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**Viability assessment of a MEET Ecotourism product
around Brijuni National Park, Croatia**

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Abstract

At the same time that the northern Adriatic is considered one of the most important sub-basins of the whole Mediterranean basin, it continuously suffers the consequences of the mass tourism pressures, which threatens the region's natural and cultural heritage (Carić & Mackelworth, 2014). Currently, there is an active organization called MEET Network that comes to provide the necessary tools for Mediterranean protected areas to create more sustainable options of tourism strategies, through the best ecotourism practices (Noll et al., 2019). MEET is a target-oriented network that works as a consultant for Mediterranean protected areas and key-organizations regarding ecotourism ideals. The network acts as a Destination Management Organization (DMO), helping the involved Mediterranean protected areas and organizations developing a better design, manage, marketing and sale of ecotourism products in a more sustainable way. Moreover, MEET incorporates these products into a destination portfolio (MEET Guide) with strong branding and professional support. It is an attempt for conservation at its core, being designed to help parks of Mediterranean countries, which play an important role in preserving the region's threatened biodiversity (Noll et al., 2019).

As a way to safeguard the multiple values and integrity of the northern Adriatic sea, this study has attempted to assess the viability of creating a MEET Ecotourism product around Brijuni National Park, a croatian protected area, in the western Istrian coastline, located in the Northern Adriatic sea. This study surges due to the urgent need to promote better ecotourism options for the protection of such important areas, by creating protocols, partnerships and common goals amongst local communities and other entities, towards a more sustainable future in the tourism sector. To do so, this study focused on understanding how the local touristic suppliers perceive the subjects of ecotourism, sustainability and partnerships for the goal. The distribution of an online survey, within a buffer zone around the selected protected area, was the main methodology to reach these local touristic businesses and understand their points of view. Furthermore, with the survey's responses, it was possible to develop a proposal of an ecotourism product, following MEET's requirements, which, when verified through checklists, presented a clear statement and a visible argument for answering to the hypothesis of this study. This study has shown an immense potential and viability on implementing a MEET Ecotourism package around this protected area. The local suppliers revealed a considerable high involvement in the subjects and the product's proposal was almost totally in compliance with MEET's requirements. Moreover, the survey's results allowed conclusions regarding eventual allies or possible obstacles for Brijuni National Park to go forward with a MEET program. In the future, if such is implemented, there are some obstacles to be overcome, regarding sustainable matters and management details. Nonetheless, such partnership is considered of high importance for the region and its benefits must be explored. The development of a MEET ecotourism approach in this specific region could come to fulfil a strategic act to protect the values of the Adriatic Sea, given that the northern Adriatic is still not integrated in such MEET programs. Finally, working towards more sustainable alternatives in the tourism industry can become a way to come closer to the Sustainable Development Goals (SDGs) launched by the United Nations, as an attempt to protect the planet and ensure that all people enjoy peace and prosperity by 2030.

Keywords: Ecotourism, Protected Areas, Mediterranean Basin, Adriatic Sea, Sustainable Tourism.

Resumo

A bacia do Mediterrâneo é uma das zonas mais interessantes a nível de património histórico, cultural e natural de todo o mundo. A sua diversidade a nível de espécies nativas e endémicas, principalmente a nível de componentes de flora, fizeram da região um dos 34 *hotspots* de biodiversidade, o que significa que esta é uma das regiões biologicamente mais ricas, mas também uma das mais ameaçadas de todo o planeta (Myers et al., 2000; Drumm et al., 2016; Noll et al., 2019).

Devido à sua complexidade a nível de valores patrimoniais, juntamente com o seu clima agradável e a sua linha de costa altamente prestigiada, a bacia do Mediterrâneo tornou-se rapidamente líder a nível de procura turística, tendo alcançado as primeiras posições em vários rankings mundiais de Turismo nos últimos anos (Kizielewicz, 2013; UNWTO, 2018). A região apresenta uma grande dependência no sector do Turismo, principalmente a nível de turismo costeiro, apostando essencialmente em modelos convencionais e direcionados às massas (Drumm et al., 2016; Noll et al., 2019). Esta dependência no turismo de massas tem levado a uma grande pressão na região, principalmente em zonas ecologicamente mais sensíveis (como zonas costeiras, áreas de natureza e áreas protegidas), que se encontram constantemente sobrecarregadas e acima do seu limite. O turismo de massas nestas áreas tem se revelado uma das principais causas da perda ecológica a nível do Mediterrâneo (MIO-ECSDE, 2012).

