



***Innovative Actions in Sustainable Tourism
EU Strategy for the Adriatic-Ionian Region (EUSAIR)***

First Annual Report

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1. INTRODUCTION

The macro-region based on the European Union Strategy for the Adriatic-Ionian Region (EUSAIR) is a functional area primarily defined by the Adriatic and Ionian Seas basin. The Strategy connects the marine, coastal and terrestrial areas as interconnected systems in which more than 70 million people live. The EU Strategy for the Adriatic-Ionian Region (EUSAIR) covers nine countries - four EU countries, Croatia, Italy, Greece and Slovenia, and five candidate countries - Albania, Bosnia and Herzegovina, Montenegro, Northern Macedonia and Serbia. On 2 April 2020, EUSAIR, the EU Strategy for the Adriatic and Ionian Region, embraced the Republic of North Macedonia as its ninth participating country.

All of the countries strive to accomplish global attractiveness and recognition aimed at developing all-year round tourism, attracting new investment and subsequently increasing employment. The emphasis is on high-quality, authentic, green, diverse and sustainable tourism. In order to achieve this, but also other strategic goals, tools and strategies are considered that will increase tourism flows and expenditure, upgrade/ensure the quality (greening) of tourism products and services, improve accommodation and tourism experts' education and attract investment.

Figure 1. Map of EUSAIR countries



Source: European Commission, https://ec.europa.eu/regional_policy/en/policy/cooperation/macro-regional-strategies/adriatic-ionician/

Pillar 4 of the Strategy, Sustainable Tourism, is focused on the development of sustainable and responsible tourism potential in the Adriatic-Ionian region through innovative and quality tourism products and services.

Innovation is a significant component fostered through the EUSAIR strategy. Therefore, with each thematic pillar, special attention is given to innovation. Pillar 4 monitors the

processes of innovation development in sustainable tourism through the implementation of projects in the Adriatic-Ionian Region, along with the development of recommendations for EUSAIR.

Innovations in the establishment of sustainable tourism at the EUSAIR level include innovations in destination management, as well as the coherence and synergy of the impact of innovations on the tourism industry in the following areas:

- Innovation and innovative processes in market positioning and promotion of sustainable tourism EUSAIR destinations (a) trends and users - innovations in research and access to users; b) new technologies in the function of visibility and promotion.
- Innovation and innovative processes in the management of EUSAIR destinations
 - in planning and stimulating the content of destinations - in the sustainable use, evaluation, presentation and interpretation of natural and cultural attractions,
 - in the infrastructural contents of the destination - in accommodation, catering, traffic, informative contents, new technologies in application,
 - in supporting activities of destinations - in activities in destinations,
 - in relations with the local community through participatory and interactive models of cooperation.
- Planning and stimulation of innovative processes of development of business models and products of sustainable tourism in the Adriatic-Ionian region through:
 - innovations in the field of entrepreneurial initiatives and enterprise development,
 - innovations in the field of product development,
 - innovations in technological support for business models,
 - innovations in tourism education.

During the preparation of the first report related to the monitoring and evaluation of the EUSAIR region for thematic pillar 4 - sustainable tourism, 24 programs and 313 projects were analyzed. For the purpose of this report, all relevant programs have been reviewed and analyzed from the aspect of encouraging innovation in sustainable tourism. Of the 24 programs funded by the European Union, 15 of them contain innovations as a theme of priority axes and have several registered projects with the theme of innovations in sustainable tourism.

Out of 313 analyzed projects related to sustainable tourism in the EUSAIR area, 88 projects introduce innovations, of which 15 projects relate to innovations and innovative processes in market positioning and the promotion of sustainable tourism of EUSAIR destinations, 42 project relate to innovations and innovative processes in EUSAIR destination management, 28 project relate to planning and encouraging innovative processes of development of business models and products of sustainable tourism in the EUSAIR area.

The other 3 projects combine several types of innovative mechanisms from different groups.

This report is the first in a series dealing with the topic of innovations in sustainable tourism in the Adriatic-Ionian region. It contains an overview of projects funded by European funds through various tenders on the topic of sustainable tourism, with a component related to innovations. Future activities will include the implementation of in-depth study and analyze of the results of 88 projects that contain innovations and present new solutions and examples of good practice. The recommendations summarized at the end of each report are a step forward for further work to foster innovation in sustainable tourism in the EUSAIR region.

2. INNOVATIONS IN SUSTAINABLE TOURISM

Today, tourism is the most important service industry in the world. The \$ 7.6 billion travel and tourism sector accounts for 10% of global GDP and accounts for 7% of total international trade and 30% of world exports of services (Interreg Central Europe, n.d.).

On the one hand, tourism contributes significantly to the development of local economies, while on the other hand there is growing concern about its impact on the devastation of the resources on which its development is based. The negative effects of mass tourism, such as the excessive number of tourists, the use of natural and cultural heritage and the loss of authenticity of an area due to the desire for higher income from tourism, negatively affect the quality of life of people today and future generations.

Therefore, modern efforts are aimed at sustainable development in tourism, i.e. the development of a tourist destination in a way that remains competitive and interesting in the market, but also to remain in balance with the environment and nature and the style and way of life of people in local communities. This form of tourism seeks to maximize the positive effects for the local community and reduce the negative effects on society and the environment.

With regard to the need for change and development of new ideas in the offer of services and content, in the behavior of hosts, organizers and guests and changes in management, it is expected that innovations in all these areas will play a major and significant role in ensuring competitiveness and attractiveness of destinations.

2.1. SUSTAINABLE TOURISM

Sustainable tourism, one that establishes a suitable balance between the environmental, economic and socio-cultural aspects of tourism development, plays an important role in conserving biodiversity. It attempts to minimize its impact on the environment and local culture so that it will be available for future generations, while contributing to generate income, employment, and the conservation of local ecosystems. By doing so, sustainable tourism maximizes the positive contribution of tourism to biodiversity conservation and thus to poverty reduction and the achievement of common goals towards sustainable development.

Sustainable tourism provides crucial economic incentives for habitat protection. Revenues from visitor spending are often channeled back into nature conservation or capacity building programs for local communities to manage protected areas. Furthermore, tourism can be a key vehicle in raising awareness and fostering positive behavior change for biodiversity conservation among the millions of people travelling the globe every year.

The United Nations World Tourism Organization defines sustainable tourism as tourism that meets the needs of present tourists and host regions while protecting and enhancing

opportunity for the future. Rather than being a type of product, it is an ethos that underpins all tourism activities. As such, it is integral to all aspects of tourism development and management rather than being an add-on component. The objective of sustainable tourism is to retain the economic and social advantages of tourism development while reducing or mitigating any undesirable impacts on the natural, historic, cultural or social environment. This is achieved by balancing the needs of tourists with those of the destination (UNWTO a), n.d.).

Sustainable tourism should be developed through all forms of tourism, in all types of destinations, including both mass tourism and various tourist niches. Therefore, sustainable tourism should (UNWTO b), n.d.):

- Make optimal use of environmental resources that are key elements of tourism development, maintaining essential ecological processes and helping to protect natural heritage and biodiversity,
- Respect the socio-cultural authenticity of the destination, preserve their built and living cultural heritage and traditional values and contribute to intercultural understanding and tolerance,
- Ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation.

Achieving sustainable development means achieving a balance between four different pillars:

- The economic pillar is defined as the generation of prosperity at different levels of society and addresses the cost effectiveness of all economic activities;
- The socio-cultural pillar is based on respect for human rights and equal opportunities for all members of society requiring an equal distribution of benefits;
- The environmental pillar refers to the conservation and management of resources, including natural and cultural resources, biodiversity and waste management;
- The transversal pillar provides support to the economic, socio-cultural and environmental pillar through management, infrastructure, etc. (T&L Europraxis, 2013).

Recognizing the important role of tourism in the European economy and the significant contribution of tourism to tackling the key challenges facing Europe in the 21st century, the European Commission is becoming increasingly involved in tourism policy. The general concept of sustainable development, related to the special role that tourism has achieved in international fora, helps to set an agenda for more sustainable tourism that meets the potential of tourism to continue as an activity in the future, with appropriate conditions and the ability of society and the environment to absorb and benefit from the impacts of tourism in a sustainable way. In this context, sustainable tourism can minimize its negative impacts on society / environment and maximize the positive and creative contribution of tourism to local economies.

Table 1. Aims and actions of sustainable tourism

	Aims:	Actions
1.	Economic Viability	To ensure the viability and competitiveness of tourism destinations and enterprises, so that they are able to continue to prosper and deliver benefits in the long term.
2.	Local prosperity	To maximize the contribution of tourism to the economic prosperity of the host destination, including the proportion of visitor spending that is retained locally.
3.	Employment Quality	To strengthen the number and quality of local jobs created/supported by tourism, including the level of pay, conditions of service, availability to all without discrimination by gender, race, disability or other ways.
4.	Social Equity	To seek a widespread and fair distribution of economic and social benefits from tourism throughout the recipient community, including improving opportunities, income and services available to the poor.
5.	Visitor Fulfillment	To provide a safe, satisfying and fulfilling experience for visitors, available to all without discrimination by gender, race, disability or in other ways.
6.	Local Control	To engage and empower local communities in planning and decision making about the management and future development of tourism in their area, in consultation with other stakeholders.
7.	Community Wellbeing	To maintain and strengthen the quality of life in local communities including social structures and access to resources, amenities, life support systems, avoiding any form of social degradation or exploitation.
8.	Cultural Richness	To respect and enhance historic heritage, authentic culture, traditions, distinctiveness of host communities.
9.	Physical Integrity	To maintain and enhance the quality of landscapes, both urban and rural, and avoid the physical and visual degradation of the environment.
10.	Biological Diversity	To support the conservation of natural areas, habitats, wildlife, and minimize damage to them.
11.	Resource Efficiency	To minimize the use of scarce and non-renewable resources in the development and operation of tourism facilities and services.
12.	Environmental Purity	To minimize the pollution of air, water, land, the generation of waste by tourism enterprises and visitors.

Source: *European Sustainable Tourism: Context, concepts and guidelines for action*,
 Global Jean Monnet Conference 2007,
<http://www.turismoyncooperacion.org/OBSERTUR/E/02.pdf>

Regardless of the goals and activities related to sustainable tourism, the basic principles of sustainable tourism are (Interreg Central Europe, n.d.):

- It includes travel to natural destinations that are often covered by some level of environmental protection.
- Sustainable tourism seeks to minimize the harmful effects of hotels, trails and other types of tourist infrastructure. Minimizing the impact also requires that the number and behavior of tourists are regulated to ensure that damage to the ecosystem is limited. This can be achieved by limiting tourism to the carrying capacity of the area

(e.g. limiting the number of tourists, reducing water, energy and other resource consumption, low mobility and use of environmentally friendly transport, minimal changes in landscape use patterns through construction, etc.).

- It builds environmental awareness for both tourists and residents of the communities it affects. Tourists will “learn about the places and people they visit” to “minimize their negative impact while visiting sensitive environments and cultures,” according to the guidelines.

Tourist destinations are increasingly addressing social, cultural, economic and environmental challenges. The European Commission has developed “*European Tourism Indicator System for Sustainable Destination Management*” (ETIS) to help measure performance against destination sustainability. ETIS is a system of indicators suitable for all tourist destinations, which encourages a more intelligent approach to tourism planning. It is a management tool that supports destinations that want to take a sustainable approach to destination management. It also encourages and facilitates a common monitoring system, which is easy to use to collect data and detailed information, and allows destinations to monitor their implementation from year to year. ETIS is also a valuable information tool (not a certification system), useful for policy makers, tourism companies and other stakeholders (European Commission, 2016).

The development of sustainable tourism presupposes a careful design of travel and interpretation of destinations as to mitigate the negative impacts of tourism on people and the environment. In doing so, the offer of tourist facilities must be adapted to local characteristics in accordance with the social, economic, cultural, environmental and geographical environment. Sustainable tourism can also accomplish positive changes in the knowledge, attitudes and behavior of tourists in relation to local communities and their development.

2.2. SUSTAINABLE TOURISM IN THE ADRIATIC-IONIAN REGION¹

Countries in the Adriatic-Ionian region strive to accomplish global attractiveness and recognition with the aim of developing tourism throughout the year, which means attracting new investment and consequently more employment. The emphasis is on high quality, authentic, green, diverse and sustainable tourism. In order to achieve this and other strategic goals, tools and strategies are considered that will increase tourist flows and expenditure, upgrade/ensure the quality (greening) of tourism products and services, improve accommodation, education in the field of tourism and attract investment.

The data show that the Adriatic-Ionian region is a popular tourist destination. In the period from 2012 to 2018, 625,543,000 tourists arrived in countries in the Adriatic-Ionian region.

¹ The text in this chapter is the result of research published in the Monitoring and Evaluation of the EU Strategy for the Adriatic-Ionian Region (EUSAIR), EUSAIR Pillar 4 “Sustainable Tourism”; Annual Monitoring Report, IRMO & ECORYS, 2020

Albania is not included due to the fact that no newer tourist data are available for Albania. The most popular destination among tourists in the Adriatic-Ionian region is Italy, which in 2018 received 63,195,000 tourists, followed by Greece with 20,914,000 tourists. The least popular tourist destination is Northern Macedonia, where in 2018 there were 674,000 tourists. In general, the countries of the Adriatic-Ionian region that are not members of the European Union are less popular destinations for tourists, but in the period from 2012 to 2018 the growth rate of arrivals in non-EU countries is much higher than in EU member states. (European Commission, 2020)

Based on an in-depth analysis of existing data in the field of sustainable tourism in the Adriatic-Ionian macro-region, a SWOT analysis was made within the monitoring report of the Adriatic-Ionian region.

Table 2. SWOT analysis of sustainable tourism in the Adriatic-Ionian region

Sustainable tourism	
STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> • Sustainable (green) competitive economic potential • Tourism as one of the fastest growing economic activities in the region and a major contributor to GDP • Regional weather and climate • Rich cultural, historical, archaeological and natural heritage • Functional areas with common characteristics • Knowledge of innovative tourism products and services such as cultural / creative industries • A critical mass of niches of excellence • Strong nautical sector • Sustainable tourism brings vitality to the local economy • Top attractions • A safe tourist destination • Touristic potential for <i>slow</i> tourism 	<ul style="list-style-type: none"> • Rich natural, cultural, historical and archaeological heritage, but not used in a sustainable and responsible way or not exploited at all • Inadequate knowledge and skills on sustainable tourism • Inadequate level of quality in the tourist offer • Poor implementation of sustainable tourism development policies and responsible tourism concepts • Low level of stakeholder involvement (local population, visitors) • Insufficient environmental awareness of participants in tourism • Seasonal attendance • Lack of common branding strategies for macro-regional tourism potentials • Complex and uncoordinated regulatory framework • Low level of diversification of the tourist offer • Poor accessibility to attractions for visitors with special needs • Inconsistency in infrastructure quality • Low labor productivity • Insufficient entrepreneurial and managerial skills • Low innovation capacity

OPPORTUNITIES	THREATS
<ul style="list-style-type: none"> • Increasing cross-border cooperation • Improving infrastructure • EU funding for cross-border cooperation for sustainable tourism • Evolution towards an experiential economy • Development of the concept of circular economy in sustainable tourism • Information and communication technology (ICT) development • Cooperation in efficiency and effective cooperation of the tourism and research and development sector, innovation networks • Improving employment and education in tourism 	<ul style="list-style-type: none"> • High dependence on the EU as a source market • Changing demographics • Low level of integrated development initiatives and good governance policies • Tourism as a vulnerable activity • Climate change • COVID-19 • Seismically unstable area

Tourism is a fast-growing and main activity that contributes to GDP in the Adriatic-Ionian region. Moreover, Adriatic-Ionian region has sustainable (green) competitive economic potential, as well as good weather and climate conditions. Rich cultural, historical, archaeological and natural heritage provide a strong basis for sustainable tourism development. The region is also characterized as a functional area with common features. Other strengths of sustainable tourism in the Adriatic-Ionian region are knowledge of services such as creative/cultural industries, critical mass of niches of excellence such as UNESCO World Heritage sites, strong nautical sector potential, top quality attractions (such as ancient and Roman archeological sites, unique natural heritage sites) and the safety of tourist destinations. In addition, sustainable tourism brings vitality to the local economy. On the other hand, the development of sustainable tourism in the Adriatic-Ionian macro-region faces many obstacles, such as inadequate knowledge and skills about forms of sustainable tourism, lack of innovative activities, inadequate level of quality in tourism, poor implementation of sustainable development policy and responsible tourism concepts, as well as the low level of accessibility of attractions to visitors with special needs. These weaknesses are even stronger in view of current global threats, such as climate change, the COVID-19 pandemic and the seismically sensitive area.

There are still opportunities to strengthen sustainable tourism initiatives and activities by increasing cross-border cooperation, evolving towards an experiential economy, developing the concept of a circular economy in sustainable tourism, developing information and communication technology (ICT) and cooperation in efficiency and effective tourism and R&D cooperation, and innovation networks.

According to the EUSAIR Action Plan, the general objective of Pillar 4 “Sustainable Tourism” is the development of sustainable and responsible tourism potential of the Adriatic-Ionian region, through innovative and quality tourism products and services. It also aims to promote responsible tourism behavior of all stakeholders (wider public, local, regional and national private and public stakeholders, tourists/visitors) throughout the

region. Facilitating the socio-economic perspective, removing bureaucratic barriers, creating business opportunities and strengthening the competitiveness of SMEs are key to tourism development. The specific objectives of pillar 4 are:

- Diversification of tourism products and services of the macro-region, together with addressing the seasonality of demand for inland, coastal and maritime tourism;
- Improving the quality and innovation of the tourist offer and strengthening sustainable and responsible tourist capacities of tourist actors throughout the macro-region.

In order to achieve the above objectives, Pillar 4 focuses on two topics: Theme 1 - Diversified tourist offer (products and services); Topic 2 - Sustainable and responsible tourism management (innovation and quality).

2.3. INNOVATION AND INNOVATION IN SUSTAINABLE TOURISM

Innovation implies creativity, but these terms are not synonymous. Creativity refers to the reformulation of existing ideas, while innovation most often involves the creation of new products (Jelinčić, Farkaš and Tišma, 2016). The Oslo Manual defines innovation as a new or significantly improved product or process (or a combination thereof) that differs significantly from previous products or processes and is available to potential users (product) or available to companies (process) (OECD, 2018). In this sense, both new and improved products and processes can be considered innovation, and creativity is a prerequisite for creating innovation. In addition, the innovation must be able to replicate at an acceptable cost and must meet specific needs. Otherwise, it remains at the level of invention (patent and prototype). While creativity in development, for example, of new products and services is often not lacking, the problem is often seen in terms of innovation or “translation” of creative ideas into “production”, which implies an acceptable cost while meeting specific needs. What is missing, therefore, is a second step that focuses on concrete action.

In the modern economy, innovation research focuses primarily on economic and technological perspectives with the goal of increasing production and sales, reducing costs, and increasing profits. In the last decade, however, the concept of innovation due to significant challenges facing society is applied in another sense: the focus is on new solutions to social problems that are effective, efficient, sustainable and equitable, and the concept is called social innovation. The value of such innovations benefits society as a whole, not just individuals from the private sector. Although innovations are primarily related to the private sector, they are possible in any area and in any sector (private, public and civil). Whether it is a production (service) or process innovation, its importance is in creating new value.

