical for the islands of the South Aegean. Starting from the healthcare sector, there need to be efforts, coordinated by the local authorities and the Greek government, towards the direction of staffing all healthcare units with experienced medical personnel and equipping them with the equipment necessary. The marine transport network and system should also be strengthened both in terms of the adequacy of the number of personnel and the organisation and implementation of itineraries on a frequent basis. Such remedial actions will help towards limiting the sense of isolation experienced by the locals and, of course, increasing the level of the population's confidence and quality of life. Tourism is the most significant developmental factor for the region. By systematically enhancing the experience of the people visiting the region with the provision of local products of top quality, there is potential for further growth of both the Agriculture and tourism sectors. However, the current Covid-19 pandemic and crisis has had a big, negative impact on the touristic sector that needs to be efficiently addressed with the adequate support of the local authorities and the government.

The primary sector in the region of the South Aegean suffers from land fragmentation, a characteristic of the land's morphology that poses difficulties on producers who are forced to make use of low-intensity machinery and allocate more time on their tasks. The need for investments in the livestock sector and products for the benefit of the socio-economic development of the southern Aegean region, as well as the lack of workers in the fishing industry have also been stressed. In this context, the MAP participants have pointed out the importance of extensive research, focusing on the specific region, in water resources and climate change. More specifically, there is a need to identify and exploit water resource alternatives that can sufficiently cover the region's watering and irrigation needs in the best quality way. Moreover, the issue of the efficient distribution of agricultural products to the market should not be neglected. In this context, the members of the MAP have stressed the opportunities that may potentially arise from the provision of incentives for the establishment of producer cooperatives and the investments in processing and packaging

units. Such initiatives can significantly contribute to the region's growth and self-sustainability by providing the local players the means to undertake and handle all the tasks involved in the agricultural products' 'journey' from farm to the fork. As far as the digitisation of the local rural community is concerned, the use of the Internet has seen a rise in the last years. The unanticipated situations faced during the recent Covid-19 pandemic have further increased the need for broadband access and revealed the potential for quality, web-based services provision (e.g. e-governance and e-commerce services). These are specific challenges and opportunities that need to be addressed. As an example, we may refer to the "Internet-of-Things" paradigm and the potential it bears for the optimisation of agricultural practices and yield increase. However, this kind of digitisation-related benefits will not be able to be reaped unless a substantial upgrade of the existing telecommunication networks and infrastructures takes place. Another major problem highlighted with regard to the South Aegean region, is the lack of senior technical staff. Thus, an interesting opportunity would be the investment in technical schools able to deliver the training necessary for having the specific need covered.

2.3. Summary of existing foresight(s)

The South Aegean islands face several difficulties in transportation and a result of this is the region islands' isolation from the mainland. Strengthening the islands' independence and self-sustainability appears to be a key target able to contribute to an efficient confrontation of problems in the healthcare and public service provision, as well as the transport of necessity products. However, till the identification and development of well-established solutions for enabling the region islands' self-sustainability, it would be useful to start from finding solutions towards the establishment of a frequent and efficient maritime transport network. Policies can play a crucial role in the reforms required in the transport sector. The establishment of reforms may also have critical effects on the primary production sector.

Another major issue is that of technological development. A step needed to be taken, as it will significantly upgrade the region's islands from a technology perspective, will be the implementation of large-scale projects for the development of optical fiber telecommunication networks. Establishing an infrastructure of this kind will allow the local producers to start considering the adoption of precision agriculture practices based on IoT-based solutions. Apart from that, there can also be a substantial growth in the provision of e-commerce and e-governance services that can be steadily and continuously made available, even in the case of experiencing unprecedented situations. Significant steps have been taken by the Greek Ministry of Education towards the provision of tele-education services since 2005 with many people involved in them. As part of this effort, an e-learning platform has been set up by COINSEP Cyclades, which has indeed been well-received. In the case of Agriculture, the introduction of digital technologies has helped to improve the quantity of the products produced, as well as their quality. The changes and challenges brought up by the systematic exploitation of digital technologies are many and the industries involved in this sector need to also support the steps taken towards a cross-sectoral digital transition and reform. After all, the information technologies are and will continue to be an integral part of our daily personal and professional lives.