Felizmente, tem-se verificado um aumento a nível da consciência ambiental por parte do público, que cada vez mais procura opções mais sustentáveis e responsáveis, quer para o meio ambiente quer para as comunidades locais (Drumm et al., 2016; Noll et al., 2019). O conceito de Ecoturismo vem de alguma forma auxiliar na resposta a esta procura, sendo este um modelo de turismo mais responsável, direcionado a áreas naturais, que conserva o ambiente, mantém o bem-estar dos locais e envolve interpretação e educação (TIES, 2015). Visto que as Áreas Protegidas do Mediterrâneo são classificadas para proteger a biodiversidade, que aqui é tão importante, torna-se cada vez mais imprescindível para estas áreas apostar em modelos de ecoturismo, como forma alternativa ao turismo de massas, e como tentativa de criação de modelos opcionais menos impactantes. Não bastando apostar nestes modelos, mas sendo também essencial desenvolvê-los de uma forma mais organizada e integrada a nível do Mediterrâneo (IUCN, 2017), surge uma entidade denominada MEET (Mediterranean Experience of Eco Tourism), em 2017, que vem tentar responder a esta problemática.

O MEET é uma organização da EU (fundada pela IUCN-Med), que trabalha como consultora para as Áreas Protegidas do Mediterrâneo em relação aos ideais de ecoturismo. Esta atua como uma Organização de Gestão de Destinos (OGD), ajudando as áreas protegidas envolvidas a desenvolver melhores estratégias de design, gestão, marketing e venda de produtos de ecoturismo mais sustentáveis, que são posteriormente incorporados num portfólio de destinos (Guia MEET), com uma marca de qualidade e suporte profissional. Esta Rede integra novas áreas protegidas no seu programa continuamente (em colaboração com a DestiMED), e já conta com 44 Áreas Protegidas de 10 países mediterrânicos diferentes (Noll et al., 2019).

Os produtos de ecoturismo MEET contam com a criação de um *cluster* local, que integra pelo menos uma área protegida, pelo menos um operador turístico e vários fornecedores locais de serviços turísticos (ex: alojamento, recreação, transporte, alimentação, etc). Além disso, o ato de compra de um produto MEET contribui para um fundo de conservação da área protegida envolvida e também para a distribuição de capital de forma justa para as comunidades envolvidas.

O norte do mar Adriático é considerado uma das sub-bacias mais importantes de toda a bacia do Mediterrâneo, principalmente devido à sua biodiversidade marinha. No entanto, à semelhança do panorama geral mediterrânico, o norte do Adriático sofre continuamente as consequências das pressões do turismo de massa, que ameaçam o património natural e cultural aqui presentes, principalmente na zona da Lagoa de Veneza (Carić & Mackelworth, 2014; UNESCO, 2014).

Como forma de salvaguardar os múltiplos valores e a integridade do norte do Adriático, este estudo tentou avaliar a viabilidade da criação de um produto de ecoturismo MEET, em torno do Parque Nacional de Brijuni, uma área protegida croata, na costa oeste da Ístria, uma península localizada no norte do Adriático. O Parque Nacional de Brijuni é um dos parques marinhos mais interessantes da Croácia, contando com milhares de visitas turísticas todos os anos. O Parque constitui um arquipélago, composto por 14 ilhas, que se distingue principalmente devido à sua diversidade paisagística, ao seu grande património histórico e cultural e à sua biodiversidade única e complexa, que deve ser preservada dentro do seu contexto ecológico.

Este estudo surge devido à urgente necessidade de promover melhores opções de turismo para a proteção e gestão desta área classificada de importância, avaliando a possibilidade de criar protocolos, parcerias e objetivos comuns entre as comunidades locais e outras entidades, em direção a um futuro mais sustentável no setor do turismo. Para isso, o estudo pretendeu compreender a maneira como os diferentes fornecedores de serviços turísticos locais se relacionam com os temas do ecoturismo, da sustentabilidade e da criação de parcerias com entidades como o MEET.

A principal metodologia para entender os pontos de vista destes negócios locais de turismo foi a distribuição de um questionário online, dentro de uma zona-tampão de 30km, em torno do Parque Nacional de Brijuni, o qual não é habitado. Além disso, com base nas respostas do questionário, foi possível desenvolver uma proposta de um produto de ecoturismo para esta área, seguindo os requisitos do MEET, que estão dispostos num Manual que pode ser consultado online (Noll et al., 2019). A verificação desta proposta, por meios de *checklists*, veio apresentar argumentos visíveis para responder à hipótese deste estudo, mostrando se a mesma se enquadra dentro dos parâmetros exigidos.