Innovation means changing the way of thinking that goes beyond traditional frameworks and conventional methods, which means breaking the usual rules, overcoming obstacles,

gathering ideas, changing concepts, optimizing strategies, most often in a team with different competencies and ways of thinking. The most common types of innovation are:

- Process improvement and organizational innovation (through continuous improvement and development of new solutions);
- Product development;
- Service innovation (development and introduction of new services);
- Innovations in business models.

Innovation is often linked to the digital space. This is especially important in recent times marked by natural challenges (COVID-19 epidemics, earthquakes in Croatia), so the digital transformation of business processes requires a new approach to business and adaptation to new conditions. This is a particular challenge for the tourism sector, which so far has depended almost entirely on physical encounter, while virtual space has been used as a marketing space (especially in the pre-travel phase), as an additional tool during the tourist stay in the destination. per destination) or as a recommendation for future travel (in the post-travel phase in terms of reviews of individual attractions, accommodation, destinations, etc.). The digital transformation, however, has so far not only replaced tourist travel, which will be the biggest challenge for innovation.

Most innovations relate to incremental innovation, which means a change in detail (e.g. change in color, shape, functionality, product size). This can ensure competitiveness in existing markets in terms of reduced production costs, product/service/process functionality or better equipment. However, the challenges the world is facing today (e.g. COVID-19), require disruptive innovation in products and services, which is not always easy. Therefore, in order to ensure long-term innovation capacity, it is necessary to invest in idea and innovation management systems, which implies a structured approach, from the innovation development strategy to a concrete action plan for their implementation. Disruptive innovation brings revolutionary changes, and the results of such changes bring new (not just improved) products and services for the market of tomorrow. It is often the case of such business models that are hard to imagine today.

Innovation development and management strategies can anticipate different methods by which they will achieve their goals. The most common methods include:

- Innovation processes managed by clearly defined phased procedures;
- Open innovation, i.e. co-creation involving clients/audiences in the development processes themselves;
- Innovation laboratories as separate business units in which employees work in innovation development teams; and
- Innovation challenges i.e. employee competitions with the aim of overcoming certain challenges.

Regardless of the method, it is important for success to nurture a culture of innovation and increase the ability of stakeholders to create innovation (Innolytics, 2020). In this sense, many EU programs, including EUSAIR, are clearly committed to fostering innovation, which is expected as a result of financial investments, but do not specify methods for achieving these goals, but the choice of methods is left to the project team, although often without prior guarantee. the project will truly result in innovation. Often, projects funded in this way are therefore more useful in terms of learning for the project partners themselves than the results that are actually achieved. Therefore, they can rather be understood as

processes in which innovation culture is learned and nurtured, but which result will be achieved only later, on another occasion.

Until the pandemic crisis, tourism was one of the largest global industries with high competitiveness of tourism companies, products and services and destinations themselves. In this sense, innovation is a vital concept for the tourism industry, which contributes to competitiveness. On the other hand, COVID-19 has brought tectonic disturbances to the global tourism industry making the need for innovation even greater, this time not so much to maintain competitiveness but for many, to keep the business afloat. It is predicted that sustainable tourism will primarily contribute to the recovery, because excessive tourism in itself has caused considerable damage to certain destinations (e.g. Barcelona, Venice, Dubrovnik), and is particularly unsustainable in epidemiological terms. Therefore, according to forecasts, possible recovery factors are manifested in the following:

- market change,
- product change, and
- changing the consumption of tourism products.

In terms of market change, the current survival was ensured by the development trend of staycation since travel abroad was almost impossible or at least reduced. Tourism products that are in demand in such conditions are those that can ensure wellbeing and health, and the change in the way of tourist spending is visible in the off-season consumption, primarily due to the avoidance of the masses of tourists, and again conditioned by the fact that the concept of working in pandemic conditions has changed. Thus, a good part of the potential tourist market is being done from home, which, due to the unconditionality of physical arrival at work, also disables travel. The change in consumption is also visible in the digitalization of products and services, but so far it has been mainly used for promotional purposes to attract future tourists after the victory over the pandemic. Thus, the concept of remote tourism has been developed, which means tourism that does not involve actual physical travel. Although this type of travel according to the definition of the World Tourism Organization cannot be characterized by tourism because it does not include staying outside the permanent place of residence for a minimum of 24 hours, the tourism industry is figuring out how to use the virtual sphere and digitalization for such transformation of travel. This indicates a huge need for innovation, not only in the tourism business, but potentially at the very source, in the definition of tourism.

Destinations that in pandemic conditions have managed to partially attract tourists and maintain tourism results at least at levels that ensure survival are destinations that can be reached by car, while distant destinations have been able to rely mainly on those guests who have survived the coronavirus. Although by future vaccination the slow recovery of the tourism business is expected, the pandemic has shown the need for innovation of the current tourism framework. In terms of products that could achieve some tourist results in pandemic conditions, there is a shift towards creative and ecological tourism, i.e. experience tourism. Namely, they have shown greater resilience to the crisis because they rely on small groups of people, on an environment that implies a reduced possibility of human contact (nature) and which provides experience. A special problem of the pandemic is the psychological problems it leaves on people, and the tourism industry in this sense

can offer products that, at least for a while, provide relief or wellbeing. Potentially, this can lead to a transformational effect, so transformative tourism, together with creative and ecological tourism, i.e. experience tourism, is in the category of sustainable tourism with the potential for easy recovery. Innovation, however, is needed here as well.

Unlike the industrial sector, innovation in service industries, as well as in tourism, has until recently been relatively neglected, which is a possible reason for the current shock and lack of effective responses to the crisis. The very changes in the tourism business can generate positive practices that will lead to greater sustainability of the tourism offer. Even before the pandemic, travel trends were observed that focused on activities related to enjoying the nature (e.g. recreational and adventure tourism), and in terms of innovation, attention is primarily focused on “green” innovations to reduce the negative environmental impacts while increasing employment, reducing costs, increasing competitiveness and the tourist experience.

Innovations in tourism most often include:

- production innovations (new products and services),
- process innovations (new ways of delivering tourist services),
- logistical innovations (new ways of providing products/services to tourists), and
- market innovations (new marketing methods or market behavior).

In addition to “green” innovations, innovative technologies and innovative business models have started a small revolution in tourism and hospitality. So, for example, today we have smartphones instead of keys, mobile self-check-in, mobile reservations, kiosks for self-check-in at the hotel, electronic luggage tags, services that allow to bring your own device, boarding tickets on smartphones, devices (e.g. bracelets) that can be used to identify guests/visitors, menus on tablets, etc. (Bilgihan and Nejad, 2015). The challenge, however, is to find the optimal ratio of digital and human interactions with the goal of creating personalized experiences. For example, Iberia has developed smart watches with boarding passes so that passengers can send flight-related news; some *rent-a-car* agencies use technology to avoid the lengthy process of filling out car rental documentation at airports; a potential trend is also the use of robots in the hotel industry that serve as receptionists, porters, waiters. Because technology does not always work perfectly, such innovations can sometimes bring negative experiences but they reduce social interaction.

Digital innovative solutions are used in all phases of tourist travel. Thus, before traveling, it is possible to use geo-location technologies to explore a potential destination. Upon entering the country, at airports there are communication terminals that use IoT (*Internet of things*) technology, analyze passengers and allow or deny them entry. During the stay in the destination, e-guide services for personalized guided tours of the destination are common, and innovations are particularly common in the hotel business. For example, the Amenity Recommender (Acquaint) system, based on Amazon’s Alexa device, provides a personalized experience for each individual guest; at the reception, the guest is offered three recommendations for activities at the destination, according to his age, gender, origin or travel companion; in his room, with the help of TV or in-room voice technology, the guest is offered recommendations for activities during the stay; and finally personal recommendations to individual guests are also provided through hotel marketing campaigns. Similarly, the technology is used to regulate the temperature or light in hotel

rooms as well as to select music. Managing visitors in the destination is particularly challenging, and technological innovations provide great opportunities. In this sense, an interesting example from Padua is related to cultural tourism. The Capella degli Scrovegni is an exceptional monument of cultural value and the excessive number of tourists have a negative impact on its preservation. Therefore, in order to maintain optimal climatic conditions in its premises, a multimedia room was introduced, which serves as a technological tool for its preservation and interpretation, so tourists are limited to a maximum stay of 15 minutes in the chapel, offering them interactive interpretation. Finally, upon returning home, the innovations made possible by IoT technology make it easier for the authorities to monitor passengers regarding infectious diseases, which is very topical today.

In addition to production innovations, innovations in tourism are often focused on service innovations, in contrast to production, by increasing business efficiency or creating value for tourists and are often related to new tourist experiences. Thus, today we have city tours through augmented reality or luxury apartments in A380 aircrafts.

Production innovations are often the result of innovative collaboration which confirms the thesis of the need for interdisciplinary teams to create innovations. So, for example, Marriott and IKEA have created a new brand of stylish but affordable hotels Moxy that target millennials. The Line Hotel in Los Angeles, in collaboration with Linus Bike, created a bike line for hotel guests, as well as maps with local bike routes (e.g. tours of local breweries).

Now a common, but in its time revolutionary innovative business model is also the model of the sharing economy which has greatly changed the environment of the tourism business by involving the efficient use of unused personal resources (e.g. rooms, apartments or places in the car), and one of the most famous companies operating on this principle, Airbnb, has been operating for almost 11 years, without a single room owned. Today, Airbnb has become a serious competitor to the hotel business, and some cities, such as Barcelona, have even introduced a ban on this type of accommodation because it negatively affects the local population in terms of over-tourism. This is an example that proves that innovation, if not managed properly, can also lead to trends that oppose the sustainability of tourism.

In terms of reducing the effects of over-tourism, for example, Venice has implemented an online visitor management system, Venice Connected, which controls the number of tourists and their movements. The system anticipates the movement of tourists so it can provide them with better services thus reducing the negative seasonal effects of increasing the number of visitors to Venice. The option on Google Maps "Most Popular Times" works in a similar way, offering information about the crowds that are expected in, for example, a restaurant with real-time data so that the guest can decide for himself whether he wants to go there.

2.4. EXPERIENCE IN INNOVATION IN SUSTAINABLE TOURISM IN THE EU AND WORLDWIDE

The European Union strongly supports innovation, and in the previous financial period 2014-2020 the EU Research and Innovation Development Strategy had three objectives: open innovation, open science and an open world. In this regard, a number of financial schemes have supported innovation, primarily through Horizon 2020. At the same time, EU industrial policy supports the development of innovations with the aim of accelerating the modernization of EU industry, development of new products and services, production technologies and the introduction of new business models. There is a special focus on social innovation and business innovation, and innovation is monitored on an annual basis at both regional and EU level. A comparative analysis of innovation at EU level in 2020 shows that it is continuously increasing (8.9% compared to 2012), and the countries showing the largest increase are Lithuania, Malta, Latvia, Portugal and Greece. Globally, the EU is overtaking the US, China, Brazil, Russia, South Africa and India for the second time, but lags behind South Korea, Australia and Japan (Hollanders, 2020). In the case of EU countries covered by EUSAIR, and compared to the rest of Europe, innovation is significantly lower compared to Central Europe, but higher compared to Bulgaria, Romania and parts of Poland. Thus, Greece, Italy and Slovenia are moderate innovators, and the Adriatic part of Croatia is modest. Regional innovation hubs, however, also exist in moderately innovative countries, such as Crete in Greece and Griuli-Venezia Giulia in Italy (Hollanders, 2020).

The Business Innovation Observatory at the EU level follows the latest trends in business and industry and collects examples of innovation. Although it does not specifically address innovation in tourism, the areas it covers, such as clean technologies; Internet of Things; service innovation for the smart industry; sustainable, safe and nutritious food; and customer experience find fertile ground precisely in the tourism industry. Thus, for example, in the area of customer experience, common innovations are related to product co-creation, improving customer support, predictive analytics, and innovation in the field of neuro-marketing.

In the field of tourism, EU activities have primarily focused on innovations that can influence the digital transformation of the tourism sector in the EU. This will continue also in the current financial period, 2021-2027, to be a priority given the coronavirus crisis, but even after recovery, digital communication and digital solutions are projected to remain key to maintaining business. One of the most common products in this regard in the tourism sector relates to the creation of experiences through augmented reality (AR) devices. In addition, digital solutions offered by hotels or encouraging guests to use their own mobile devices when, for example, choosing a menu or for other services are common. For example, Link@Sheraton is a *touchscreen* device that allows guests a new way of discovering local attractions. Innovations resulting from the need to reduce human interaction conditioned by coronavirus crisis have resulted in solutions concerning contactless stays in hotels. Examples are locations throughout the world of citizenM Hotels. At the same time, guests choose the level of social interaction, pay contactless and use the application for selecting a room before arrival. Check-in and check-out to/from the hotel

is also done via the application, and the entertainment and ambient systems in the rooms are controlled via smartphones. Room cleaning is only at the request of the guest since it is required to reduce interaction among people.

In terms of environmental innovations in the hotel industry, the future Hotel Svart, which is being built in Norway, can be highlighted, since it is constructed according to special energy principles that require that the hotel must produce more energy than it consumes. Moreover, its energy needs will be 85% lower than typical modern hotels, and its opening is scheduled for 2023. The hotel will be on a wooden structure in the middle of a fjord that will be viewed through large windows from all perspectives as the hotel is circular in shape (Figure 2).

Figure 2. The future Hotel Svart, Norway



Some hotels, such as The Marriott Renaissance Hotel in Pittsburgh, are implementing another strategy that encourages reduced interaction with digital devices. The mentioned hotel thus requires guests to leave their mobile devices at the reception upon check-in at the hotel. In this way, guests are given a different experience and a real vacation. Innovation in the hotel industry is also an example of the Berlin Heart Break Hotel, which stands out from the competition by branding on the theme of grief over a failed love affair. In a similar way, the innovation is presented by the Zagreb Museum of Broken Relationships as the first and only such museum in the world, which is one of the leading tourist attractions. The museum is innovative not only in terms of topic, but also the co-creation of its exhibition, so the visitors themselves are also donors of the exhibits. Also, visitors create intangible experiences such as writing their own experiences with broken relationships in the visitor's book, which is part of the exhibition set up in a special Confession room.

In terms of accommodation reservations, an innovation related to the sharing economy has already been mentioned. But hotel business platforms are also innovating to be competitive. An example is the Danish platform Goodwings, which operates on the principle of subscription for hotels around the world at wholesale prices. The advantage of the platform is in the principles of sustainable business that promotes the reduction of

carbon dioxide emissions. Its business model is based on partnerships with hundreds of non-profit partners from over 40 countries who promote it, and the money saved on the promotion is invested in projects and people who operate respecting the Millennium Development Goals.

Innovations are also present in tourist tours, so that many, e.g. Alternative Berlin Tours represent those parts of the city that are not common for sightseeing. Also, there are frequent innovations in the system of charging tourist tours that do not have a predefined price but are based on the principle of pay-as-you-wish. A good example of a thematic innovation is the Czech company CorruptTour.com, which has designed reviews based on political corruption and even offers the purchase of a master's degree in corruption management.

In terms of agency business, a special innovation is offered by the innovative Dutch product WaarSchijntdeZonWel.nl. It organizes travel depending on weather conditions and forecast.

In passenger traffic, due to the coronavirus crisis, the innovation in the design of the seat of the Interspace Comfort System aircraft stands out, which offers an "origami" solution whereby fences are placed between two seats, and the middle one of the three seats remains empty.

Furthermore, at the destination level, innovations are seriously considered, so, for example, Paris plans to become a leader in tourism innovation and has dedicated the first incubator of this kind (Glasco, 2020). At the same time, however, in the current situation, such a strategy is not a priority for companies, which should carry out innovations. Innovations are often part of smart city development planning, and the solutions they offer are aimed at tourists as well as citizens. Interesting solutions in this regard were offered by Vienna with the SmartCityCards project, which enables live marketing and direct communication of tourists with the local population; Madrid with the MyStreetBook project, which offers a personalized solution for touring the city, and connects the personal interests of tourists with external conditions (means of transport, accessibility, timetable, etc.); and Amsterdam with the CabTab project, a hardware solution that enables interactive communication with passengers.

Also, staying in a tourist destination according to the principles of sustainable lifestyle is often challenging for tourists. That is why the French start-up Tookki has designed a free mobile application that allows users to search for restaurants, hotels and means of transport that are environmentally friendly. Tourists on the platform can share their own experiences and become ambassadors of the same, thus collecting points that they can exchange for discounts in partner e-commerce brands. Tookki also offers customers workshops for recycling waste or cooking organic meals.

Innovations are also important in the field of interpretation, which we most often associate with cultural tourism or natural heritage. The coronavirus crisis has particularly affected the increasing use of digital technology in interpretation, so QR codes are often used, which allow tourists to independently load interpretive messages using mobile phones. An example of such an interpretation is the Agile Interpretation devised by the English Heritage

Association. A similar innovation was developed by the Croatian company Astarta Plus, which offers purchases of *pre-paid* vouchers for mobile phones when visiting the museum, and the visitor independently enters the number of the exhibit for which he/she needs an interpretation. The same company also offers a tour of exhibitions/sites with the use of 3D glasses, i.e. the presentation of sculptures that can be “revived” with technology. In addition to QR codes, this type of interpretation often includes audio guides that can be used on your own devices (bring-your-own-device, BYOD).

To mitigate the impacts of the coronavirus crisis on tourism, the UNWTO has called on start-ups and entrepreneurs to propose solutions related to health, economics and destination management. The solutions concern social initiatives, new and existing technologies, innovative processes and management structures, and there were over 1,000 proposals. The best ones are, for example, automatic detection of potential hazards in passenger traffic using X-rays and CT systems (SeeTrue, Israel), facility occupancy management (SmartOccupancy, Spain), “contactless receptionist” (MyStay, Czech Republic), disinfection device (WAAM, Poland), safe management of digital identities of tourists (Airside, USA), i.e. detection of contacts of persons infected with coronavirus (iBonus COVID19 Digital Prevention System, Hong Kong).

Although all the mentioned examples of innovations are worthy of attention, none of them radically mitigated the impact of the coronavirus crisis on the tourism business, since tourism requires a physical presence in a locality. To some extent, a shift in this regard has been made by the Faroe Islands (see Figure 3) through a virtual tour of the island through the “eyes” of a local resident. It is a tool that allows remote touring, where the tourist via a mobile phone, tablet or computer connects to a *live* video camera carried by a local resident of the Faroe Islands and touring locations according to the wishes of the tourist, even from a bird’s eye view (from a helicopter). While this kind of innovation provides an experience and can have some economic effects, at the same time it still lacks the multiplier effect of the usual, pre-corona crisis tourism business.

Figure 3. A tour of the Faroe Islands using technology



Finally, in line with the changes taking place due to the COVID-19 pandemic, it has already been said that the tourism industry has turned to the development of new markets with a visible orientation towards the domestic and not always classic tourism market. An example of such an innovation is the Italian Association of Traditional Games of Verona (Associazione Giochi Antichi Verona) with a mission to preserve traditional games and sports, which it organized before the coronavirus crisis as part of the Tocati Festival on the streets of Verona for both locals and citizens. The impact of the pandemic changed the way of doing business, so the Association moved from the tourist market to the local population, proposing that in time of *lockdown* games are played at home, which can have a positive impact on reducing stress and anxiety while preserving and reviving authentic intangible cultural heritage.