With regard to healthcare, there is a great need for technical equipment and intensive care units. The life and working conditions of doctors, nurses, medical staff, and civil servants in the region needs to become more attractive so as to capture the interest of professionals in these domains and provide solutions to the problem of insufficient staffing of hospitals and public agencies. In the same context, the local healthcare centers must be significantly upgraded. This need becomes more evident during the summer season when a great number of tourists visit the islands of the South Aegean. If these issues become effectively addressed, there are going to be significant benefits in the local populations' well-being and the feeling of safety experienced by both the locals and visitors. However, till these long-term, large-scale plans become implemented, some more practical short-term solutions need to be devised. One of them could be the construction of an appropriately equipped mobile healthcare unit able to be transported from one island to another in order to cover basic medical needs, especially during the high touristic season.

Rural development is a very important parameter for the South Aegean's island viability. In order to help the islands become self-sustainable, we must rely on sustainable agricultural holdings and not holdings that

maintain subsidies. In addition, there are many plots that cannot be built and if appropriately exploited they can contribute to the expansion of agricultural production. An issue that also requires attention is that of the promotion of organic farming in the region in an attempt to contribute to the natural environment's protection and the humans' well-being. By investing in organic farming and the improvement of agricultural products' quality, the products produced in the region can have a competitive advantage in the market. In this context, we should consider one of the core advantages of the region relating to the low operating costs of greenhouses, which needs to be regarded as part of the efforts towards production improvement. The change in ambient temperature and humidity levels may lead to the emergence of new crop diseases, which the farmer must fight; however, the climate change may also yield opportunities for the production and marketing of top quality products (e.g. figs that need to be infrequently irrigated). The introduction of information technologies in all sectors, and Agriculture especially, can significantly contribute to the region's development and growth.

Another foresight highlighted was women's entrepreneurship in the South Aegean region. This concerns three main areas, namely the production, processing and packaging, and the distribution of products to the market. However, due to the harsh and difficult conditions encountered in the crop harvesting process, the processing and packaging stage of the supply chain, as well as the distribution of products to the market appear to be more appealing for the establishment of entrepreneurial activities by women.

Climate change has greatly affected the South Aegean islands and policies need to be put into motion for relieving the local population from their disastrous effects. As far as the agricultural sector is concerned, in the coming years, the climate change will completely alter the profession of the agronomist/advisor and the way in which farmers cultivate their land and grow their crops. Monitoring the weather conditions on a very frequent basis can potentially facilitate the adoption of timely measures for the protection of crops from the harmful effects of extreme weather conditions, which constitute the manifestation of climate change. The construction and utilisation of dams and water reservoirs, as well as the exploitation of the solar and wind energy can be viable alternatives to efficiently addressing the producers' needs in energy at a minimum cost for the natural environment.

3. Results from interviews with MAP members

This section aims to record the opinions and views shared by the members of the South Aegean MAP, as part of the discussions held with them, with regard to what the situation in the region could be in the next twenty years (i.e. till 2040). More specifically, the points highlighted refer to: (i) what the challenges and opportunities for the South Aegean region could be; (ii) the MAP members' vision for the region for 2040; and (iii) the challenges needed to be faced in order to pave the way towards making the vision become a reality. The above points are tightly associated with the questions 3, 4, and 5 that were used as a guide to the discussions held in the context of the MAP. The full list of the questions used in the discussions with the MAP members are listed in Annex 2.

3.1. Challenges and opportunities in the next 20 years

With regard to the domains in which specific challenges and opportunities, for the South Aegean region, may arise in the next 20 years, the members of the MAP have referred to the agricultural production, the tourism sector, the protection of the environment and natural habitat, as well as the provision of services and infrastructures. As far as the agricultural production is concerned, emphasis was placed on the need to better promote the local products and the local producers' further involvement in organic farming. More specifically, what has been mentioned is that the gradual shift of the agricultural production towards the direction of organic farming products, together with the support of qualified and experienced advisors and agronomists, may result in the production of top quality agricultural products of high nutrient value to the consumer. Such product examples are fig and caper, which are largely grown in the island of Syros. In the same context, the domain of fishing needs also to be strengthened. The establishment of appropriately

organised, large-scale aquaculture-related initiatives in the region of the South Aegean is greatly favoured by the prevailing weather and climatic conditions. Thus, the systematic establishment of aquaculture in the region may significantly contribute to the raise in employment rates and an increase in income.