O presente estudo veio demonstrar um imenso potencial e viabilidade na implementação de um pacote de ecoturismo MEET em torno do Parque Nacional de Brijuni. Os fornecedores locais revelaram um alto envolvimento nas temáticas em questão e a proposta do produto apresentou-se quase totalmente em conformidade com os requisitos do MEET. Além disso, os resultados da pesquisa permitiram conclusões sobre os eventuais aliados e os possíveis obstáculos para o Parque Nacional de Brijuni avançar com um projeto MEET. No futuro, se tal for implementado, existem alguns obstáculos a serem superados em relação a questões de sustentabilidade e detalhes de gestão do próprio produto. No entanto, esta parceria é considerada de alta importância para a região e os seus benefícios devem ser explorados.

O desenvolvimento de uma abordagem MEET nesta região específica pode vir a contribuir para um ato estratégico de proteção dos valores do Mar Adriático, uma vez que o norte do Adriático ainda não está integrado na Rede MEET. Finalmente, trabalhar em direção a alternativas mais sustentáveis na indústria do turismo pode ser considerada uma das maneiras de se conseguir eventualmente alcançar os Objetivos de Desenvolvimento Sustentável (ODS) lançados pelas Nações Unidas, como uma tentativa de proteger o planeta e garantir que todos desfrutem de paz e prosperidade até 2030.

Palavras-Chave: Ecoturismo, Áreas Protegidas, Mediterrâneo, Mar Adriático, Turismo Sustentável.

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1. Introduction

1.1. Tourism and Ecotourism in the Mediterranean

The Mediterranean basin covers an area of 2 million square kilometres, having its extended influence covering 34 countries, east from Portugal to Jordan, and south from northern Italy to Cape Verde. It is considered one of the 34 biodiversity hotspots identified around the globe, Earth's most biologically rich, yet threatened areas (Myers et al., 2000; Drumm et al., 2016; Noll et al., 2019). This region is highly valuable, not only in biological and geographic wonders, but also in human history and culture, being the home to some of the world's earliest civilizations such as Mesopotamia, Phoenicia or Persia, and being the everlasting stage of strong empires such as Roman, Byzantine or Ottoman Empires. (Drumm et al., 2016; Noll et al., 2019). The Mediterranean basin is also incredibly diverse regarding landscapes, varying from high mountains to deserts, ancient rivers to forests, islands to caves, and in all of these contrasted views, it is possible to observe a region where human civilization and wild nature have coexisted for centuries (Cuttelod et al., 2009).

This region is well-known and enhanced for its flora, being home to about 25,000 native species of plants, of which half is considered endemic, meaning that around 12,500 species of plants can only be found in the Mediterranean, at least in its wild state (Cuttelod et al., 2009). Besides the richness of the Mediterranean flora, the region also counts on unique fauna, where 2 out of 3 amphibian species are endemic, as well as half of the crabs and crayfish species, 48% of the reptiles, 25% of mammals, 14% of dragonflies, 6% of sharks and rays and also 3% of birds are endemic and exclusive to this area (Cuttelod et al., 2009). Furthermore, even though the Mediterranean Sea only represents less than 1% of the global ocean surface, up to 18% of the macroscopic marine species are found there, of which 25 to 30% are endemic - an incredibly rich biodiversity for such a small area (Bianchi & Morri, 2000; Cuttelod et al., 2009).

Despite its evident importance, the Mediterranean countries suffer a panoply of threats and pressures to its biodiversity and local cultures, including the region's dependence on income from mass tourism (Drumm et al., 2016; Noll et al., 2019). According to the bibliography, there is no final agreement on the definition of Mass Tourism, but most authors agree that the concept is associated with the act of large numbers of people visiting the same destination simultaneously, creating some type of pressure in the implied region (Burkart & Medlik, 1981; Poon, 1993; Pigram & Wahab, 2005).

At the same time that the Mediterranean basin provides home to a great extent of natural, cultural and historical heritage, it also presents a comfortable weather throughout the seasons, accompanied by a prestigious coastline, which has stimulated this region to rapidly become a leader in tourism departments and one of the most sailed seas in the world (Kizielewicz, 2013). In the past recent years, the Mediterranean countries have been reaching top positions in the world ranking of international tourist arrivals, revealing a strong demand for destinations along the countries involved, according to the UN World Tourism Organization (UNWTO, 2014; UNWTO, 2016; UNWTO, 2018; UNWTO, 2019).