For nursing home users who have mobility issue, the University of Tokyo has developed VR technology that allows them to “travel” to locations in the world they have once visited or would like to visit. The goal is to enable older people who are unable to travel due to physical or mental disabilities to recall past experiences from the safety of the home in which they reside, which has the effect of reducing anxiety and loneliness. Although this is not a physical tourism experience, this innovation proves the importance and application of tourism for health purposes, and it can be applied in marketing or in developing new markets.

2.5. ON RELEVANT STRATEGIC AND PLANNING DOCUMENTS ON INNOVATIONS IN SUSTAINABLE TOURISM IN THE ADRIATIC-IONIAN REGION

The challenges facing the Adriatic-Ionian region primarily concern organizational and financial problems, i.e. those related to human resources, insufficient cooperation between public bodies with the private sector, extension of the tourist season, tourist quality, better conditions for tourist employees, insufficient use of resources, inadequate waste management, pressures on water supply, the negative impacts of tourism on soil and biodiversity, so innovation in this regard could contribute to the overall competitiveness of the region. The previously presented data show that the countries of the Adriatic-Ionian region are not leaders in the field of innovation, and the practice shows an insufficient number of initiatives for innovation in sustainable tourism. In this regard, it will be necessary to evaluate the results of EUSAIR-funded projects in order to measure the impact of concrete project outcomes on a possible increase in innovation capacity in the region.

EUSAIR Action Plan for TSG4 in its 2nd specific objective is directly concerned with innovations. The construction of networks for the transfer of innovations in the tourism industry has the potential to have an impact on the development of products and services, on increasing quality and value, i.e. sustainability. Thus, the approach to tourism is seen through sustainability and smart development, which needs to be explored from a commercial perspective. In this sense, the priorities are related to improving and strengthening cooperation between public and private stakeholders, encouraging the

competitiveness and innovation of tourism SMEs, extending the season and promoting the sustainability of the tourism sector.

The indicative activities under this Action Plan are as follows:

1. Network of sustainable tourism businesses and clusters;
2. Access to finance for new innovative tourism start-ups;
3. Promotion of the region on world markets;
4. Extending the tourist season to year-round tourism;
5. Training in professional and entrepreneurial skills in tourism;
6. Adriatic-Ionian cooperation with the aim of encouraging tourist circulation;
7. Activities for more sustainable and responsible tourism.

The target values by 2020, according to this specific objective, are, for example, a 50% increase in tourist arrivals from countries outside the Adriatic-Ionian region and a 50% increase in tourist arrivals in the pre- and post-season (European Commission, 2020).

SWOT analysis developed within the FOSTINNO project from the *Strategy for fostering innovation in sustainable tourism for the Adriatic-Ionian region* showed that strengths for the development of innovation in the region are already good examples of the implementation of innovations in tourism as well as participation in EU projects on the topic of innovation². Weaknesses are, however, the low level of acceptance of new technologies and knowledge about innovation, the lack of innovation and incentives for creativity and innovation, and the lack of indicators for measuring innovation. There are many opportunities, from the existence of new technologies, the development of the economy of experience and selective forms of tourism, new markets, EU funds to the strengthening of regional, local and national cooperation and sales within the Adriatic-Ionian region. Strong competition, excessive tourism, environmental degradation and climate change, insufficient financial resources and unstable socio-political situation, insufficiently effective migration management, terrorism and natural disasters are listed as threats (Cerovac *et al.*, 2018). These threats certainly have an impact on ensuring sustainable tourism in the region, but they are not necessarily threats, but possible incentives for the development of innovation.

The same *Strategy* also defined common problems related to the development of tourism and innovation, and they can be classified into seven topics:

1. State level, public administration,
2. Broader understanding,
3. Complexity and diversity of tourism,
4. Human resources and education,

²Eg. respondents from research conducted for the purposes of developing the *Strategy for fostering innovation in sustainable tourism for the Adriatic-Ionian region* particularly point out the following projects: ADRION 5 SENSES (Adriatic-Ionian Program INTERREG VB Transnational 2014-2020), DIOD - Development of ICT for outdoor destination (IPA Cross-Border Program Croatia-Montenegro), EDEN - European Destination of Excellence (European Commission project), HERICOAST - Management of heritage in coastal landscapes (Interreg Europe project), INHERIT - INter-sectoral Health Environment Research for InnovaTions (Horizon 2020), INNOUTOURCLUST - Innovative cluster of SMEs in cross-border tourism (Interreg IPA CBC Italy-Albania- Montenegro).

5. Companies
6. Tourism in the Adriatic-Ionian region, and
7. Innovation and/or sustainability.

Thus, the biggest problems related to **state level and public administration** are: insufficient analyzes of innovation capacities of the public and private sector; almost non-existent legislative framework for innovation, especially related to tourism; insufficient incentives/tax incentives for innovation, i.e. lack of systematic approaches and goals; slowness and bureaucracy of the public administration system; inability to measure existing initiatives.

On topic **broader understanding**, a lack of understanding of the real meaning of the concept of innovation was detected, and the connection of innovation is almost exclusively linked with technological innovations and patents.

The multiplicative effects of tourism involve different stakeholders which makes it impossible to easily communicate and network them. Therefore, insufficient cooperation between SMEs and large companies is observed; insufficient cooperation between higher education institutions, support organizations, public administration, enterprises and non-governmental organizations; lack of promotion of strategic partnerships by public administration. These are all problems observed within the topic **complexity and diversity of tourism**.

The **human resources and education** topic covers the unfavorable educational structure in tourism; lack of highly educated workforce; lack of education for innovation and innovation management; lack of online courses (e.g. for renters); migration of the domestic population to developed countries; and insufficient use of digital technologies.

In relation with **companies** there is a lack of innovation awards for employees; and the general lack of a systematic approach to innovation management.

Problems related to **tourism in the Adriatic-Ionian region** which hinder the development of sustainable tourism are the following: the region is insufficiently recognized as an integrated destination by Member States or tourists; seasonality of tourism; excessive tourism in certain parts of the region/destinations; insufficient understanding of the value of existing resources (natural, cultural, social, etc.); economic migrations of the local population endanger autochthonous and authentic tourist products; inequality in the development of e.g. rural and coastal parts; too much emphasis on the exclusively economic and environmental component of sustainability while the social component is neglected.

Last topic, **innovation and/or sustainability** detects problems in the lack of innovation indicators concerning tourism systems; the lack of metrics to monitor, manage and encourage innovation; and the lack of a comprehensive knowledge base of existing examples of good practices (Cerovac *et al.*, 2018).

The establishment of the Adriatic-Ionian Tourism Innovation Center (AITIC) was proposed as a possible solution to these problems, which would act as a network composed of contact points in individual countries, with the aim of providing knowledge about innovation and sustainable tourism development.

Except for the mentioned *EU Strategy for the Adriatic-Ionian Region (EUSAIR)* and *Strategy for fostering innovation in sustainable tourism for the Adriatic-Ionian region*, innovations for sustainable tourism in the region are not systematically processed, but there are documents that take them into account (e.g. BLUTOURSYSTEM: Defining the QH governance plan to establish a long-term platform).

3. OVERVIEW OF INNOVATIVE MECHANISMS IN SUSTAINABLE TOURISM PROGRAMS IN THE ADRIATIC-IONIAN REGION

Projects related to sustainable tourism are mainly funded by the ERDF and the ESF and have been identified and analyzed as part of specific operational programs at the national or regional level.

Most projects are funded by the ADRION program, but there are also sustainable tourism and culture projects funded by the Cross-Border Cooperation Program, Interreg Mediterranean, LIFE and HORIZON programs. For the purposes of this report, all relevant programs and analyzes from the aspect of encouraging innovation in sustainable tourism have been reviewed.

Table 3. Programs relevant to Pillar 4 that include goals, priorities and measures related to innovation in sustainable tourism

Program	Number of analyzed projects	Innovations in sustainable tourism
OP Competitiveness and Cohesion (HR)	133	Not in the program as a goal / priority / measure
OP Effective Human Resources (HR)	7	Not in the program as a goal / priority / measure
OP for the implementation of EU Cohesion Policy (SI)	1	Thematic goal 1: Strengthening research, technological development and innovation
Attica OP (GR)	1	Priority 3: Improving competitiveness, innovation and digital convergence
Ionian Islands OP (GR)	1	Priority Axis 1: Increasing regional competitiveness through the development of entrepreneurship, innovation and ICT.
OP Western Greece (GR)	1	Priority Axis 1: Increasing competitiveness and business reach, transition to quality entrepreneurship, top innovations and increasing domestic added value
ROP Western Macedonia (GR)	1	Priority Axis 1: Strengthening research, technological development and innovation
OP Culture (IT)	1	Not in the program as a goal / priority / measure
Sardagna ROP (IT)	1	Goal 2: Support innovation and investment in human capital
Umbria ROP (IT)	1	Priority Axis 1: Research and Innovation
ADRION Program	22	Priority Axis 1 - Innovative and smart region
Interreg Croatia - Bosnia and Herzegovina - Montenegro	6	Not in the program as a goal / priority / measure
Interreg Croatia - Serbia	10	Not in the program as a goal / priority / measure
Interreg Greece - Albania	28	Not in the program as a goal / priority / measure
Interreg Greece - Italy	8	Priority Axis 1 Innovation and Competitiveness

Interreg Greece - Northern Macedonia	6	Specific objective 1.1. Creating employment opportunities for educated graduates by taking advantage of the comparative advantages of the cross-border area, preferably using innovative tools and practices
Interreg Italy - Albania - Montenegro	15	Specific objective 2.2. Increase the cooperation of key actors in the field for the delivery of innovative cultural and creative products
Interreg Italy - Croatia	13	Thematic objective 1 Research and innovation
Interreg Italy - Slovenia	5	Thematic objective 1 Research and innovation
Interreg Slovenia - Croatia	21	Not in the program as a goal / priority / measure
Interreg Mediterranean	21	Thematic objective 1 Research and innovation
LIFE Program	3	Not in the program as a goal / priority / measure
HORIZON Program	7	Specific objective 3: Increase the contribution of research and innovation to address key societal challenges

For the purpose of analyzing projects with an innovative mechanism in the 4th pillar of the EUSAIR strategy, **all national and several regional operational programs** were analyzed. Since most of the documents are prepared in local languages, at this stage the total amounts by individual priority axes involving sustainable tourism and culture are presented, and the request for information on specific projects is sent to the national coordinators.

The Slovenian **Operational Program for the Implementation of EU Cohesion Policy** has as its thematic objective 1 strengthening research, technological development and innovation and is divided into 2 investment priorities – Improving research and innovation (R&I) infrastructure and capacity to develop excellence in research and development, and promoting centers competences, especially those of European interest, and Promoting business investment in research and development, developing links and synergies between enterprises, research, development centers and higher education sectors, in particular promoting investment in product and service development, technology transfer, social innovation, eco-innovation, public service applications, demand stimulation, networking, clusters and innovation, smart specialization and support for technological and applied research, pilot lines, advanced production capabilities and first production, especially KET, and the spread of general purpose technology. Although the OP prioritizes innovation, it does not address innovation in sustainable tourism.

Greek regional **OP Attica** mentions innovation in Priority 3: Improving competitiveness, innovation and digital convergence related to the tasks to be promoted in the Attica region to make its economy more competitive include greater use of information and communication technology (ICT) in enterprises, transmission knowledge to create innovative products, support for technology transfer to small and medium-sized enterprises (SMEs), support for investment in enterprises directly involved in research and innovation, SME networking, assistance to SMEs in using modern financing instruments, incentives for "green" entrepreneurship and improved IT services for tourism.

The Greek **Ionian Islands Operational Program** mentions innovation in Priority Axis 1: Increasing regional competitiveness through the development of entrepreneurship, innovation and ICT. Tasks within the priority axis include strengthening research, technological development and innovation, strengthening access to information and communication technologies, strengthening the competitiveness of small and medium-sized enterprises. In the financial period 2014-2020 Priority Axis 1 amounted to a total of 10.45% of the EU allocation of funds from the ERDF.

ROP Western Greece encourages innovation in the region under Priority Axis 1: Reinforcement of competitiveness, extroversion and transition to a quality entrepreneurship with focus on innovation and increase of national added value. In the financial period 2014-2020 Priority Axis 1 amounted to a total of 14.34% of the EU allocation of funds from the ERDF.

The latest analyzed Greek regional operational program **ROP Western Macedonia** mentions innovation in Priority Axis 1: Strengthening research, technological development and innovation. In the financial period 2014-2020 Priority Axis 1 amounted to a total of 3.13% of the EU allocation of funds from the ERDF.

The Italian National Operational Programme on Culture has no objectives, priorities or measures related to innovation, while in the regional operational programs innovation is mentioned. ROP Sardagna encourages innovation in Objective 2: Supporting innovation and investment in human capital, and ROP Umbria in Priority Axis 1: Research and Innovation.

Of the 10 national and regional Operational Programs analyzed, innovation has seven as a goal, priority and / or measure, while only the **Greek Regional Operational Program Attica** mentions innovation in the context of sustainable tourism in terms of improving tourism-related IT services. Other OP innovations are mentioned in the context of research and development, SME operations and increasing the competitiveness of the economy, but the importance of innovation in sustainable tourism is not emphasized. Also, of the 148 projects related to sustainable development analyzed within national and regional operational programs, only 6 relate to innovation in sustainable tourism, 5 under OP Competitiveness and Cohesion and 1 under OP Effective Human Resources.

Innovations within the OP Competitiveness and Cohesion are as follows: innovative tourism product "storytelling" and "reviving history", creation of innovative cultural, artistic, tourist, educational and other content, innovative content, presentation of culture in a modern, innovative and attractive way, which raises the competitiveness of the new product of cultural tourism and the introduction of innovative ways of presenting the attractive natural heritage of the first Croatian UNSECO geopark. Within the OP Effective Human Resources, innovations in sustainable tourism refer to innovative learning models, technologies and trends.

The ADRION programme is a European transnational programme that invests in regional innovation systems, cultural and natural heritage, environmental resilience, sustainable transport and mobility as well as capacity building. Funds devoted to operations to be allocated through calls for proposals refer to the three priority axes: (i) Priority Axis No 1 –

Innovative and smart Region; (ii) Priority Axis No 2 – Sustainable Region; and (iii) Priority Axis No 3 – Connected Region. Sustainable tourism related projects are mostly part of the Axis No 2 – Sustainable Region.

One of the main challenges of the Adriatic-Ionian area is to monitor global competition, which is why the ADRION Program has developed Priority Axis 1 – Innovative and Smart Region, which improves mutual understanding among ADRION partner countries on potential fields of transnational innovation and diffusion embracing innovation, enhancing the competencies or skills of stakeholders and stakeholders, improving framework conditions (awareness and foresight, legal, economic aspects, innovation management, organizational issues, policy solutions, technology impact assessments), mobilizing stakeholders in research, innovation and use as means to increase knowledge transfer between businesses, users, academia and administrative actors (quadruple coil approach), identify new market opportunities taking into account EUSAIR themes and smart specialization strategies in the regions, and better coordinate innovation policies and strategies, for example in the context of Regional Innovation Strategies.

Within the Adrion Program, a total of 22 projects related to sustainable development were analyzed, of which 16 projects involve some kind of innovation. Of these 16 projects, three were funded under Priority Axis 1 – Innovative and Smart Region, and the other 13 under Priority Axis 2 – Sustainable Region. Innovations within the ADRION Program mostly refer to innovations in accommodation, catering, transport, information content, new technologies in application and innovations in the field of product development.

APPRODI main objective is to promote and valorize cultural heritages in ADRION area by enhancing management and promotion of ancient harbors sites as touristic destinations and by improving the involvement of local communities. 5 pilot sites will be valorized as new potential destinations by **applying innovative techniques, such as geo-archeological investigations** (Ortona, Durazzo, Dubrovnik) whose findings will be exposed in Museums exhibitions or zero impact and zero infrastructures solutions for an innovative coastal and lagoon archaeological park (Torcello, Venice).

European Cross-Border cooperation, known as Interreg A, supports cooperation between NUTS III regions from at least two different Member States lying directly on the borders or adjacent to them. IPA Cross-border Co-operation Programme, supports cross-border co-operation between candidate countries, potential candidate countries and EU Member States. Cross-border cooperation programs have innovation as an important topic, but not to the same extent in all areas. An analysis of all cross-border cooperation programs in the Adriatic-Ionian region is presented below.

Interreg V-A Greece-Italy Programme is a European Territorial Cooperation Programme that aims to help public institutions and local stakeholders to develop cross-border projects and pilot actions and to create new policy, products and services, with the final goal to improve the citizens' quality of life. Strategically, the programme enhances innovation in a

number of fields such as blue growth, tourism and culture, agro food and cultural and creative industries.

Projects within Interreg Greece - Italy related to sustainable tourism are funded under the Priority Axis Integrated Environmental Management, and there is one project under the priority axis Innovation and Competitiveness. Projects related to sustainable tourism within the Interreg VA Greece - Italy Program are listed in Table 2.

Table 4. Interreg V-A Greece-Italy projects involving innovation in sustainable tourism

Project	Priority Axis	LEADING PARTNER	Innovations in sustainable tourism	type of innovations.
Silver Wellbeing	Integrated environmental management	Poyclinic of Bari (IT)	No	-
E-Parks	Integrated environmental management	University of Foggia (IT)	No	-
Nett	Integrated environmental management	The Apulian Public Theater - Regional Consortium for Arts and Culture (IT)	Yes	innovations in activities in destinations
PATH	Integrated environmental management	The Regional Union of Municipalities of Western Greece (EL)	No	-
POLYSEMI	Integrated environmental management	University of Bari Aldo Moro, Department of Literature, languages, arts. Italianistics and comparative cultures (IT)	Yes	innovations in activities in destinations
Sparc	Integrated environmental management	Municipality of Patra (EL)	Yes	innovation in relations with the local community through participatory and interactive models of cooperation
CIAK	Integrated environmental management	Apulia Film Commission (IT)	No	-
In Med Tour	Innovation and competitiveness	National Organization for Health Care Services Provision- EOPYY (EL)	Yes	innovations in activities in destinations

Source: Interreg Greece - Italy, <https://greece-italy.eu/>

Of the 8 analyzed projects related to sustainable tourism under the Interreg Greece - Italy VA program, four projects contain innovations. Of these 4 projects, three types of innovation relate to innovations in activities in destinations (Nett, POLYSEMI and In Med Tour), while the Sparc project introduces innovations in relations with the local community through participatory and interactive models of cooperation.

InMed-Tour – “Innovative Medical Tourism Strategy” promotes an **innovative and increasing kind of tourism called “health tourism”**, which consists of associating health travel with the opportunity to enjoy the beauties of the area you visit, through a touristic package that takes into account the needs of the patient and his partner. The so-called "medical" tourism represents an innovative touristic offer, because it gives the possibility for the relatives of those who are sick, to enjoy the area by considering the needs of patients and tourists. The project will deliver a cross-border effort for bringing together the health and research industries with the local enterprises, through the creation of a modern e-Cluster, where medical information from both countries will be stored for the exchange of know-how and good practices.