Following the above ideas, the importance of the agricultural products' processing and packaging has also been raised. The foundation of producer groups/cooperatives may pave the way towards the establishment of efficient distribution channels for distributing the local PDO products to a wide range of consumers and markets. It has also been said that the information technologies available can significantly help and boost the process of advertisement campaigns' design and creation in a cost-efficient manner. As a result, a new socio-economic landscape can become prevalent and new job opportunities made available. The potential for job opportunities for women and the growth of women entrepreneurship have also been pointed out as the benefits that can be reaped from a shift of focus towards a region-based empowerment and further development of the local agricultural products processing, packaging, and marketing.

From the discussions that have taken place with the participation of the members of the Greek MAP, it has also been stressed that tourism is a domain that has the potential to significantly grow in the next twenty years. This growth potential can be viewed under the perspective of promoting alternative and/or new forms/types of tourism. Such types of tourism are maritime tourism, fishing tourism, gastronomic tourism, and religious tourism. These alternative types of tourism can indeed be strengthened, in the South Aegean region, within the next twenty years, however this has to take place by fully respecting the environment, the character of the region, as well as its long history and culture. A point that has also raised considerable attention is that the promotion of the local agricultural products, via targeted promotional activities, should be part and parcel of the experience offered to the region's visitors.

Despite the fact that the environment's and natural habitat's protection have indeed been mentioned in the context of other issues discussed, it should be noted that they have also been raised as standalone issues. More specifically, the South Aegean MAP members have particularly stressed the importance of the natural environment's protection in the years to come. Within this context, the exploitation of renewable energy sources (e.g. solar and wind power) need to be considered for covering the energy needs of the local community especially with respect to agricultural activities. It has also been suggested that investments in environmental protection should also focus upon the construction of units processing the byproducts/waste coming from the agricultural activities (e.g. waste from olive mills) in an effort to contribute to the region's circular economy.

As far as the challenges and opportunities regarding the provision of services and infrastructures are concerned, the members of the Greek MAP have referred to the creation of electric power supply stations where electric vehicles (e.g. electric bicycles and cars) will be able to be charged, the establishment of waterways to further attract airline companies to the region's islands, the upgrading of the local public healthcare system and services, and the provision of a more stable and reliable sea transport system to better connect the islands of the region.

Finally, in order to address the above stated challenges and opportunities, there needs to be support by the local authorities and the government. As far as the agricultural and tourism sectors are concerned, support may be offered by providing opportunities to farmers for the processing and packaging of their products, as well as through the implementation of education/training programs targeting both the farmers and people involved in the sector of tourism.

3.2. Desirable future for 2040

What has become evident from the discussions with the members of the South Aegean MAP is that a desirable future may be easily imagined, yet the path to the desired vision is not necessarily an easy one. The discussions that have taken place helped us understand the desirable future for 2040 and highlight the MAP members' vision for the South Aegean region. More specifically, the representatives of the Science, Policy, and Society domains had the opportunity to define what the desired future could be for different group members, organisations, and societal entities. Based on these discussions, we have been able to get

informed that the members of the local community envision a sustainable and balanced development of the region with an emphasis on the citizens' safety and quality of life. As an example, they have mentioned the need for provision of quality educational services and a robust healthcare system. Such a balanced and sustainable development necessitates the reduction of bureaucracy towards the achievement of an efficient and flexible policy coordination and management offering the local people the opportunity to express their needs and opinions and be heard from the "bottom" to the "top". Taking steps for the digitisation of the activities and practices involved in the productive tissue (namely, the Agriculture and tourism) is, of course, a requisite for the achievement of the sustainable development goal. The local community's modernisation together with the establishment and promotion of entrepreneurial initiatives and activities are the key ingredients of the future imagined for the South Aegean region. All the above can significantly contribute to the reconstruction and upgrading of the productive and social tissue, the social cohesion's strengthening, and the provision of motives to keep the local population in the region.