The UN World Tourism Organization annually calculates the number of travellers in all the regions of the world. The statistics are performed based on the registered numbers from arrivals of international tourists to the destinations, considering that an arrival implies that the visitor remains at least for one night in the destination. In a global perspective, the numbers provided by this organization

show that global tourism is having a strong growth period: in 2017 the number of international arrivals increased 7% globally and the total number of tourists was 1,322 million (UNWTO, 2018).

The numbers also show that the Mediterranean basin is currently the world’s leading tourism destination, having led the results on international tourist arrivals in 2017, with a growth of +13% (UNWTO, 2018).

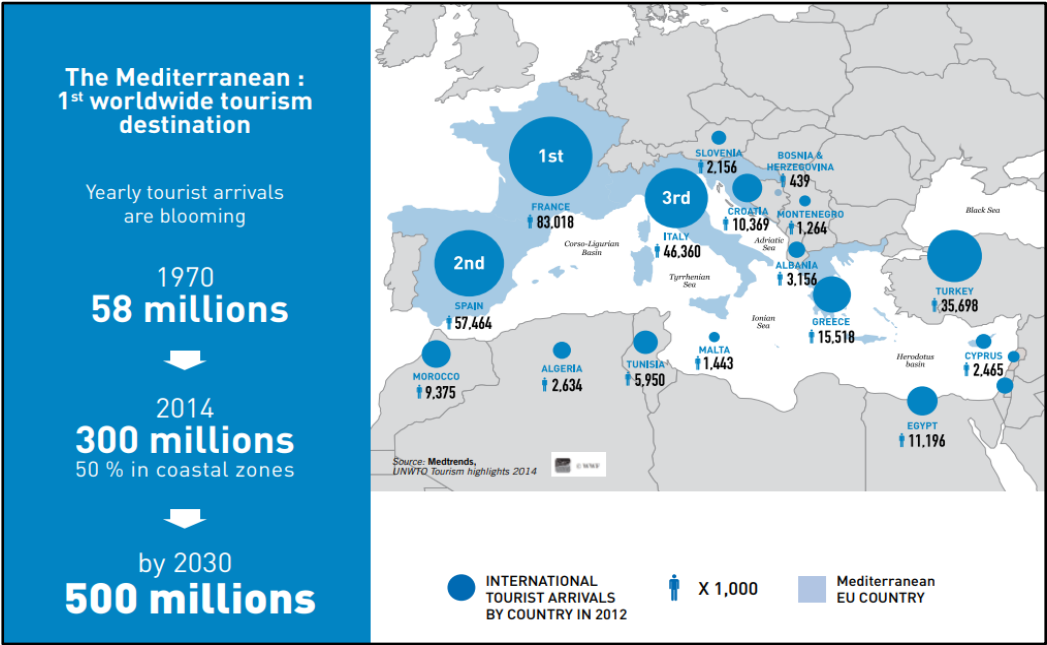


Figure 1-1 – Tourism highlights for the Mediterranean in 2014.
 Source: UNWTO, 2014; Noll et al., 2019.

As Figure 1-1 shows, international tourist arrivals in the Mediterranean countries have grown from 58 million in 1970 to 300 million in 2014, and the numbers are predicted to keep rising, with a forecast of 500 million by 2030. In 2014 alone, the international tourist arrivals to the region, represented 30% of the total world tourists of that year, being half of these arrivals in coastal areas (UNWTO, 2014; Bleu, 2016; Noll et al., 2019). Coastal tourism is the largest sea-related economic activity in the Mediterranean basin (Piante & Ody, 2015), with 11.3 of the regional GDP, and according to the World Travel and Tourism Council, in the year of 2014 the tourism sector represented 11,5% of the total employment in the Mediterranean countries, revealing tourism as a major source of revenue and employment in the area (WTTC, 2015; Bleu, 2016; Noll et al., 2019).

However, while tourism can serve as a positive economic tool to the development of the Mediterranean countries, it can also become a threat to the initial values that attract tourists in the first place (Noll et al., 2019). The most associated model of tourism in the Mediterranean basin is targeted at the coastline and the 3 S’s: Sun, Sand & Sea (Cirer-Costa, 2015), where the goal is usually to achieve quantitative goals over quality goals (WWF, 2001). The increased tourist flows in the region combined with a constant growing population cause noticeable pressures to the area (Noll et al., 2019).