The Italy-Croatia CBC Programme is the financial instrument supporting the cooperation among the two European Members States territories overlooking the Adriatic Sea. Sustainable tourism related projects are implemented within the Interreg Italy – Croatia priority axis Environmental and Cultural Heritage, Specific Objective 3.1: Make natural and cultural heritage a leverage for sustainable and more balanced territorial development. Pillar 4 related projects implemented within the Interreg Italy – Croatia are listed in the table below.

Table 5. Interreg V-A Italy – Croatia projects involving innovation in sustainable tourism

Project	Lead partner	Innovation in sustainable tourism	Type of innovation
ARCA ADRIATICA	Primorje-Gorski Kotar county (HR)	No	-
VALUE USEFALL TOURISM4ALL	Municipality of Comacchio (IT)	Yes	Innovation in the field of product development
S.LI.DES.	Municipality of Ravenna (IT)	No	-
RECOLOR	Molise Region (IT)	No	-
MADE IN-LAND	Ca' Foscari University of Venice (IT)	No	-
KEYQ+	Emilia-Romagna Region - General Directorate Economics of Knowledge, Labor and Enterprise (IT)	No	-
INNOCULTOUR	Marche Region - Budget and National and Community Planning Department (IT)	Yes	New technologies in the function of visibility and promotion
ATLAS	AZRRI – Agency for rural development of Istria ltd (HR)	Yes	Innovation in the field of product development
	DELTA 2000 - Consortium Company with Limited Liability (IT)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
	Friuli Innovazione research and technology transfer centre (IT)	Yes	Innovation in the field of product development

HISTORIC	Sistemi Territoriali Spa (IT)	Yes	Innovation in research and customer approach
HERCULTOUR	Zadar County (HR)	No	-
EXCOVER	Public Institution Regional Development Agency of Lika Senj County – LIRA (HR)	Yes	Innovation in activities in destinations

Source: Interreg Italy - Croatia, <https://www.italy-croatia.eu/>

Out of 13 projects related to sustainable tourism within Interreg Italy – Croatia, 7 projects introduce innovation related to sustainable tourism, of which three projects relate to innovation in the field of product development (VALUE, KEYQ +, ATLAS), MADE IN-LAND introduces new technologies in the function of visibility and promotion, INNOCULTOUR innovation in accommodation, catering, transport, information content, new technologies in application, HISTORIC innovation in research and customer approach and EXCOVER innovation in activities in destinations.

The project **INNOCULTUR** is capitalizing the results of the IPA Adriatic project MUSEUMCULTOUR, and is aimed to increase the visibility and immediate identification of 8 less-known cultural heritage sites. The activities will be focused on active involvement of creative industries, local population and major stakeholders dedicated to the preservation of natural and cultural heritage by the mean of public call for ideas launch in order **to support integration of traditional cultural offer with ICT and improving the virtual accessibility of the natural and cultural destinations involved in the project.**

Interreg V-A Italy – Slovenia Programme supports a smart, sustainable and inclusive growth as planned by the Europe 2020 Strategy, spending significant resources on growth, innovation, quality of life and environmental sustainability, also through the improvement of the efficiency of public administration. The Programme covers the seven-year period of the European Programme 2014-2020, which is developed to provide continuity with the previous 2007-2013 Programme, which has funded 87 projects aimed at enhancing competitiveness, research and innovation, protection and promotion of cultural and natural resources, and cross-border activities.

The ERDF allocation has been distributed as indicated:

- Priority Axis 1: Promoting innovation capacities for a more competitive area - 24% of the ERDF contribution, amounting to EUR 18.703.189,00.

Sustainable tourism related projects are implemented under Interreg Italy – Slovenia priority axis 3: Protecting and promoting natural and cultural resources, Specific Objective SO 3.1.: Conserving, protecting, restoring, and developing natural and cultural heritage. Pillar 4 related projects implemented under Interreg Italy – Slovenia are listed in the table below.

Table 6. Interreg V-A Italy – Slovenia projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
AGROTUR II	The Agricultural Institute of Slovenia (SI)	No	-
ISONZO-SOČA	EGTC GO European Grouping of Territorial Cooperation (IT)	No	-
MerlinCV	Science and Research Centre Koper (SI)	Yes	New technologies in the function of visibility and promotion, Innovation in the field of product development
tARTini	Piran Municipality (SI)	Yes	Innovation in the field of product development
WALKofPEACE	Soča Valley Development Centre (SI)	Yes	Innovation in the sustainable use, evaluation, presentation and interpretation of natural and cultural attractions

Source: Interreg Italy - Slovenia, <https://www.ita-slo.eu/en>

Of the five projects on sustainable tourism analyzed within the Interreg Italy – Slovenia, three contain innovation – Merlin CV, tARTini and WALKofPEACE. MerlinCV is a project that introduces two types of innovation - new technologies in the function of visibility and promotion, since it introduces an innovative way of using marketing and visibility, and innovation in the field of product development. The tARTini project also introduces innovation in the field of product development, while the WALKofPEACE project introduces innovation in the sustainable use, evaluation, presentation and interpretation of natural and cultural attractions.

The **Multisensorial experiences linked to the castles and villas of the cross-border region for excellence in tourism (MerlinCV)** project will contribute to promoting the cross-border tourism region. In order to exploit the untapped potential of the cultural, natural and gastronomic heritage in the Italo-Slovenian cross-border area, the project will **develop innovative, integrated and thematic tourism products focussing on sustainable tourism**. Taking into account the environmental challenges, the project will offer relevant, European level solutions for the development of sustainable and thematic tourism; to this end, a large number of activities will aim to create new tourism products, training stakeholders with a particular focus on food and wine and typical local products. The project activities will be planned on the basis of a study or with the help of good practice in similar environments. A web and mobile application will be created to serve as a database of the local tourist offer and to assist in planning tourism itineraries.

Cooperation Programme INTERREG V-A Slovenia – Croatia is the main document setting out the framework for the cross-border cooperation of the Slovenia and Croatia in the financial perspective 2014-2020. The Cooperation Programme INTERREG V-A Slovenia-Croatia aims at promoting sustainable, safe and vibrant border area by fostering

smart approaches to preservation, mobilization and management of natural and cultural resources for the benefit of the people living and working in or visiting the area.

Sustainable tourism related projects are implemented under Interreg Slovenia – Croatia Priority axis 2: Preservation and sustainable use of natural and cultural resources infrastructure. Pillar 4 related projects implemented under Interreg Slovenia – Croatia are listed in the table below.

Table 7. Interreg V-A Slovenia – Croatia projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
Mala barka 2	Primorje-Gorski Kotar county (HR)	No	-
DETOX	Lenart Municipality (SI)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
Riviera4Seasons2	Piran Municipality (S)	No	-
CLAUSTRA+	Institute for the Protection of Cultural Heritage of Slovenia (SI)	No	-
KRASn'KRŠ	Scientific Research Center of the Slovenian Academy of Sciences and Arts (SI)	Yes	Innovation in the sustainable use, evaluation, presentation and interpretation of natural and cultural attractions
ECoolTour	Mosaic, Society for Social Inclusion (SI)	Yes	Innovation in the field of entrepreneurial initiatives and enterprise development
Uživam tradicijo	Biotechnical Educational Centre Ljubljana (SI)	Yes	Innovation in research and customer approach
Prebujanje/Buđenje	Goričan Municipality (SI)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
ZELENO ŽELIMO	Chamber of Agriculture and Forestry of Slovenia - Agricultural and Forestry Institute Murska Sobota (SI)	Yes	Innovation in the field of product development
ŽIVA COPRNIJA	Development Information Center Slovenska Bistrica (SI)	Yes	Innovation in the field of product development
MISTERION	Semič Municipality (SI)	Yes	Innovation in the field of product development
RIDE&BIKE II	Zagorje Development Agency (HR)	Yes	Innovation in the field of product development
INSPIRACIJA	Trbovlje Municipality (SI)	Yes	Innovation in research and customer approach
MITSKI PARK	Hrpelje-Kozina Municipality (SI)	Yes	Innovation in research and customer approach

KULTURA	City of Jastrebarsko (HR)	Yes	Innovation in the field of product development
PREHISTORY ADVENTURE	Donja Voća Municipality (SI)	Yes	Innovation in activities in destinations
NATURE&WILDLIFE	RDA Green Karst Ltd. (SI)	No	-
MINE TOUR	City of Labin (HR)	No	-
IN CULTURA VERITAS	Zagreb County (HR)	Yes	Innovation in the field of product development
LIVING CASTLES	Polytechnic of Međimurje in Čakovec (HR)	Yes	Innovation in activities in destinations
KAŠTELIR	Komen Municipality (SI)	Yes	Innovation in activities in destinations

Source: Interreg Slovenia - Croatia, <http://www.si-hr.eu/en2/>

Within the Interreg Slovenia – Croatia program, 21 projects in the field of sustainable tourism were analyzed, of which as many as 16 projects introduce innovation, although they do not represent the goal and / or priority of the program itself. Most projects, 6 of them relate to innovation in the field of product development, three innovation in research and customer approach, three innovation in activities in destinations, 2 innovation in accommodation, catering, transport, information content, new technologies in application, one project brings innovation in the sustainable use, evaluation, presentation and interpretation of natural and cultural attractions and an innovation in the field of entrepreneurial initiatives and enterprise development.

The project **Common heritage for the joint international promotion of 365 days of green tourism on the Opatija and Portorož Riviera (Riviera4Seasons2)** builds on preservation of regional heritage and complements the integrated tourism product–cultural tourism of 365 Riviera, developed under the project 365 DAYS OF RIVIERA, by including nat. and cult. heritage and events in the countryside into a newly formed itineraries. The common challenge of the programme area, undertaken by the project, using cross-border cooperation is to promote active preservation of cult. and nat. heritage by promoting sustainable green tourism. This approach is based on the fact that Portorož and Opatija, represent a cradle of Central European tourism with a rich tradition. With events organised in the countryside of both cities, as well as minor developments, efforts are undertaken to utilise this potential in the most tourism-oriented places of this region in order to directly increase the number of visitors at the common cross-border destination. Educational workshops are organised to inform stakeholders about sustainable management, to promote green job positions, and increase international recognition of cross-border destination on internat. markets. **The project includes innovative approaches to increase integration and joint presentation of destination on internat. markets (joint portal, itineraries, events and promotion).** As the pressure of tourism shall decrease in favour of green sustainable tourism in the countryside, the main beneficiaries of the project will be the local population, tourists/visitors, non-profit organisations, companies, their employees, and potential start-ups related to utilisation of national and cultural heritage.

The overall objective of the **Interreg IPA Cooperation Programme Croatia-Serbia 2014-2020** is to strengthen the social, economic and territorial development of the cross-border area through the implementation of joint projects and activities

Sustainable tourism related projects are implemented under IPA Cross-border Co-operation Programme Croatia – Serbia Priority axis 3: Contributing to the development of tourism and preserving cultural and natural heritage. Pillar 4 related projects implemented under IPA Cross-border Co-operation Programme Croatia – Serbia are listed in the table below.

Table 8. Interreg IPA Croatia – Serbia projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
Central Danube Tour	Public Institution Development agency of Osijek-Baranja County (HR)	No	-
EXPLORE CRO-SRB	Development Agency of Slavonski Brod Ltd. (HR)	No	-
HORIS	Municipality of Nijemci (HR)	No	-
S.O.S.	Tourist Board of the City of Osijek (HR)	No	-
ViCTour	Vukovar-Srijem County (HR)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
VISITUS	City of Sombor (RS)	No	-
FILMHARMONIA	Zagreb Philharmonic (HR)	Yes	Innovation in the field of product development, Innovation in education for tourism
Pannonia Gourmet	Educons University (RS)	No	-
Panona net	Association for Creative Development SLAP (HR)	No	-
Wild Danube Tour	Green Osijek (HR)	No	-

Source: IPA Cross-border Co-operation Program Croatia - Serbia, <https://www.interreg-croatia-serbia2014-2020.eu/>

Out of 10 analyzed projects of the Interreg IPA Croatia – Serbia program related to sustainable tourism, only 2 projects include innovations. The ViCTour project combines innovative and modern marketing tools with ICT equipment such as holograms to create an innovative tourist offer in Vukovar-Srijem County, thus introducing innovation in accommodation, catering, transport, information content, new technologies in use. The FILMHARMONIA project combines two types of innovation – innovation in product development and innovation in education for tourism.

The **FILMharmonia** project tackles the challenge of undiversified tourism offer in the cross-border area, lack of innovative cultural products and lack of specialized skills needed to develop cultural products, as well as the small number of high quality artistic performances. The main objective of FILMharmonia is to strengthen and diversify the tourism offer by **developing an innovative cultural tourism product**: the FILMharmonic program. Partners from Zagreb and Novi Sad plan to combine screenings of mute films with live orchestra performances in a number of events across the Programme area, bring new experiences to the local community and capture new audiences with the idea of integrating cinematic and music arts. Additionally, partners will **deploy innovative training programs for cultural and tourism actors of the Programme area** and provide new opportunities for long-term development of cultural tourism.

The Interreg IPA Cooperation Programme Croatia – Bosnia and Herzegovina – Montenegro 2014-2020 is designed to strengthen the social, economic and territorial development of the cross-border area between Croatia, Bosnia and Herzegovina and Montenegro. Through the implementation of joint projects and activities, the programme will become a key enabler for generating smart solutions to the needs and the challenges of the people living in those regions.

Table 9. Interreg IPA Croatia – Bosnia and Herzegovina – Montenegro projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
ADRIATIC CANYONING	City of Široki Brijeg (BA)	No	-
Becharac & Ganga	City of Pleternica (HR)	Yes	Innovation in the field of product development
Fortress RelInvented	Šibenik City Museum (HR)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
Heritage route	City of Lipik (HR)	No	-
RiTour	Public Institution RERA SD for Coordination and Development of Split Dalmatia County (HR)	No	-
FORTITUDE	Public Cultural Institution Fortress of Culture (HR)	No	-

Source: IPA Cross-border Co-operation Program Croatia - Bosnia and Herzegovina - Montenegro, <https://www.interreg-hr-ba-me2014-2020.eu/>

Of the 6 analyzed projects related to sustainable tourism within the Interreg IPA Croatia – Bosnia and Herzegovina – Montenegro program, two projects introduce some kind of innovation, although they are not in the priorities of the operational program itself. The Becharac & Ganga project represents an innovation in the field of product development, while the Fortress RelInvented project introduces innovative digital content in tourist places,

which falls into the category of innovation in accommodation, catering, transport, information content, new technologies in application.

Innovative approach and digital contents in historical fortification monuments (Fortress ReInvented) aims to **introduce new, digital content in tourism sites** of the cross-border area and further develop the untapped potential of historical fortification monuments. The partners believe that sustainably reviving cultural and historical heritage with joint cultural cooperation will strengthen and diversify the cross-border tourism. Many medieval fortresses can be found throughout the cities of the Programme area, both inland and along the coast, and with their high historical and scientific value they play an important role in future tourism trends. Fortress ReInvented aims to digitalize historical fortification monuments in two Croatian cities, Šibenik's St. Michael's Fortress and Klis Fortress in Klis. Revitalization of two other fortresses is planned in Zenica's Vranduk Fortress in Bosnia and Herzegovina and Herceg Novi's Kanli Kula Fortress in Montenegro. The aim of the project is to develop cross-border tourism offer with an innovative approach and new digital content in historical sites.

The **cross-border cooperation programme Greece – Albania 2014-2020** supports regional cooperation among Greek and Albanian regions in the upcoming programming period. The Program's overall objective is to "increase the standard of living of the population by promoting sustainable local development in the cross-border area". It concentrates on priorities that are either characterized by significant cross-border effects or present a high potential for achieving added-value through cooperation.

Table 10. Interreg IPA Greece - Albania projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
CLLD-CulTour	Municipality of Zitsa (EL)	Yes	Innovation in the field of product development
i-Thea	Development Agency of Epirus S.A. (EL)	No	-
Cult2Routes	Municipality of Nestorio (EL)	No	-
ALTTOUR	Albanian Ministry of Tourism and Environment (AL)	No	-
AuthentiKK	Municipality of Korca (AL)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
VirtualLand	University of Ioannina - Research Committee (EL)	Yes	Innovation in activities in destinations
STONE.ART	Municipality of Konitsa (EL)	No	-
Milestones III	Municipality of Dodoni (EL)	No	-
SMARTIMONY	University of Ioannina - Research Committee (EL)	Yes	Innovation in the sustainable use, evaluation, presentation and interpretation of natural and cultural attractions

SMART TOUR	University of Ioannina - Research Committee (EL)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
e-natura	University of Western Macedonia - Research Committee (EL)	No	-
CheeseCult	University of Ioannina - Research Committee (EL)	Yes	Innovation in the field of product development
GET	Institute of Public and Private Policies (AL)	No	-
EX.TOUR	Region of Epirus (EL)	No	-
Culture Lands	Municipality of Florina (EL)	Yes	Innovation in relations with the local community through participatory and interactive models of cooperation
THEMA	Development Agency of Epirus S.A. (EL)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
IT Culture	Municipality of Grevena (EL)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
CULTURAL LANDS	Municipality of Zitsa (EL)	Yes	Innovation in the sustainable use, evaluation, presentation and interpretation of natural and cultural attractions
CULTURE PLUS	University of Thessaly - Research Committee (EL)	Yes	New technologies in the function of visibility and promotion
4ALL	Urban Research Institute (AL)	No	-
EXTRO-CULT	Chamber of Kefallonia and Ithaka (EL)	No	-
POLYPHONIA	Regional Union of Municipalities of Epirus (EL)	No	-
RyTHM	Ministry of Culture and Sports - Ephorate of Antiquities of Corfu (EL)	No	-
CBTB	Chamber of Grevena (EL)	Yes	New technologies in the function of visibility and promotion
EXPLORAL	University of Ioannina - Research Committee (EL)	No	-
PROSFORA	University of Ioannina - Research Committee (EL)	Yes	Innovation in the field of product development
MileSTONES II	Municipality of Dodoni (EL)	Yes	Innovation in research and customer approach
TACTICAL TOURISM	Regional Council of Gjirokastra (AL)	No	-

Source: IPA Cross-border Co-operation Program Greece - Albania, <https://greece-albania.eu/>

Although the Interreg IPA Greece-Albania program does not mention innovation in its priorities and measures, out of 28 analyzed projects related to sustainable tourism, 14

projects bring some kind of innovation. The most common innovations relate to the introduction of technology to tourist destinations, i.e. the type of innovation in accommodation, catering, transport, information content, new technologies in use. Other categories of innovation include innovation in research and customer approach, innovation in product development, new technologies for visibility and promotion, innovation in sustainable use, evaluation, presentation and interpretation of natural and cultural attractions, and many others.

Despite the natural and cultural resources, the cross border area lacks an organized management plan for the development of thematic tourist products and hence the main tourist product remains “sun, sea & sand” tourism. In addition, the recent economic crisis in Greece, drove the local economy into a recession on the Greek part and slowed down growth rates on the Albanian part. This leads to a significant opportunity to promote the thematic tourism in the cross-border, especially by creating a visitor profile to understand the tourism impacts on local, regional and national economies was needed. Thus, there is a significant opportunity for growth and developing through thematic tourism in the area of interest and **THEMA** targets this need.