However, it should not be neglected that the protection of the natural environment and the conservation of the region's biodiversity are also at the core of how the MAP members conceptualise the desirable future for 2040. There is indeed a need for further development of the primary sector. Nevertheless, it needs to take place by fully respecting the landscape and natural habitat, as well as the region's long cultural heritage. In other words, there is no point in achieving progress without preserving the physiognomy of the region. Within this context, the members of the South Aegean MAP imagine a future in which growth and evolution will be achieved by means of a sustainable natural resources exploitation with all the community members and stakeholders being fully aware and actively participating in it instead of just being observers.

3.3. Challenges in reaching the vision

One of the main challenges that has been identified by the South Aegean MAP members on the way to the materialisation of their vision is the need for a shift in the local community members' mindset and culture and the role that education can play. All the MAP members, from all the domains represented (namely, the Science, Policy, and Society domains) have pointed out the fact that moving forward necessitates a shift in the local population's culture and mindset and that this has to occur at both the individual and collective level. It has been highlighted that there is a lack of a collaboration culture and entrepreneurial mindset in the local population. People appear to be afraid of working with each other and, therefore, it is crucial to empower and incentivise them to start networking at the local, regional, national, and international level. It is very important to help people realise the importance of developing synergies and facilitate the establishment of a sense of mutual trust among the members of the community.

In order to do so, i.e. to help towards a substantial shift in the culture and mindset of the local community members, the role of formally provided education is of paramount importance. There should not be a focus solely on the transmission and provision of declarative knowledge, but rather a change of direction towards helping young people broaden their horizons, have access to information and knowledge relevant to their preferences and needs (to also empower them make decisions for their lives and professional careers), become well-informed and active citizens, as well as develop an entrepreneurial mindset and skills. A major challenge needed to be addressed relates to the creation of a local community of people appreciating their place of origin and the surrounding environment, being eager to contribute to the community's evolution by respecting the region's natural habitat, being able to reap the benefits of the globalised economy while, at the same time, taking a critical stance on it, and, of course, having the capacity to quickly adapt to the rapidly changing socio-economic landscape. However, as it has specifically been stressed, working towards the attainment of such objectives and efficiently addressing these challenges requires a significant educational reform penetrating all the levels from primary to tertiary education.

In addition, the South Aegean MAP members have also stressed a number of issues calling for actions by the local authorities and the Greek government. Specifically, the local economy needs to be strengthened by taking all the measures necessary to keep the local production units going and make them sustainable. Financing is a critical aspect of this endeavour. In other words, financial resources need to be allocated, yet in a transparent way by having their appropriate exploitation being monitored (especially in the case of EU-

funded projects). The South Aegean region is made up of a large number of islands. Enabling growth and progress necessitates that the inhabitants of these islands do not migrate to other places. In order to address this challenge, specific motives need to be provided. As an example, we can mention the provision of jobs and facilitation of pleasant living conditions, as well as the empowerment of entrepreneurship in an attempt to strengthen and increase the local production. Within this context, the local authorities need to reconsider their everyday relationship and interaction with the local citizens. The COVID-19 crisis has helped to realise that people can indeed follow the rules and contribute to the common good. This is a key message to consider with regard to the measures needed to be taken, at the policy level, to help the local community members evolve at both the individual and group level. Finally, the MAP participants have stressed that many of the islands of the region should acquire more visibility given that they are unique touristic destinations offering memorable experiences to their visitors. Nevertheless, this visibility needs to be pursued in a way fully respecting the character and profile of the region.