Project THEMA introduces innovation in three levels:

- at a technological level, by incorporating a new form of Bluetooth-based location sensors and an innovative gamification rewarding mechanism.
- At a content level, by exploiting and enriching existing routes, while providing open access to that content to tour agents and tour operators.
- At a social level, by promoting socialization and user empowerment.

The cross-border cooperation programme Greece – Republic of North Macedonia supports regional cooperation between Greece and North Macedonia. The Program’s overall objective is to enhance territorial cohesion by improving living standards and employment opportunities holding respect to the environment and by using the natural resources for upgrading of the tourism product.

Table 11. Interreg IPA Greece – Republic of Northern Macedonia projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
CINECULTURE	Municipality of Edessa (EL)	No	-
CONNECT	Municipality of Volvi (EL)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
HOLY WATER	Municipality of Prespes (EL)	No	-
I-TOUR	Center for Development of Pelagonia Region (MK)	No	-
TERRA VINO	Greek-Italian Chamber of Commerce of Thessaloniki (EL)	Yes	Innovation in the field of entrepreneurial initiatives and enterprise development

ToCulter	Regional Development Fund of Central Macedonia (EL)	Yes	New technologies in the function of visibility and promotion
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Source: IPA Cross-border Co-operation Program Greece - Republic of North Macedonia, <http://www.ipa-cbc-programme.eu/home/>

Out of 6 analyzed Interreg IPA projects Greece – Republic of Northern Macedonia, innovation in sustainable tourism introduce 3 of them. The CONNECT project introduces innovation in accommodation, catering, transport, information content, new technologies in application, providing access to culture and innovative ICT solutions. The TERRA VINO project introduces innovation in the field of entrepreneurial initiatives and enterprise development, while the ToCulter project introduces new technologies in the function of visibility and promotion.

The project “**ToCulter**” has as overall objective to create a common tourist identity based on water trails, specialized according to location's identity and through an **innovative platform and networking activities to develop promotional tourism packages in order to improve the cross-border tourism product and services** and to enhance tourism flow in the area. The aforementioned goals will be achieved through the development of a group of actions, such as: e-tools in order to improve the cross-border tourism product and services, digital signage networks, media and tourism operators networking events, creation of Local Quality Agreement of Tourism Enterprises and activities (fairs/promotional events) implemented outside the Programme area enhancing the "local" tourism product in new domestic and foreign markets. The results of the project will be used by the direct beneficiaries and target groups, e.g. local population, tourists/visitors, local businesses in tourist and relevant sectors aiming to increase their income, local/regional authorities dealing with development planning regarding tourism, associations for the elderly people and tour operators.

The “**Interreg IPA CBC Italy – Albania – Montenegro**” programme is designed in the framework of the European strategy for smart, inclusive and sustainable growth (EU 2020). The programme therefore aims at assisting countries to meet their national 2020 targets in each of these areas through fostered cross-border cooperation across the Mediterranean.

The selected thematic priorities have been translated into four priority axes which will enable the programme to become the tool for implementing smart solutions that answer to the programme area needs and challenges. The program contains innovations within the specific objective 2.2. Increase the cooperation of the key actors of the area for the delivery of innovative cultural and creative products and is **the only analyzed program that in its goals, measures and / or priorities directly links innovation with sustainable tourism and culture**.

Table 12. Interreg IPA Italy – Albania - Montenegro projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
3C	Ministry of Culture of Montenegro (ME)	Yes	Innovation in the field of product development
3D-IMP-ACT	Polytechnic of Bari (IT)	Yes	Innovation in the field of product development
ADNICH	Montenegrin Royal Theater Zetski dom (ME)	No	-
Co.Co.Tour	Albanian Development Fund (AL)	No	-
COMPLICITIES	Public company "Cultural Center" Bar (ME)	Yes	Innovation in relations with the local community through participatory and interactive models of cooperation
CROSS BORDER OL	Agricultural University of Tirana (AL)	No	-
DUE MARI	Ministry of Environment (AL)	Yes	Innovation in research and customer approach
HAMLET	Ministry of Culture (AL)	No	-
MONET	Ministry of Culture of Montenegro (ME)	No	-
NEST	Ministry of Economic Development, Tourism, Trade and Entrepreneurship (AL)	Yes	Innovation in the field of entrepreneurial initiatives and enterprise development
OPEN TOURISM	Union of Municipalities "Lands of the Sea and the Sun" - Eastern belt of the province of Taranto (IT)	Yes	Innovation in relations with the local community through participatory and interactive models of cooperation, Innovation in the field of product development
P.A.S.T.4Future	Ministry of Economic Development, Tourism, Trade and Entrepreneurship (AL)	No	-
REGLPORTS	National Coastline Agency (AL)	No	-
TOURNEE	Municipality of Fier (AL)	Yes	Innovation in the field of product development
wISHfUI	City of Maglie (IT)	No	-

Source: IPA Cross-border Co-operation Program Italy - Albania - Montenegro, <https://www.italy-albania-montenegro.eu/>

Of the 15 projects related to sustainable tourism analyzed within the Interreg IPA Italy – Albania – Montenegro program, 7 projects introduce some kind of innovation. Projects 3C, 3D-IMP-ACT and TOURNEE introduce innovation in the field of product development, COMPLICITES innovation in relations with the local community through participatory and interactive models of cooperation, DUE MARI introduces innovation in research and customer approach, NEST innovation in entrepreneurial initiatives and enterprise development , while OPEN TOURISM brings innovation in relations with the local community through participatory and interactive models of cooperation and innovation in the field of product development.

OPEN TOURISM aims to reinforce cross border public-private cooperation, in order to promote local heritage and favour economic and social development. An **innovative strategy will be implemented, based on a new concept of tourism**, focusing on a deeper relationship between visitors and local communities. An integrated territorial marketing strategy will boost the attractiveness of natural and cultural assets, while **innovative products and services will be released** to enhance excellences, provide information and offer high quality, customized and off-season tourist services.

Partner States from 13 countries are working together in the transnational European Cooperation Programme for the Mediterranean area, **The Interreg MED Programme 2014-2020**. The transnational setup allows them to tackle challenges beyond national borders, such as the rise of low carbon economy, the protection of natural and cultural resources and the strengthening of innovation.

The main objective of the Interreg MED Programme is to promote sustainable growth in the Mediterranean area by fostering innovative concepts and practices and a reasonable use of resources and by supporting social integration through an integrated and territorially based cooperation approach.

Table 13. Interreg MED projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
MEDCYCLETOUR	Regional Government of Andalusia (ES)	No	-
CONSUME-LESS	Energy and Water Agency (MT)	Yes	New technologies in the function of visibility and promotion
MITOMED+	REGIONE TOSCANA Productive Activities Department (IT)	No	-
COASTING	Andalusian Federation of Towns and Provinces (ES)	No	-
DESTIMED PLUS	Lazio Region (IT)	No	-
INCIRCLE	Area Science Park (IT)	No	-
LABELSCAPE	Scientific Research Centre of the Slovenian Academy of Sciences and Arts (SI)	No	-
SUSTOWNS	Lazio Region Association of Cities and Municipalities (IT)	Yes	Innovation in activities in destinations
WINTER MED	Association of Tuscan Municipalities (IT)	No	-
BLUETOURED_C3	Latin Arc (ES)	No	-
INHERIT	Region of Peloponnese-Department of Management for Development Planning (EL)	Yes	Innovation in research and customer approach

HERIT-DATA	Toscana Region (IT)	Yes	Innovation in research and customer approach
MEDFEST	Scientific Research Centre of the Slovenian Academy of Sciences and Arts (SI)	No	-
EMBLEMATIC	Syndicat Mixte CANIGÓ Grand Site (FR)	No	-
BLUE ISLANDS	Ministry of Agriculture, Rural Development and Environment - Department of Environment (CY)	No	-
ALTER ECO	Valencia Institute of Building (ES)	No	-
CO-EVOLVE	Region of East Macedonia and Thrace (REMTH) - Regional Development Fund (EL)	No	-
BLUEMED	Region of Thessaly - Regional Development Fund (EL)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
TOURISMED	Municipality of Trabia (IT)	Yes	Innovation in activities in destinations
CASTWATER	Municipality of Rethymno (EL)	No	-
DESTIMED	REGION LAZIO - Regional Parks Agency of Lazio (IT)	No	-

Source: Interreg Mediterranean, <https://interreg-med.eu/>

Of the 21 projects related to sustainable tourism under the Interreg MED program, only 6 of them introduce some kind of innovation. The COSUME-LESS project introduces new technologies for visibility and promotion, SUSTOWNS and TOURISMED introduce innovation in activities in destinations, INHERIT and HERIT-DATA innovation in research and customer approach and BLUEMED innovation in accommodation, catering, transport, information content, new technologies in apply.

INHERIT is an integrated project with 15 partners from all 10 MED countries aiming to conserve and valorise natural heritage in MED coastal and maritime tourist destinations. The project will test and deploy a new approach adapted to MED specificities protecting natural heritage from the adverse effects of intensive tourism. INHERIT will promote sustainable tourism alleviating seasonality and tackling the surpassing of the hosting capacity, by designing and implementing a “bottom-up” protection approach relying on self-regulation and monitoring by local society and tourism stakeholders. **INHERIT introduces innovations to alleviate pressures in destinations by redirecting tourists in other nearby activities/sites.**

The LIFE programme is the EU’s funding instrument for the environment and climate action created in 1992. The current funding period 2014-2020 has a budget of EUR 3.4 billion. The LIFE programme is divided into two sub-programmes, one for environment

(representing 75% of the overall financial envelope) and one for climate action (representing 25% of the envelope).

Projects related to sustainable tourism are implemented under the sub-program Environment and are listed in the table below.

Table 14. LIFE projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
LIFE GRECABAT	University of Crete (EL)	No	-
LIFE IGIC	Hellenic Agricultural Organisation (ELGO) Demeter Directorate of Agricultural Research (NAGREF) (EL)	No	-
LIFE Andros Park	Agricultural University of Athens (EL)	No	-

Source: LIFE Program, <https://ec.europa.eu/environment/life/project/Projects/index.cfm>

There are no innovations in any of the three sustainable tourism projects analyzed under the LIFE program.

Horizon 2020 is the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness. Seen as a means to drive economic growth and create jobs, Horizon 2020 has the political backing of Europe's leaders and the Members of the European Parliament. They agreed that research is an investment in our future and so put it at the heart of the EU's blueprint for smart, sustainable and inclusive growth and jobs.

By coupling research and innovation, Horizon 2020 is helping to achieve this with its emphasis on excellent science, industrial leadership and tackling societal challenges. The goal is to ensure Europe produces world-class science, removes barriers to innovation and makes it easier for the public and private sectors to work together in delivering innovation.

The EU Framework Programme for Research and Innovation is complemented by further measures to complete and further develop the European Research Area. These measures aim at breaking down barriers to create a genuine single market for knowledge, research and innovation.

Sustainable tourism and cultural heritage projects are implemented under Priority Axis 3: Social Challenges and are presented in the table below.

Table 15. HORIZON 2020 projects involving innovation in sustainable tourism

Project	Lead Partner	Innovation in sustainable tourism	Type of innovation
SoPHIA	Roma Tre University (IT)	No	-
iMARECULTURE	European University of Technology (CY)	No	-
EMOTIVE	EXUS SOFTWARE LTD (GB)	No	-
SILKNOW	University of Valencia (SP)	Yes	Innovation in accommodation, catering, transport, information content, new technologies in application
DETECT	Alma Mater Studiorum - University of Bologna (IT)	Yes	Innovation in research and customer approach
PLUGGY	Institute of Communication and Computer Systems (EL)	No	-
ViMM	European University of Technology (CY)	No	-

Source: Horizon 2020, <https://ec.europa.eu/programmes/horizon2020/en/h2020-sections-projects>

Although the main goal of the HORIZON 2020 program is to create an Innovation Union, among the 7 analyzed projects related to sustainable tourism within the HORIZON 2020 program, only two projects introduce innovations – SILKNOW innovation in accommodation, catering, transport, information content, new technologies and DETECT innovation in research and customer approach.

SILKNOW aims to produce an **intelligent computational system that goes beyond current technologies in order to improve our understanding of European silk heritage**. This legacy will be studied, showcased and preserved through the digital modelling of its weaving techniques (a “Virtual Loom”). Users will access the resulting information through visual and tangible simulations, and experience vastly enhanced search tools, providing better results through automatic visual recognition, advanced spatio-temporal visualization, multilingual and semantically enriched access to existing digital data. Thus, SILKNOW will improve the understanding of EU heritage and its rich diversity, applying next-generation ICT research to the needs of various users (museums, education, tourism, creative industries, media...), and preserving an intangible heritage (ancient weaving techniques) for younger generations.

Taking into account the abovementioned restrictions the monitoring procedure has to tackle, a general description of the current state of implementation includes the following points:

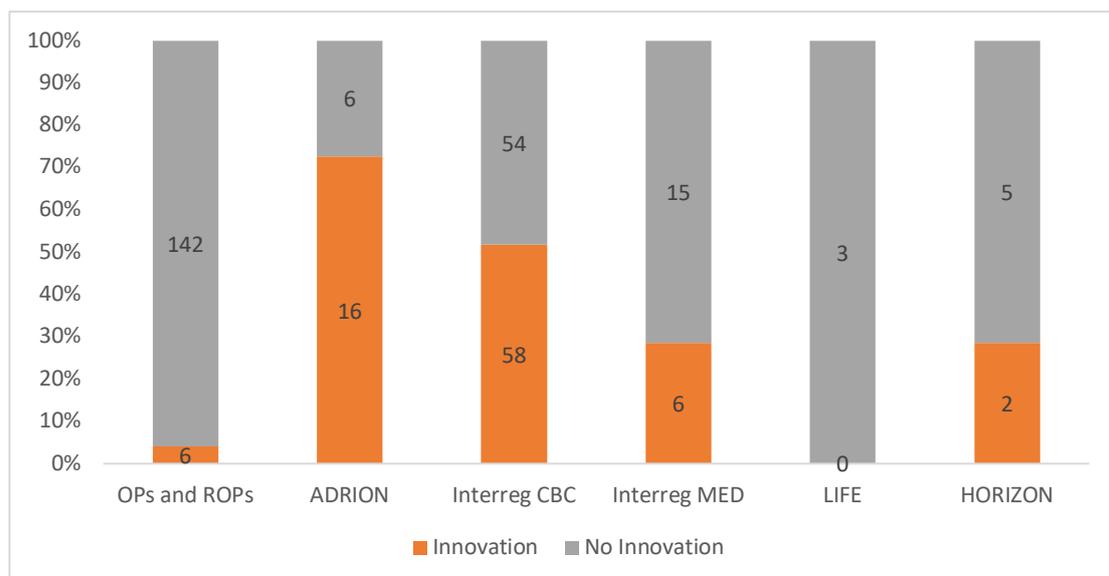
- A total of 313 projects of a budget of EUR 689,85 million, under the above programmes and calls are carried out in relevance with Pillar 4 sustainable tourism. It must be underlined that those figures do not include the implementation of project financed by the ERDF and ESF under specific national and regional operational

programs. These projects are still in the phase of collection. Out of 313 projects, 88 have innovations in sustainable tourism.

- The National and Regional Operative Programmes contribute to EUSAIR – Pillar 4 topics with 148 projects with a total budget of EUR 461,98 million. Of the 148 projects, only 6 include innovation - 5 in the OP Competitiveness and Cohesion and 1 in the OP Effective Human Resources.
- The ADRION Programme contributes to EUSAIR – Pillar 4 topics with 22 projects with a total budget of about EUR 18,66 million. Of the 22 projects analyzed, 16 involve innovation.
- The Cross-Boarder Cooperation and Transnational programmes, contribute to EUSAIR – Pillar 4 topics with 112 projects with a total budget of about EUR 132,16 million. Of the 112 projects analyzed, 58 projects involve innovation.
- The Interreg Mediterranean contributes to EUSAIR Pillar 4 topic with 21 projects with a total budget of EUR 56,75 million. Of the 21 projects analyzed, 6 have innovation.
- The LIFE Programme contributes to EUSAIR Pillar 4 topic with 3 projects with a total budget of EUR 4,86 million. None of the analyzed projects has innovation.
- The HORIZON Programme contributes to EUSAIR Pillar 4 topic with 7 projects with a total budget of EUR 15,44 million. Of the seven projects analyzed, two have innovation.

The analysis of projects related to sustainable tourism according to the programs is shown in Figure 4.

Figure 4. Innovations in sustainable tourism according to programs



Through the implementation of the EUSAIR strategy in the field of TSG 4 Sustainable tourism, three mono-pillar project ideas have been developed and initiatives have been

launched to network projects and institutions through cross pillars cooperation. Brief descriptions of these project ideas and initiatives are below:

Three mono-pillar project ideas developed are Green Mapping, DES_AIR and CulTourAir. Green Mapping for Adriatic-Ionian Region is the project supporting the development of responsible and sustainable tourist destinations and micro -, small - and medium-sized enterprises in the region.

DES_AIR addresses the need for harmonized training and educational programmes for responsible integrated tourism management, establishing a Master program on tourism management, hospitality and services, sharing the same methodologies and approaches, within EUSAIR countries as well as establishing new programmes for training and new projects in the field of education. The aim of the project is to provide in-service trainings for education professionals, flexible and continuous education of SME employees and to raise the knowledge and competence of unemployed; target: increased number of highly educated employees and entrepreneurs in the field of tourism.

CulTourAir project addresses the need for structured and harmonized data on cultural tourism demand in Adriatic-Ionian Region and need for the establishment of a unified and harmonized methodological framework to monitor cultural tourism demand characteristics. The challenge is to enable joint regional and transnational entrepreneurial projects and researches, that could adequately track the so called "cultural" tourists, their size and impact on the local communities and economy leading to new business opportunities, increased number of total tourist arrivals and overnights, increase of tourism income. It is hereby provided as an answer to the EUSAIR Thematic Priority of Research & Development for improvement of SME's performance and growth-diversification.

None of the analyzed mono-pillar projects has innovation.

Four cross-pillar project ideas developed are: ADRIONet, "Managing Tourism Flow in Protected Areas" in cooperation with Pillar 3, Quality of environment, STE-TAI, "Sustainable Tourism through Environmental Energy Technologies in Buildings of High Architectural Interest" in cooperation with Pillar 2, Connecting the region, subgroup on Energy networks, Blue Culture, "Development of Macro Regional Cluster on BlueCulture Technologies and creation of International Competence Center" in cooperation with Pillar 1, Blue growth, and ADRIONCYCLETOUR, "ADRIatic IONian CYCLE route for sustainable TOURism" with cooperation with Pillar 2, Connecting the region, subgroup on transport.

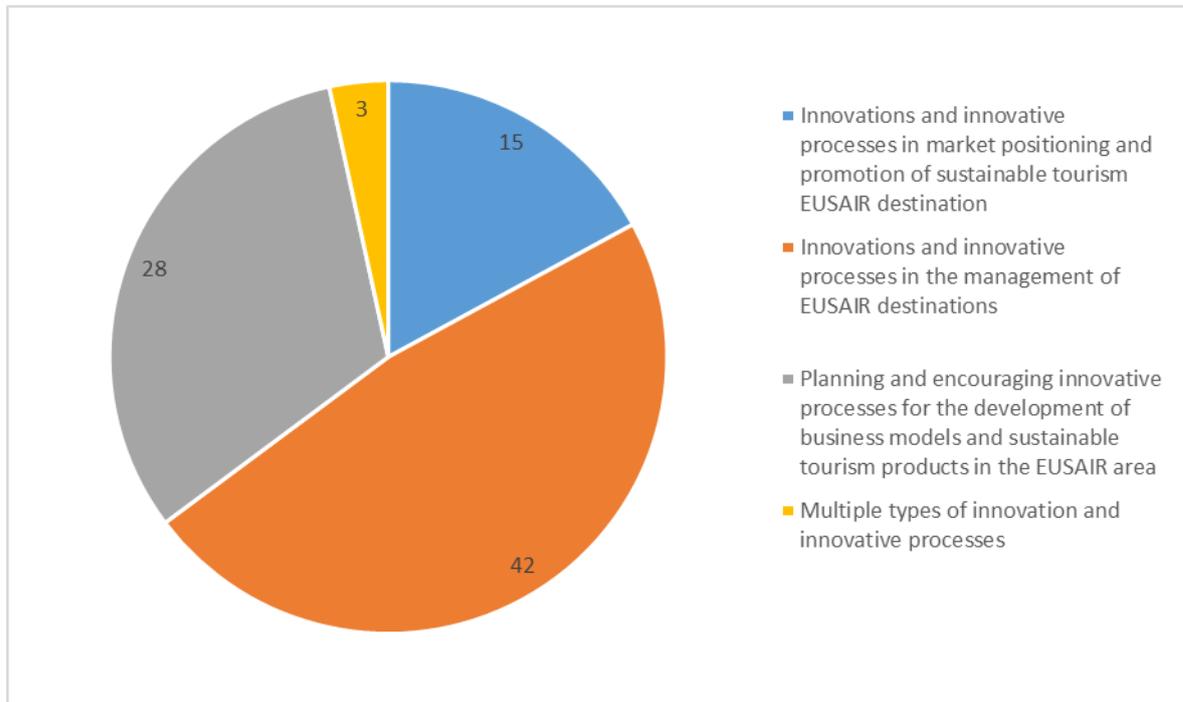
None of the analyzed cross-pillar project ideas has innovation.

4. AN OVERVIEW OF INNOVATIVE MECHANISMS IN SUSTAINABLE TOURISM PROJECTS IN THE ADRIATIC-IONIAN REGION

Innovative mechanisms are divided into three groups - innovations and innovative processes in market positioning and promotion of sustainable tourism EUSAIR destinations, which are divided into innovations in research and customer approach and new technologies in the function of visibility and promotion; innovations and innovative processes in the management of EUSAIR destinations, which include innovations in sustainable use, evaluation, presentation and interpretation of natural and cultural attractions, innovations in accommodation, catering, transport, information content, new technologies in application, innovations in activities in destinations, innovations in relationships with the local community through participatory and interactive models of cooperation; and planning and encouraging innovative processes for the development of business models and sustainable tourism products in the EUSAIR area, which include innovations in entrepreneurial initiatives and enterprise development, innovations in product development, innovations in technological support for business models and innovations in tourism education.

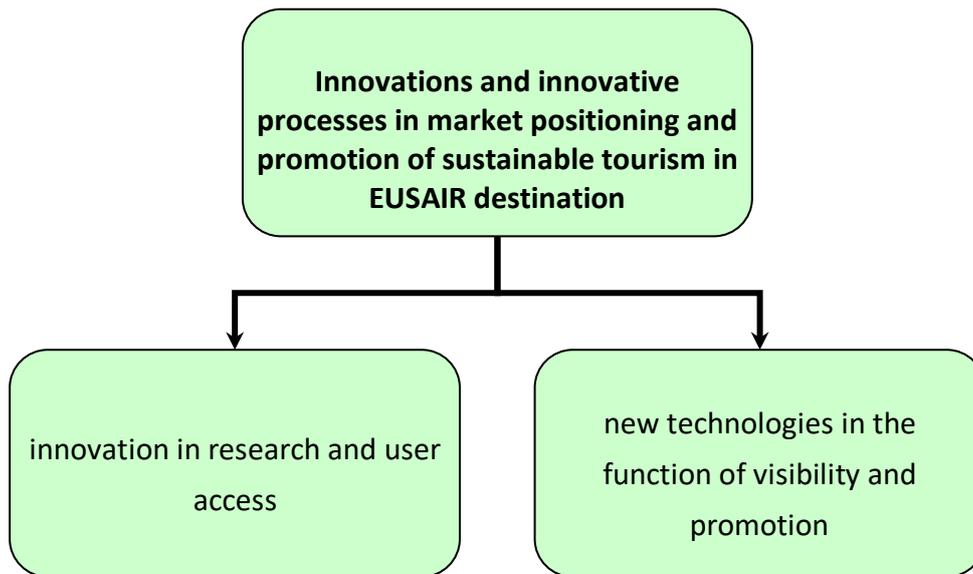
Out of 313 analyzed projects related to sustainable tourism in the EUSAIR area, 88 projects introduce innovations, of which 15 projects relate to innovations and innovative processes in market positioning and promotion of sustainable tourism of EUSAIR destinations, 42 to innovations and innovative processes in EUSAIR destination management, 28 project refers to planning and encouraging innovative processes of development of business models and products of sustainable tourism in the area of EUSAIR. The other 3 projects combine several types of innovative mechanisms from different groups. Figure 5 shows projects by types of innovation.

Figure 5. Sustainable tourism projects by type of innovation



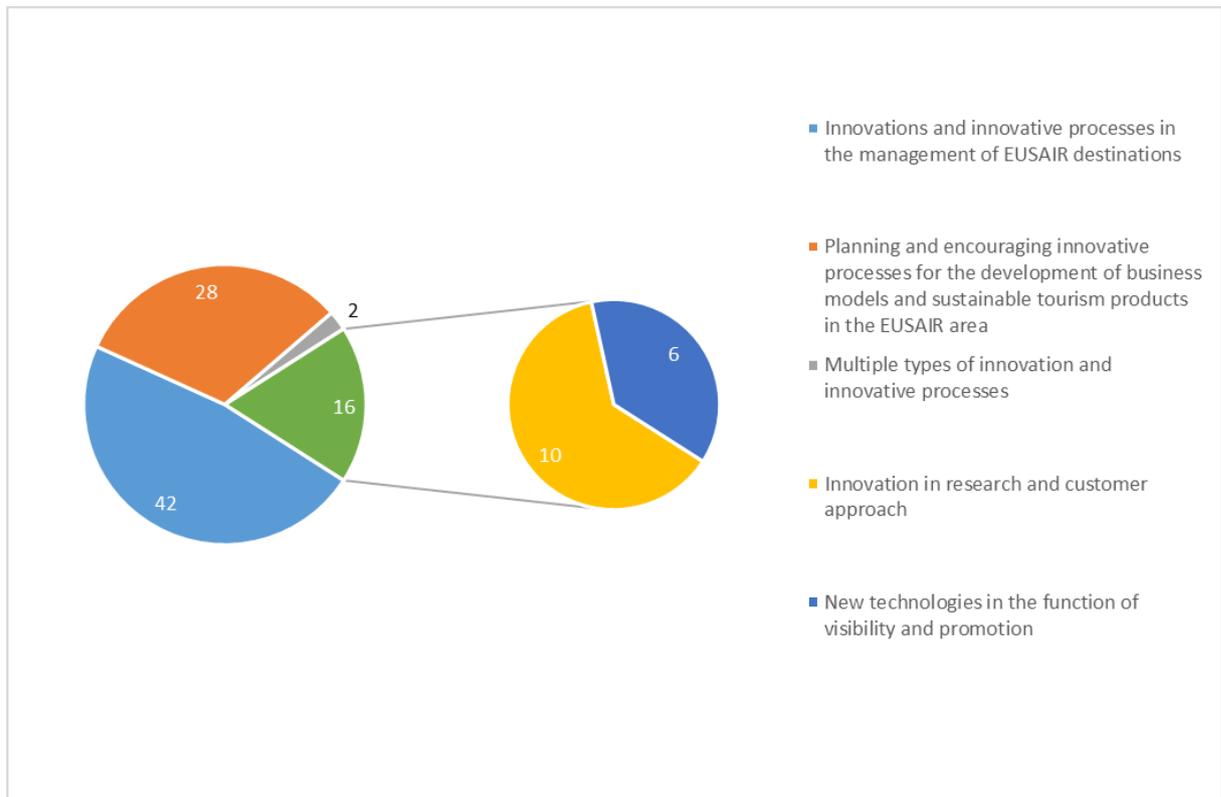
4.1 INNOVATIONS AND INNOVATIVE PROCESSES IN MARKET POSITIONING AND PROMOTION OF SUSTAINABLE TOURISM IN EUSAIR DESTINATION

Innovations and innovative processes in market positioning and promotion of sustainable tourism in EUSAIR destinations are divided into innovations in research and access to users and new technologies in the function of visibility and promotion.



Out of 15 projects that introduce innovations and innovative processes in market positioning and promotion of sustainable tourism of EUSAIR destinations, 10 projects introduce innovations in research and customer approach and 5 new technologies in the function of visibility and promotion. Of the projects that introduce several types of innovations, one project also introduces new technologies in the function of visibility and promotion. Sustainable tourism projects with innovations and innovative processes in market positioning and promotion of sustainable tourism of EUSAIR destinations are shown in Figure 6.

Figure 6. Sustainable tourism projects with innovations and innovative processes in market positioning and promotion of sustainable tourism in EUSAIR destinations



4.1.1. Trends and users - innovations in research and approach to users

Sustainable tourism projects that introduce innovations in research and customer approach are described below:

- **THEMATIC** is an ADRION project that brings together research and innovation centers, higher education institutions, policy makers and business actors for a **comprehensive innovation strategy**, following a triple coil approach, to seize new opportunities and mitigate risks.
- **HISTORIC** is a project implemented within the Interreg Italy – Croatia program, which in 4 pilot areas uses **innovative tools to valorize cultural heritage** following a common approach.
- **Uživam tradicijo** is the project implemented within the Interreg Slovenia – Croatia program, which introduces an **innovative approach to users by establishing a culinary trail** - a thematic tour, combining stories about tradition and cuisine of the project areas.
- **INSPIRACIJA** is a project implemented within the Interreg Slovenia – Croatia program characterized by an **innovative cross-border approach** that connects local expertise that is upgraded by the insight of top experts, which will enable sustainable presentation and experience of industrial heritage based on local resources.

- **MITSKI PARK** project was implemented within the Interreg Slovenia – Croatia program, whose **innovative approach to users** combines the tourist product Mitski park with a number of services, thus promoting economic and sustainable tourism development.
- **MileSTONES II**, the project implemented under the Interreg Greece-Albania program, creates a link between additional protection and preservation of cross-border cultural assets and their promotion through sustainable tourism, using existing assets, infrastructure and networks and **applying innovative tools and techniques beyond current practice**.
- **DUE MARI** project was implemented within the Interreg Italy – Albania – Montenegro program, which aims to create a common virtual reality platform that will favor sustainable tourism growth, reduce seasonality and promote **new technologies and innovative approaches to users**.
- **INHERIT** is a project implemented within the Interreg MED program that introduces an **innovative way of accessing users**, as it aims to alleviate pressures in destinations, which is achieved by redirecting tourists to other nearby activities / places.
- **HERIT-DATA** is a project implemented within the Interreg MED program whose goal is to reduce the impact of human activities (tourism) on cultural heritage by using **innovations related to smart cities**.
- **DETECT** is a project implemented under the HORIZON 2020 program whose innovations include a set of experimental resources for **research and learning and innovative tools for collaboration**, collected and organized on the web portal DETECT.

4.1.2. New technologies in the function of visibility and promotion

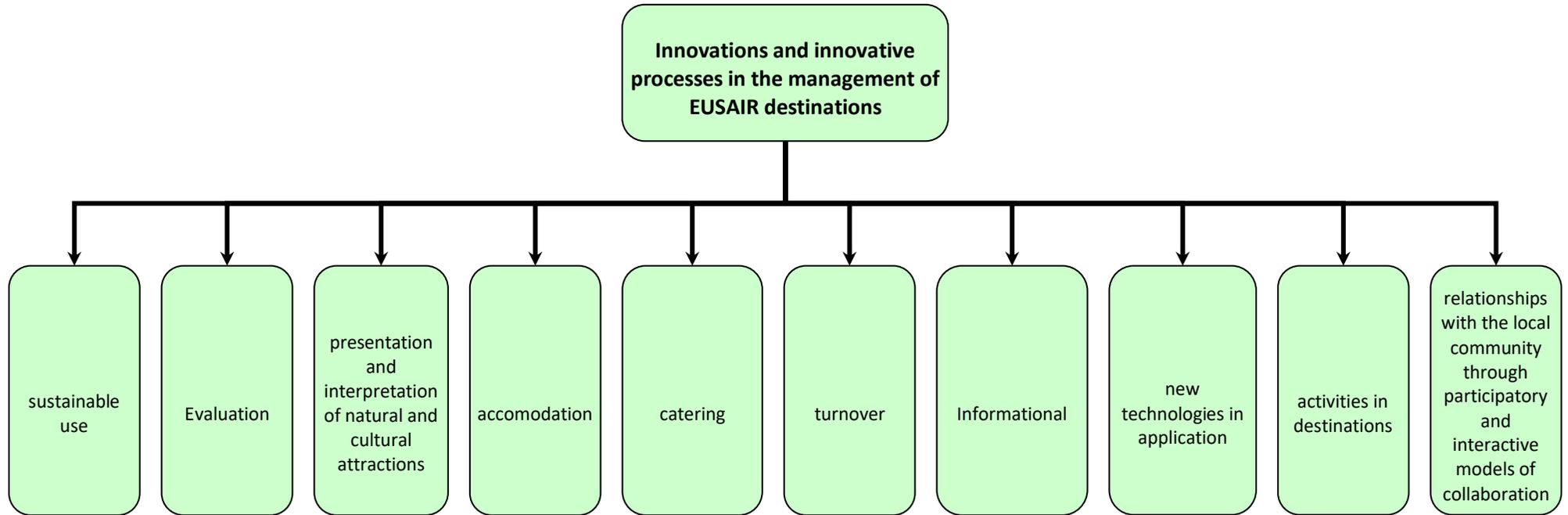
Sustainable tourism projects that introduce new technologies in the function of visibility and promotion are described below:

- **MADE IN-LAND** project was implemented within the Interreg Italy – Croatia program, which aims to establish a new cross-border strategy that unleashes the potential of land assets by integrating them into wider networks and markets. Cooperation with coastal areas, which are considered destinations of mass tourism, is envisaged through **joint and innovative means of integrated management, marketing and promotion**.
- **MerlinCV** project was implemented within the Interreg Italy – Slovenia program, which introduces new technologies in the function of visibility and promotion and innovation in the field of product development. New technologies in the function of visibility and promotion refer to **an innovative way of promoting cultural heritage (castles, palaces and villas) by creating a web and mobile application that will serve as a database of local tourist offer and help in planning tourist itineraries**.
- **CULTURE PLUS** project was implemented under the Interreg Greece-Albania program, which develops a **comprehensive and innovative branding**

management tool for the cross-border area of Greece and Albania, which has a negative image among tourists in both countries and Europe in general.

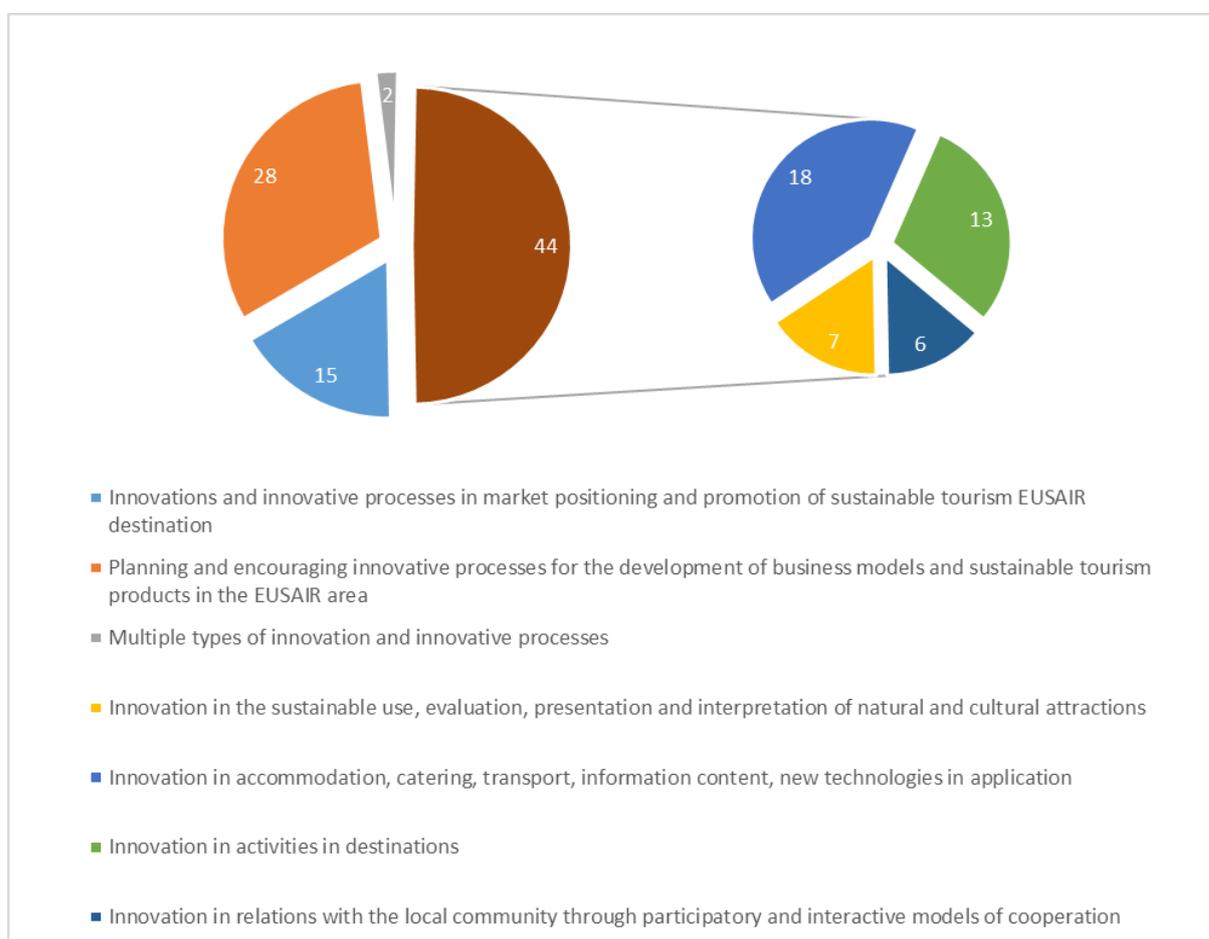
- **CBTB** project was implemented within the Interreg Greece – Albania program which combines a rich area (numerous local products and traditions), new trends (new tourist product "gastronomic tourism"), a strong need (economic development through tourism), modern tools (branding) and **innovations (smartphone applications) to promote** the competitive advantage of the area and attract targeted visitors and tourists, in order to achieve sustainable tourism development.
- **ToCulter** is a project implemented under the Interreg Greece – Republic of Northern Macedonia program that introduces **innovative platforms and network activities for the development of promotional tourism packages** with the aim of improving cross-border tourism products and services and improving the flow of tourism in this area
- **CONSUME-LESS**, project implemented under the Interreg MED program, identifies the problem of negative externalities demonstrating the effectiveness of the model of sustainable tourism based on the qualification of coastal cities as less spending places and improves this specificity through **innovative communication and territorial marketing campaign**, both implemented direct involvement of all stakeholders (local authorities, tourism entities and service providers, tourists).