4. Conclusion and next steps

The region of the South Aegean comprises a big island complex located in the southeast of Greece and the European Union. The fact that the region is made up of a big number of islands of various populations and areas poses a number of considerable challenges on the way to the region's growth and development. The desktop research that has taken place for the needs of the SHERPA together with the discussions held with the members of the South Aegean region's MAP have helped confirm the importance that the sectors of tourism and Agriculture have for the specific region. In addition, it has been indicated that there is room for considerable growth in both these sectors and this potential can be realised through the establishment of synergies between them (for instance, promotion of the local agricultural products as part of targeted efforts to enhance the experience offered to the visitors of the region). The problem of land fragmentation and limited freshwater resources call for specially-designed initiatives for the purpose of facilitating the growth of the agricultural sector. Young people should be incentivised to consider and follow careers in the domain in Agriculture. However, this goal cannot be achieved without the adequate support from the local authorities, together with the Greek government, and the provision of quality technical education. The role of infrastructure and digital services provision is of paramount importance. However, apart from all the above, any activities and initiatives towards the facilitation of further development and growth in the region should not take place without carefully considering the environment. The distinctive characteristics and the physiognomy of the region's natural habitat need to be respected and in this context renewable energy sources should be considered by mainstreaming their uptake and use for everyday agricultural activities.

New kinds of financial activities can come to the foreground (e.g. fishing), whereas it is critical to take all the measures necessary to facilitate the region's self-sustainability. In order to achieve this goal, the local healthcare system needs to be strengthened and further developed through systematic efforts of personnel hiring and equipment renewal. Moreover, the public services provision needs to be upgraded. For purposes like these, incentives need to be provided to experienced and qualified professionals so as to be willing to offer their services in the region. In addition to that, the establishment of a well-designed, robust maritime transport system can significantly contribute to the region's growth by particularly contributing to the sense of safety experienced by both the local population and visitors.

The vision for the future growth of the region will not be able to be achieved if not preceded by a change of the local community's culture and mindset at both the individual and collective level. The population of the region needs to become innovative and think out-of-the-box. However, such a change necessitates an adequate support from the educational sector. Young people need to be equipped with skill sets allowing them to become well-informed and active citizens, as well as develop entrepreneurial mindsets. Despite the importance of education for the materialisation of the vision for 2040, it should not be neglected that the implementation of targeted actions and initiatives by the local authorities and the government can offer a significant impetus.

Having established a thorough view of the issues of importance for the region of the South Aegean and the vision of local actors for the region's future, the next step is to further validate these insights by designing and implementing a survey. The survey will be designed on the basis of the information available from the desktop research and the results obtained from the transcription of the discussions with the MAP members. The results that will be gathered from the survey process and their analysis will provide further input able to be used for the revision of the present Discussion Paper.

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Annex 2. Survey Questionnaire

Question 1

Are you aware of any studies, documentation, foresights, initiatives regarding the future of the area (national, regional, local levels).

Question 2

According to you, what are the main current theme(s) for rural areas in the MAP region? How is it to live in rural areas at the moment? Which are the advantages and disadvantages? How has the local community faced the current situation with the coronavirus spread?

Questions based on the indicators identified from the desktop research

Demographic shifts

Permanent population by gender and region (Population and housing census 2011)					
Region	Total	Men	Women	percentage (%) of the total area	
				Men	Women
Greece as whole	10.816.286	5.303.223	5.513.063	49	51
South Aegean	309.015	155.865	153.150	50,4	49,6

CONTEXT: According to the data from the last population census (2011), the population of the South Aegean region was in balance regarding the percentages of male and female population. Nevertheless, we know that Greece has been severely affected by the economic (and social) crisis of the decade 2009-2019.

QUESTION: Did this crisis **affect the local population**? Do you have any idea about the **fluctuation of this index** from 2011 until today? **Has the number of residents** in the region of the south Aegean **increased**? **Has it been decreased**; Has it **remained roughly the same**? **Have residents of the region migrated** to other places in Greece or abroad? In the case of internal or external population migration, do you know if there has been a **move to urban centers or other provincial areas**? Do you know if the **ratio of male and female** population has changed significantly since 2011?