4.2 INNOVATIONS AND INNOVATIVE PROCESSES IN THE MANAGEMENT OF EUSAIR DESTINATIONS



Out of 42 projects with innovations and innovative processes in the management of EUSAIR destinations, 7 projects relate to planning and encouraging the content of destinations or innovations in sustainable use, evaluation, presentation and interpretation of natural and cultural attractions, 18 to infrastructure contents of destinations – innovations in accommodation, catering, transport, information content, new technologies in application, 13 projects relate to the supporting content of destinations and innovations in activities in destinations, and 5 projects introduce innovations in relations with the local community through participatory and interactive models of cooperation. Of the projects that introduce multiple types of innovation, one project introduces innovation in relationships with the local community through participatory and interactive models of collaboration. Figure 5 shows sustainable tourism projects with innovations and innovative processes in the management of EUSAIR destinations by groups.

Figure 7. Sustainable tourism projects with innovations and innovative processes in the management of EUSAIR destinations



4.2.1. Destination content planning and promotion - innovations in sustainable use, evaluation, presentation and interpretation of natural and cultural attractions

Sustainable tourism projects that introduce innovations in the sustainable use, evaluation, presentation and interpretation of natural and cultural attractions are described below:

- **KRASn'KRŠ** project was implemented within the Interreg Slovenia – Croatia program, the **innovation of which is an integrated approach to heritage preservation and promotion based on an integrated bottom-up approach** combined with a three-level heritage interpretation approach.
- **WALKofPEACE** is a project implemented within the Interreg Italy – Slovenia program that introduces new thematic routes, info-points and centers with interactive and **innovative heritage presentation**.
- **SMARTIMONY** is a project implemented under the Interreg Greece – Albania program whose innovations relate to **strategic innovations in tourism in peripheral, remote and sparsely populated areas** with a rich heritage offer.
- **CULTURAL LANDS** project was implemented within the Interreg Greece – Albania program and it embodies the establishment of an **innovative network of cooperation** in the service of sustainable, local and regional development in the field of preservation and promotion of similar cultural assets as a prerequisite for the development of cultural tourism.
- **ZADAR HERITAGE** project was implemented within the Croatian OP Competitiveness and Cohesion and it addresses the long-term needs of the city of Zadar and institutions in culture and tourism for the **presentation of culture in a modern, innovative and attractive way**, which raises the competitiveness of new cultural tourism products. entrepreneurship.
- **Geo stories of the UNESCO geopark** project was implemented within the Croatian OP Competitiveness and Cohesion and its goal is to improve the tourist infrastructure in less developed areas of continental Croatia by introducing **innovative ways of presenting the attractive natural heritage** of the first Croatian UNESCO geopark.

4.2.2. Infrastructure contents of destinations - innovations in accommodation, catering, transport, information contents, new technologies in application

Sustainable tourism projects that introduce innovations in accommodation, catering, transport, information content, new technologies in application are described below:

- **APPRODI** is a project implemented within the ADRION program that valorizes 5 pilot sites as new potential destinations using **innovative techniques, such as geoarchaeological research (Ortona, Durazzo, Dubrovnik)**, whose findings will be exhibited at museum exhibitions.
- **ADRILINK** is a project implemented within the ADRION program whose goal is to promote landscape tourism in the Adriatic region using smart technology applications and **innovative ICT solutions**.

- **EMOUNDERGROUNDS** is a project implemented under the ADRION program that introduces **innovative solutions that increase the enjoyment potential of users**, such as virtual reality rooms, smart mobile applications, holographic demonstrations, interactive screens / projections.
- **FOST INNO** project was implemented within the ADRION program and its general goal is to improve and ensure the long-term competitiveness of the Adriatic-Ionian area by **strengthening innovation capacities** in sustainable tourism.
- **INNOVAGRO** is a project implemented under the ADRION program **whose innovations include a virtual transnational center for innovation and entrepreneurship** (VIBIEC) that offers support through e-incubators, online e-business platforms and other assessment tools.
- **INNOCULTOUR** project was implemented within the Interreg Italy – Croatia program and its activities are aimed at actively involving creative industries, local people and major stakeholders dedicated to the preservation of natural and cultural heritage through a public call for ideas to support **the integration of traditional cultural offerings with ICT** and improve the virtual accessibility of the natural and cultural destinations involved in the project.
- **DETOX** is a project implemented within the Interreg Slovenia – Croatia program whose **innovation includes a completely new 3D holographic concept** of depicting life in traditional homes.
- **Prebujanje / Buđenje** project was implemented within the Interreg Slovenia – Croatia program and it **creates innovative, attractive content in rural areas** that are not attractive to visitors in order to attract and retain them.
- **Fortress ReInvented** project was implemented within the Interreg Croatia – Bosnia and Herzegovina – Montenegro program and it is characterized by an **innovative approach and new digital content in historical places**.
- **ViCTour** project was implemented within the Interreg Croatia – Serbia program and it **combines innovative and modern ICT equipment, such as holograms and VR equipment, in order to create a unique tourist offer in Vukovar-Srijem County**.
- **AuthentiKK** is a project implemented under the Interreg Greece-Albania program that restores and preserves selected cultural and natural heritage sites and upgrades them with **digital innovations**.
- **SMART TOUR** is a project implemented within the Interreg Greece – Albania program, which created an **innovative platform that combines "Impressive Reality" (Immersive Reality) with cloud-based tools**.
- **THEMA** is a project implemented under the Interreg Greece-Albania program that introduces **innovations at three levels**: at the technological level, by including a new form of Bluetooth location sensor and an innovative gamification reward mechanism; at the level of content, by exploiting and enriching existing routes, while providing open access to that content to travel agents and tour operators; at the societal level, by promoting socialization and empowering users.

- **IT Culture** is a project of the Interreg Greece – Albania program, within which **an innovative e-platform has been created** that will be used to inform people more about tourist and cultural attractions.
- **CONNECT** is a project implemented within the Interreg Greece – Republic of Northern Macedonia program that uses **active networking, green interventions and innovative ICT applications in three museums** to improve their services, create top tourism services and products and mobilize tourism service providers towards sustainable cultural tourism.
- **BLUEMED** is a project implemented under the Interreg MED program aimed at promoting innovation in the diving industry and improving the diving experience through **innovative diving services and technologies**.
- **SILKNOW** is a project implemented under the HORIZON 2020 program that aims to produce an intelligent computer system that transcends current technologies to improve understanding of Europe’s silk heritage. SILKNOW is based on the **exchange of ideas and innovations**.

4.2.3. Destination support contents - innovations in destination activities

Sustainable tourism projects that introduce innovations in activities in destinations are described below:

- **WONDER** is a project implemented within the ADRION program which aims to increase the attractiveness and competitiveness of destinations from the Adriatic-Ionian region thanks to a child-friendly approach, aimed at improving the vitality of cities and the tourist offer (management, environment and services) through the development of **new and innovative methods of participation**.
- **EXCOVER** is a project implemented within the Interreg Italy – Croatia program that introduces **innovative activities to address the limitations of tourism development of small towns with relevant local assets**, but with poor tourism flows.
- **PREHISTORY ADVENTURE** is a project of the Interreg Slovenia – Croatia program within which a comprehensive interpretation of prehistoric facts and pushing events to the entry points of protected heritage through **various innovative elements of experience** is carried out.
- **LIVING CASTLES** project was implemented within the program Interreg Slovenia – Croatia and it focuses on the preservation and valorization of manors / castles by developing a joint cross-border tourist offer and **integrating innovative activities for the preservation of cultural heritage**.
- **KAŠTELIR** is a project implemented within the Interreg Slovenia – Croatia program that provides an **innovative sustainable cross-border tourist offer** by discovering and re-establishing the ancient connection between humans and wild plants and presenting traditional knowledge in a modern way to use for sustainable development and tourism.

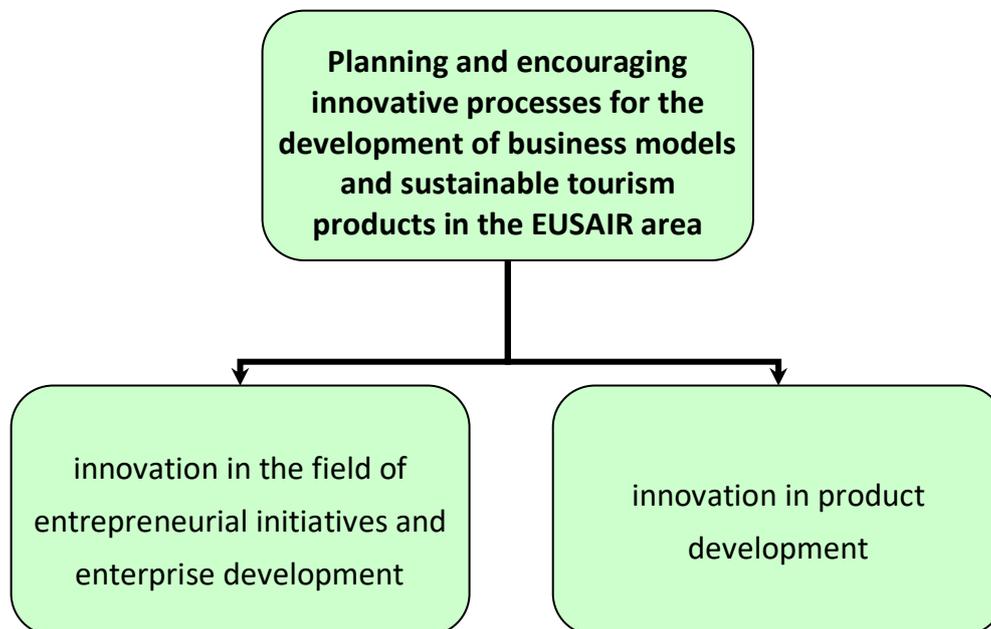
- **Nett** is a project implemented under the Interreg Greece – Italy program thanks to which Greek and Italian institutions in cooperation with local companies working in the fields of culture, creative industry, local typical handicrafts and agri-food products, implemented a cross-border network to improve attractiveness areas with **innovative and sustainable tourism packages**.
- **Polysemi** is a project implemented under the Interreg Greece – Italy program introducing **an innovative model of sustainable literary tourism** by creating a Literary Travel Park in Greece and Magna Graecia.
- **In Med Tour** project was implemented under the Interreg Greece – Italy program and it promotes an **innovative and increasingly developed type of tourism called "health tourism"**, which consists of connecting health travel with the opportunity to enjoy the beauties of the area you visit, through a tourist package consideration of the needs of the patient and his partner.
- **VirtuaLand** is a project implemented under the Interreg Greece – Albania program that creates a new tourism concept that will result in **innovative attractions for all tourists** visiting the project area.
- **SUSTOWNS** is a project implemented under the Interreg MED program aimed at **developing innovative services** that will create new jobs in tourism and enable tourists to continue to enjoy tourist attractions in the future.
- **TOURISMED** is a project implemented under the Interreg MED program aimed at testing and **transferring innovative models of fishing tourism** in the coastal territories of Italy, Cyprus, Greece, Albania, France and Spain as a way to promote sustainable access to tourism, while promoting marine ecosystem preservation and traditional fishing culture Mediterranean region.
- **HVAR** - Fortress of Culture project was implemented within the Croatian OP Competitiveness and Cohesion and it aims to **create innovative cultural, artistic, tourist, educational and other facilities**, making the town of Hvar a recognizable tourist destination.
- **Reconstruction and revitalization of the fortification of the Old Town of Čakovec into the Museum of Intangible Heritage** is a project within the Croatian OP Competitiveness and Cohesion which by reconstructing the fortress of the Old Town in Čakovec and its revitalization into a modern Museum of Intangible Heritage with nine museum units creates **innovative content that will adapt to tourists**.

4.2.4. Innovations: relations with the local community - interactive models of cooperation

Sustainable tourism projects that introduce innovations in relations with the local community through participatory and interactive models of cooperation are described below:

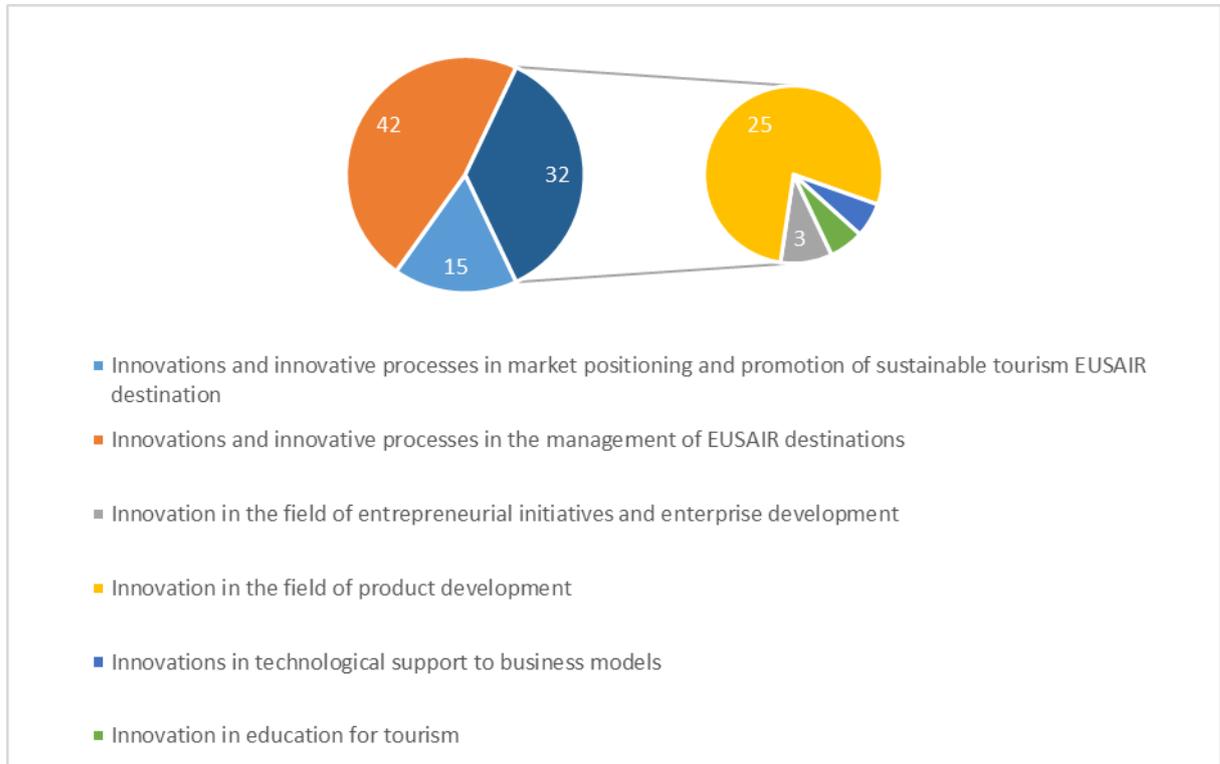
- **QNeST** is a project implemented under the ADRION program that ensures the implementation of a joint strategy by launching demonstration and **innovation initiatives in collaboration with public and private stakeholders.**
- **TANGRAM** is a project implemented within the ADRION program whose general goal is to build and promote the ADRION brand name in tourism by promoting sustainable valorization and integration into the tourist offer of parks and gardens as hidden resources by an **innovative management system based on stakeholder cooperation.**
- **Sparc** is a project implemented under the Interreg Greece-Italy program that aims to develop close cooperation and synergies between the tourism, cultural and creative industries (CCI) sectors, local SMEs and the management of cultural and natural assets, **fostering innovation and growth.**
- **Culture Lands** is a project implemented under the Interreg Greece – Albania program whose **innovative actions** include cultural mapping (a systematic approach to identifying and coding tangible and intangible cultural resources of the community); defining cultural resources by accepting a broad definition that includes creative cultural industries, cultural spaces and facilities, natural and cultural heritage, festivals and events, and community cultural organizations; adoption of cultural conscience by establishing a process for the integration of culture as a consideration in all aspects of planning and decision-making on the cross-border area; and an attempt to work with existing, active local networks and work together to set future guidelines for sustainable growth.
- **COMPLICITIES** is a project implemented within the Interreg Italy – Albania – Montenegro program, which aims to develop **innovative solutions for urban renewal through the cooperation of cultural and creative industries, local communities and public institutions.**
- **OPEN TOURISM** project was implemented within the Interreg Italy – Albania – Montenegro program, which introduces innovations in relations with the local community through participatory and interactive models of cooperation and innovation in the field of product development. **Innovation in relations with the local community through participatory and interactive models of cooperation is the development of an innovative strategy, based on a new concept of tourism,** focused on a deeper relationship between visitors and local communities.

4.3 PLANNING AND ENCOURAGING INNOVATIVE PROCESSES FOR THE DEVELOPMENT OF BUSINESS MODELS AND SUSTAINABLE TOURISM PRODUCTS IN THE EUSAIR AREA



Out of 28 projects that belong to the group of planning and encouraging innovative processes of development of business models and sustainable tourism products in the EUSAIR, 3 projects introduce innovations in the field of entrepreneurial initiatives and enterprise development, 22 innovations in the field of product development, 2 innovations in technological support for business models and one innovation in education for tourism. Of the three projects that combine several types of innovation, all projects introduce innovations from the group of innovative processes of business model development and sustainable tourism products – of which all three introduce innovations in product development and one introduces innovations in education for tourism. Figure 8 shows sustainable tourism projects with innovations and innovative processes of developing business models and products of sustainable tourism in the EUSAIR area by groups.