Demographic shifts

Categories and number of people engaged in agricultural activities (2016)			
Region	Farm Managers of legal entities	Holders and family members in the exploitation of individuals	Permanent workers
Greece as whole	652	1.168.324	33.826

South Aegean	17	35.010	547
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CONTEXT: A 2016 survey has revealed a significant difference in the numbers of people working in family farms and those who cultivate land that has been rented for exploitation. A similar conclusion emerges for the whole of Greek territory.

QUESTION: In your opinion, what is the **reason** for this difference?

Demographic shift

Workforce and percentage (%) of unemployment, by region (2014 - 2018)						
Occupational status by region		2014	2015	2016	2017	2018
Greece in total	Workforce	4.810,60	4.808,00	4.804,50	4.779,70	4.743,00
	Employees	3.536,20	3.611,00	3.673,60	3.752,70	3.828,00
	Unemployed	1.274,40	1.197,00	1.130,90	1.027,00	915
	Unemployment rate	26,5	24,9	23,5	21,5	19,3
South Aegean	Workforce	154,9	155	157,2	152,1	158,3
	Employees	123,8	132	129,8	127,7	131,6
	Unemployed	31,1	23	27,4	24,4	26,7
	Unemployment rate	20,1	14,8	17,4	16	16,9

CONTEXT: According to data for the time period 2014-2018 recorded in the table above, the rate of unemployment, at the national level, has fallen gradually. However, in the region of South Aegean there is not any specific trend (increase or decrease), but rather fluctuations.

QUESTION: What is the **current situation** regarding the **labour market**? In which **areas is there greater supply than demand** and in which areas is the **opposite trend** observed? How can we make jobs **more attractive** where there is no demand?

Climate change

QUESTION: Are there any **effects of the climate change** in the South Aegean region evident in the last years? Can you give **specific examples** that are indicative of the changes observed in climatic conditions?

Production shift

QUESTION: Do you think that there is **saturation** in some **professional fields**? Are there sectors of professional activity that **need further support** in the region?

QUESTION: Could you tell us a few things about **women entrepreneurship** in the region of the South Aegean? In which **sectors is the presence of women** in the South Aegean **competitive**?

Health infrastructure

	2013	2014
Number of hospitals/medical centers	12	12
Number of beds	89	90

QUESTION 1: Given the difficulty in accessing healthcare hospital units and the increasing number of tourists visiting the area during the summer, do you think that the **local healthcare units are sufficient** to respond to such increased needs? What was the situation faced during the coronavirus crisis?

QUESTION 2: Do you think that it is **necessary to hire additional medical staff and purchase new equipment** for the local healthcare units?

Digitisation

CONTEXT: According to a survey about the access of Greek households to the internet, we know that, in 2019, about 69% of households in the regions of Crete and the Aegean islands had access to the Internet.

QUESTION 1: From your own experience as a resident of the South Aegean region and having the experience of daily life and activity in the area, are the **existing technical infrastructures enough to meet the needs of citizens** and professionals to **access quality Internet services**? What was the **network's response** to the increased access observed during the quarantine period due to coronavirus? Are there problems with the Internet connection? Has the advancement of technology made the Internet access become part of the lives of the local citizens?

CONTEXT: In 2018, the rate of electronic transactions, over the total transactions number related to purchases, made by the residents of Crete and the Aegean islands was 45%. This percentage was about 5% higher than that of the entire Greek territory.

QUESTION 2: Do you think this **picture could change in the future**? Do you have a view of this trend during the quarantine period due to coronavirus?

Inequalities

CONTEXT: A survey for the time period 2008 - 2013 has showcased an increase of 5% in the poverty index in the region of the southern Aegean (it has increased from 16.5% to 23.7%).

QUESTION: Apart from the economic crisis, which affected the whole country, do you believe that other **factors have contributed** to the increase in this percentage? If so, **which are they**? In your opinion, has **this situation improved**? What do you **predict** for the next 20 years?

QUESTION 3

Based on the discussion that has already taken place in the context of the above questions, what **kind of**

opportunities do you think can be developed in the region over the **next 20 years** (that is, by **2040**)?

QUESTION 4

What is **your vision** for your area by **2040**?

QUESTION 5

What are the challenges on the way to achieving the vision for the region of South Aegean?