Figure 8. Sustainable tourism projects with innovations and innovative processes for the development of business models and products of sustainable tourism in the EUSAIR area



4.3.1. Innovations in the field of entrepreneurial initiatives and enterprise development

Sustainable tourism projects that introduce innovations in the field of entrepreneurial initiatives and enterprise development are described below:

- **EcooLTour** project was implemented within the Interreg Slovenia – Croatia program and it aims to improve sustainable tourism, entrepreneurship and economic cooperation by improving the capacity of local stakeholders by introducing **innovative approaches for activating, educating and connecting service providers.**
- **NEST** is a project implemented under the Interreg Italy – Albania – Montenegro program that aims to maintain socio-economic growth in the program area, **empowering SMEs with innovative approaches, tools and strategies, using digital technologies and networking.**
- **TERRA VINO** is a project implemented within the Interreg Greece – Republic of Northern Macedonia program that develops sustainable and responsible single tourism and promotes **and introduces local SMEs to innovation tactics and methodologies.**

4.3.2. Innovations in the field of product development

Sustainable tourism projects that introduce innovations in the field of product development are described below:

- **Adrian5senses** is a project implemented under the ADRION program that creates an **innovative product combining five senses** - sight, hearing, smell, taste and touch to develop effective branding strategies and improve the performance of the ADRION destination.
- **SMART Heritage** is a project implemented under the ADRION program whose specific goal is to increase tourism attractiveness and reduce the seasonality of tourism in the project area consisting of Evia (Greece), Gerace (Italy), Forlì (Italy), Mostar (Bosnia and Herzegovina) and Albania by **creating innovative transnational tourism offerings**.
- **CREATURES** is a project implemented within the ADRION program whose goal is to preserve cultural heritage, promote sustainable and experiential tourism in the ADRION region by **exploiting the potential of cultural and creative industries (CCI), finding the right balance between innovation and preserving Adrion's rich cultural heritage**. The tool for achieving the goal is to offer diverse and innovative tourism products.
- **ADRIONET** is a project implemented within the ADRION program that creates a transnational network of "Authentic Villages" as a driver of local development to overcome the current marginalization and sub-valorization of smaller but still rich destinations and historical destinations in the Adriatic-Ionian region. The **innovative product introduced by ADRIONET refers to the innovative approach of the "hospitable community"**.
- **VALUE** is a project implemented under the Interreg Italy – Croatia program that defines a new development model focused on the integration of cultural and tourist chain in the cross-border area by strengthening visibility and competitiveness internationally, action to valorize existing heritage, promote **innovative solutions and tourism products** and destinations cultural characterization.
- **KEYQ +** is a project implemented within the Interreg Italy – Croatia program that provides an **innovative tourist itinerary** that will be aimed at strengthening local eno-gastronomic attractiveness and supporting the creation of synergies between didactic kitchens, local producers and cultural attractions.
- **ATLAS** is a project implemented within the Interreg Italy – Croatia program that encourages innovative models of cultural tourism and the **creation of innovative tourism products**.
- **ZELENO ŽELIMO** is a project implemented within the Interreg Slovenia – Croatia program whose **innovation is provided by a joint product, based on 4 micro-products**, which together will make attractive content for the mass population.
- **ŽIVA COPRNIJA** is a project implemented within the Interreg Slovenia – Croatia program whose main goal is to ensure the active preservation of mythical folklore, increasing the visibility of neglected places and create opportunities for development. This will be achieved through **innovative integrated cross-border**

products of culture and tourism called Living Magic - stories about Pohorje and Istria. The product will offer innovative ways to experience natural and cultural heritage through stories, which visitors will discover in guided tours, through digital media during individual exploration, by visiting the Festival of Living Magic and other attractive ways of exploring.

- **MISTERION** is a project implemented within the Interreg Slovenia – Croatia program whose goal is to connect, increase the attractiveness of unique natural and cultural heritage in the project area, development of green cross-border sustainable product that will provide visitors with different experiences about water secrets. The **innovative character of the heritage in Bela krajina, from Semič through Metlika to Kamanj, is unique and has not yet been presented anywhere.**
- **RIDE & BIKE II** project was implemented within the Interreg Slovenia – Croatia program and its **innovation is reflected in the creation of a common cross-border tourist destination, i.e. the development of selective tourist products based on the interpretation of natural and cultural heritage** by establishing a management system for active tourism.
- **KULTURA** is a project implemented under the Interreg Slovenia – Croatia program whose **innovation includes non-standard approaches introduced in all product segments** - from details of renovation to reviving great stories of random people in Črnomelj and Jastrebarsko to develop tourism in these places rich in cultural heritage.
- **IN CULTURA VERITAS** project was implemented within the program Interreg Slovenia – Croatia. The project develops and promotes **innovative tourist destinations that will connect cultural heritage with wine roads** by connecting services and offers from both sectors and their integration.
- **Becharac & Ganga** project was implemented within the Interreg Croatia – Bosnia and Herzegovina – Montenegro program. It has an **innovative project idea** that deals with regional folk songs that are even protected by UNESCO - Bečarac and Ganga.
- **MerlinCV** project was implemented within the Interreg Italy – Slovenia program, which introduces two types of innovations – new technologies in the function of visibility and promotion, and innovation in the field of product development. Innovations in the field of product development relate to the **development of innovative, integrated and thematic tourism products focused on sustainable tourism** in order to exploit the untapped potential of cultural, natural and gastronomic heritage in the Italian-Slovenian cross-border area.
- **tARTini** is a project implemented under the Interreg Italy – Slovenia program that faces the challenge of preserving the cultural heritage of the border area to promote the study, preservation and promotion of cultural heritage associated with the famous musician Giuseppe Tartini, as well as its use to develop a new, sustainable cross-border cultural itinerary. tourism. The project is developing an **innovative cross-border cultural / tourist product bearing the TARTINI brand.**

- **FILMHARMONIA** is a project implemented within the Interreg Croatia – Serbia program that brings two types of innovations - innovations in the development of cultural products and innovations in education for tourism. The FILMHARMONIA project creates **an innovative cultural product - the FILMharmony program that combines silent film screenings with live orchestra performances at numerous events throughout the Program Area**, bringing new experiences to the local community and attracting new audiences with the idea of integrating cinematic and musical arts.
- **CLLD-CulTour** is a project implemented under the Interreg Greece-Albania program that develops **innovative cultural tourism products**, such as themed tourist routes, using innovative digital tools and exhibition centers.
- **CheeseCult** is a project implemented under the Interreg Greece – Albania program that creates a link between value chains and dairy tourism, mapping and ultimately establishing an **innovative cultural heritage product – Cheese Route**, as a driving force for tourism development with different sub-routes.
- **PROSFORA** is a project implemented under the Interreg Greece – Albania program that creates an **innovative product, pilgrimage tourism**, together with the promotion of local cuisine, products and services, using the latest ICT methods and tools to improve the visitor experience.
- **3C** is a project implemented within the Interreg Italy – Albania – Montenegro program, which aims to **create innovative centers with residential art programs and joint cross-border cooperation networks**.
- **3D-IMP-ACT** is a project implemented under the Interreg Italy – Albania – Montenegro program that uses the latest technology in the field of 3D and virtual reality, to promote the tourist attractiveness of the region, strengthening cooperation between universities and public bodies in conservation, management and the promotion of cultural assets, which will result in the creation of an interregional network of historic sites and the **development of innovative models and products**.
- **OPEN TOURISM** project was implemented within the Interreg Italy – Albania – Montenegro program. The project introduces innovations in relations with the local community through participatory and interactive models of cooperation and innovation in the field of product development. Product development innovation refers to the **development of innovative products and services to enhance excellence, provide information and provide high quality, customized and off-season tourism services**.
- **TOURNEE** is a project implemented under the Interreg Italy – Albania – Montenegro program that includes experts in theater production, territorial marketing, cultural heritage management and strategic tourism policy in **creating innovative cultural products to strengthen the use of tourist destinations**. As a result, theater is expected to play an increasing role in supporting tourism economic growth, as well as improving public policies in the cultural and tourism sectors.

- **KulTourSpirit** is a project implemented within the Croatian OP Competitiveness and Cohesion, which valorizes the protected cultural and historical heritage of Istria, with an emphasis on encouraging the development of the central part of the Istrian peninsula. Valorization is designed by a unique integrated management program guided by the concept of an **innovative tourism product "storytelling" and "reviving history"**, with the aim of developing the tourist offer for all 365 days of the year.

4.3.3. Innovations in technological support for business models

Sustainable tourism projects that introduce innovations in technological support to business models are described below:

- **TOUREST** is a project implemented under the ADRION program that **introduces innovative digital tools for SMEs and companies** to monitor, compare and self-assess the impact and efforts on water efficiency, in order to minimize the negative impacts of tourism activities on natural heritage.
- **TRANSFER** is a project implemented under the ADRION program that introduces **innovative tools for archaeological parks** to improve the preservation and valorization of the archaeological heritage in the Adrion area.

4.3.4. Innovations in tourism education

Sustainable tourism projects that introduce innovations in tourism education are described below:

- **FILMHARMONIA** is a project implemented within the Interreg Croatia - Serbia program that brings two types of innovations - innovations in the development of cultural products and innovations in education for tourism. Innovations in education for tourism refer to **innovative training programs for cultural and tourism actors in the program area** that will provide new opportunities for the long-term development of cultural tourism.
- **Establishment of a regional competence center in the tourism and hospitality sector Split** project was implemented within the Croatian OP Effective Human Resources. The project will create market-based programs in cooperation with employers and apply **innovative models of learning, technologies and trends, improve competencies, creativity and employability of students of Tourism and catering school Split.**

5. KEY RESEARCH FINDINGS

Sustainable tourism is tourism in which a balance is established between economic, environmental and social and cultural aspects of tourism development. It seeks to minimize the impacts of tourist activities on the environment and local culture in the areas where it takes place. In this way, the preserved environment and cultural heritage would be preserved for generations to come with the continuous operation and development of tourism activities, generating income for the local population and community, and creating and retaining jobs. Sustainable tourism enables the preservation of natural and cultural heritage, but also the realization of the quality of life and well-being of citizens and guests in the areas where it develops.

Sustainable tourism involves travel to natural destinations that are often covered by some level of protection of natural and/or cultural heritage. Activities within the framework of sustainable tourism take place in such a way that the harmful effects of hotels, trails and other types of tourist infrastructure are tried to be reduced to a minimum. Sometimes this is done by limiting the number of visitors within the carrying capacity of the area and by investing in informing and educating both the local population and visitors-tourists.

The macro-region based on the European Union Strategy for the Adriatic-Ionian Region (EUSAIR) is a functional area defined by the Adriatic and Ionian Seas. EUSAIR includes nine countries - four EU countries (Croatia, Italy, Greece and Slovenia) and five candidate countries - (Albania, Bosnia and Herzegovina, Montenegro, Northern Macedonia and Serbia).

Through pillar 4 of the Strategy - Sustainable Tourism, all countries strive to achieve quality, authentic, green, diverse and sustainable tourism, and one of the special priorities is to encourage investment in innovative and quality tourism products and services. The expected innovations and innovative processes are related to the market positioning and promotion of sustainable tourism of EUSAIR destinations, to innovations and innovative processes in their management and to the planning and encouragement of innovative processes of developing business models and products of sustainable tourism.

The EUSAIR region is a popular tourist destination. In the period from 2012 to 2018, 625,543,000 tourists arrived in EUSAIR countries, excluding Albania due to the fact that no newer tourist data are available for Albania. The most popular destination among tourists in the Adriatic-Ionian region is Italy, which in 2018 received 63,195,000 tourists, followed by Greece with 20,914,000 arrivals.

Although very interesting and attractive to tourists, the development of sustainable tourism in the EUSAIR macro-region faces many obstacles, such as inadequate knowledge and skills about the forms of sustainable tourism, lack of innovative activities, inadequate quality of tourism, poor implementation of sustainable development policies and responsible tourism concepts, as well as a low level of accessibility to attractions for visitors with special needs. These weaknesses are even greater with regard to current global threats, such as climate change, the COVID-19 pandemic, and the seismically sensitive area.

There are still opportunities to strengthen sustainable tourism initiatives and actions through increased cross-border cooperation, evolution towards an experiential economy, development of a circular economy concept in sustainable tourism, development of information-communication technology (ICT) and cooperation in efficiency and effectiveness of tourism and research and development, and innovation networks.

Innovation means a new or significantly improved product and/or process, which is significantly different from previous products or processes and which is available to potential users. Most innovations refer to the gradual improvement of a product, service, or process. Innovation can ensure competitiveness in existing markets in terms of reducing production costs, product / service / process functionality or better equipment. In order to ensure long-term innovation capacity, it is necessary to invest in an idea and innovation management systems, which implies a structured approach, from the innovation development strategy to a concrete action plan for their implementation.

Unlike the industrial sector, innovation in service industries, as well as in tourism, has until recently been relatively neglected. The very changes in the tourism business can generate positive practices that will lead to greater sustainability of the tourism offer. Innovations in tourism usually include new products and services, but there are also process innovations through new ways of delivering tourist services, logistical innovations through new ways of providing products/services to tourists and market innovations, i.e. new marketing methods or types of market behavior. In addition to “green” innovations in tourism, there are digital innovative solutions for better organization and simplification of tourist travel, managing visitors to the destination, touring cities through augmented reality, platforms for the so-called sharing economy, etc.

The challenges facing the Adriatic-Ionian region primarily concern organizational and financial problems, i.e. those related to human resources, insufficient cooperation between public bodies with the private sector, prolongation of the tourist season, tourist quality, better conditions for tourist employees, insufficient resource utilization, inadequate waste management, pressures on water supply, negative impacts of tourism on soil and biodiversity, etc., so in this regard innovations could contribute to the overall competitiveness of the region. However, the level of innovations in the EUSAIR region is low, and practice shows an insufficient number of initiatives for innovation in sustainable tourism.

During the preparation of the first monitoring and evaluation report of the EUSAIR region for thematic pillar 4 - Sustainable Tourism, 24 programs and 313 projects related to sustainable tourism were analyzed. For the purposes of this report, all relevant programs have been reviewed and analyzed from the aspect of encouraging innovation in sustainable tourism. The findings of the research are as follows:

- Of the 24 programs reviewed, 15 of them contain innovations as a topic of priority axes and all 15 have some of the submitted projects with the topic of innovations in sustainable tourism.

- A total of 313 projects with a budget of EUR 689.85 million are being implemented in line with sustainable tourism from Pillar 4. Out of 313 projects, 88 have innovations in sustainable tourism.
- National and regional operational programs contribute to the topics of EUSAIR - Pillar 4 with 148 projects with a total budget of EUR 461.98 million. Of the 148 projects, only 6 include innovation - 5 in the OP Competitiveness and Cohesion and 1 in the OP Effective Human Resources.
- The ADRION program contributes to the topics of EUSAIR - Pillar 4 with 22 projects with a total budget of around EUR 18.66 million. Of the 22 projects analyzed, 16 involve innovation.
- Cross-border cooperation and transnational programs contribute to the topics of EUSAIR - Pillar 4 with 112 projects with a total budget of around EUR 132.16 million. Of the 112 projects analyzed, 58 projects involve innovation.
- Interreg Mediterranean contributes to the topics of EUSAIR - Pillar 4 with 21 projects with a total budget of EUR 56.75 million. Of the 21 projects analyzed, 6 have innovations.
- The LIFE program contributes to the topics of EUSAIR - Pillar 4 with 3 projects with a total budget of EUR 4.86 million. None of the analyzed projects has innovations.
- The HORIZON 2020 program contributes to the topics of EUSAIR - Pillar 4 with 7 projects with a total budget of EUR 15.44 million. Of the seven projects analyzed, two have innovations.
- Within EUSAIR, three monopillary project ideas have been developed: Green Mapping, DES_AIR and CulTourAir. Green Mapping for the Adriatic-Ionian region is a project that supports the development of responsible and sustainable tourist destinations and micro, small and medium enterprises in the region. None of these projects involving collaboration between thematic pillars has an innovation component in them.
- Out of 313 analyzed projects related to sustainable tourism in the EUSAIR area, 88 projects introduce innovations, of which 15 projects relate to innovations and innovative processes in market positioning and promotion of sustainable tourism of EUSAIR destinations, 42 to innovations and innovative processes in EUSAIR destination management, 28 projects are related to planning and encouraging innovative processes of development of business models and products of sustainable tourism in the area of EUSAIR. The other 3 projects combine several types of innovative mechanisms from different groups.

Since the increased innovation activity is recognized as a solution to common regional issues related to sustainable tourism and contributes to the competitiveness of businesses and destinations, the focus should be on developing an attractive and stimulating environment that can enable any business to progress and develop through innovation.

There is still a low level of application of innovations in tourism, mainly due to the lack of knowledge about innovations and their role in sustainable tourism development, due to weak cooperation at all levels, as well as the lack of effective incentives for innovation.

6. GUIDELINES FOR GROWTH AND IMPROVEMENTS IN THE DEVELOPMENT OF INNOVATION IN THE EUSAIR AREA

Since this report is only the first analysis that contains an overview of innovation programs/projects, the recommendations given in this chapter relate primarily to the conclusions related to such an overview analysis. They are harmonized with the general knowledge about innovations and sustainable tourism, as well as with strategic and planning documents in the Adriatic-Ionian region.

The most important recommendations are the following:

1. **Invest in the development of knowledge and education about innovations and innovative processes in sustainable tourism.** Since the number of innovations in the analyzed programs/projects is relatively low, despite the strategic determinations of planning documents relevant to the EUSAIR area focused on innovation, it is necessary to invest in human capacity building in the field of innovation. The analysis showed that the challenges for the Adriatic-Ionian region are related, inter alia, to insufficient capacity of human resources, so training and education in this area would be necessary. In this sense, it is possible to develop educational (online) programs, and it would be useful to learn from others, from the good practice examples. The topics of such educational programs should include not only basic knowledge (e.g. what is and what can be innovation?), but also teach specific methods of innovation in order for projects to truly result in innovation.
2. **Develop and strengthen cooperation at the level of individual countries (within countries in the tourism sector) and between countries (within the EUSAIR area) and stimulate networking on the topic of innovation in sustainable tourism.** Research has shown that collaboration is a fundamental principle in creating innovation because it is based on creativity; the more stakeholders in the process, the greater the opportunity to come up with innovation using creative methods (e.g. *brainstorming*, method of random stimulation, intuitive association, etc.). The more diverse the team, the greater the opportunity to innovate. Part of the projects in the Adriatic-Ionian area results or will result in networking, so it is also an opportunity to develop innovations through various teams and create innovative networks. Diverse teams imply the private, civil and public sectors, but also teams from different fields (not just tourism). This includes initiating and continuing work on existing cross-border projects that include a strong component of innovation development in sustainable tourism.
3. Along with geographic networking, **integrated projects on innovation should be encouraged, for example through several EUSAIR pillars.** It is necessary to integrate development projects and unite all those who are centered on innovations, and to encourage them further.

4. **Strengthen national development programs and projects** through, for example, Tourism Development Strategies and Operational Programs **in a way to evaluate and include development priorities and projects that have components of innovation, and innovation in sustainable tourism.** National development programs provide a basic framework on which to prescribe priorities at the national level and are in direct contact with real existing projects. Therefore, they also have a significant impact on creating a climate for innovation development, so it is important that they provide a public policy framework that will put innovation at the center. Such a framework implies the whole system of funding and other incentives for innovation in sustainable tourism, but also evaluations to be able to measure the impact of concrete project outcomes. The incentive system may include, for example, access to public funding for innovation (e.g. one-stop-shop with customer-tailored services that are not just about providing information but at a higher level), incentives for business digitization, incentives for “green” business and for the development of innovation infrastructure.
5. **Encourage change and innovation in the very concept of tourism.** The crisis caused by the COVID-19 pandemic has greatly changed the perception, but also the practical business in the tourism sector, and, due to circumstances, the concept of remote tourism has been developed, without real physical travel. Although such a concept has proven to be relatively successful in the promotion of tourist destinations or products/services (for future travel), its capacity to generate revenue and, consequently, maintain the entire supply chain and preserve jobs is still insufficient. In this sense, the virtual sphere has proven to be a “ the first aid” and so far, the only platform for the development of any kind of tourism, and it is possible to seek solutions in this direction, but also beyond. The crisis has thus led to a huge need for innovation, not only in the tourism business, but potentially at the very source, in the definition of tourism.

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