Overbuilding, waste, pollution, disturbance of local communities, disturbance of wildlife and the exacerbated usage of important resources such as freshwater, serve as examples of how tourism can threaten the future viability of marine and terrestrial Mediterranean resources. (WWF, 2001). Most countries of the Mediterranean basin suffer the impact of such unsustainable practices and intensified activities in the tourism sector (MIO-ECSDE, 2012).

Mass tourism models are one of the main forces behind the ecological loss and destruction in the Mediterranean region, particularly in coastal and marine areas that still maintain high natural values and are important to safeguard biodiversity (MIO-ECSDE, 2012).

It has become evident that more and more people are seeking for tourism experiences in natural places, which tend to be the most sensitive areas as well. It is estimated that the market of tourism that occurs in natural sites is increasing at six times the rate of tourism overall (UNWTO, 2006; Bell et al., 2007). According to the Institute for Tourism report (IT, 2006), demand for nature-based tourism in the early 2000 contributed 7% to the world's total tourism demand with its annual growth rates ranging from 10% to 30% (Petrić & Mandić, 2014). Recreation activities that emerged from nature-related tourism such as mountaineering, camping, hiking, cycling, canyoning, kayaking, scuba diving and others are continuously becoming trends among the tourism industry nowadays (Cordell, 2008).

A study by Balmford et al. (2009) has even confirmed that nature-related tourism is continuously growing, specifically in protected areas. Protected Areas, according to the IUCN Definition of 2008, are “clearly defined geographical spaces, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values”. Hence its name, these spaces require careful management especially when it comes to tourism, since conventional and mass tourism can pose serious threats to its sensitive integrity.

Gladly, it has been observable that the public's demand for alternatives to conventional tourism is growing around the world as more tourists seek to experience nature and authentic culture in a respectful, low-impact way (Drumm et al., 2016; Noll et al., 2019).

The concept of Ecotourism emerges from these new demands, as it can be used as a way to maintain the economic benefits of tourism itself, but without the disruptive effects of mass tourism (Drumm et al., 2016). According to The International Ecotourism Society (TIES, 2015), the best accepted definition so far comes to define Ecotourism as a “responsible travel to natural areas that conserves the environment, sustains the well-being of local people, and involves interpretation and education”, where education is meant to be inclusive of both staff and guests. According to Petrić & Mandić (2014), ecotourism demand has represented between 7% to 10% of the total world's tourist demand, with growth rates ranging between 2% and 4%.

Ecotourism has in fact been demonstrated to be a form of tourism that respects nature and cultures, promotes a positive engagement between tourists and locals while maintaining profitable economies (Drumm et al., 2016). Thus, with increased numbers of tourists in the Mediterranean basin every year, especially in mediterranean protected areas, there is a growing urge to promote better alternatives to the degradation of these sites and preserve these ecosystems.

Mediterranean Protected Areas need a new model of tourism that ensures that impacts on environment and local communities can be minimized (Noll et al., 2019). Furthermore, IUCN acknowledges that ecotourism is still organized in a fragmented way in the Mediterranean region, with gaps in its standards, revealing a huge necessity for improvements in coordination of management and marketing strategies in the future (IUCN, 2017).

1.2. MEET - Mediterranean Experience of Ecotourism

As Noll et al. (2019) stated: *Ecotourism in the Mediterranean offers significant untapped potential. The high diversity of flora, fauna, landscapes, ecosystems, unique cultural mosaics, and rich heritage together provide exceptional conditions for the development of ecotourism products.*

Given the need of finding better strategies to manage tourism in the Mediterranean protected areas, the EU-funded initiative of MEET - Mediterranean Experience of Eco Tourism was created, as an attempt to harness the potential of ecotourism in the region (Drumm et al., 2016). The initiative was developed by the European Programme ENPI-CBC “Mediterranean Basin”, implemented by a partnership of nine Mediterranean bodies, headed by Federparchi – Europarc Italy.

MEET project took place between 2013 and 2015 and its main goal was to develop an ecotourism model for Mediterranean Protected Areas (PAs) based on the “European Charter for Sustainable Tourism”, to promote a better seasonal distribution of tourism flows in this area (IUCN, 2017; MEET, n.d.).

After the success achieved in the 3-year project (2013-2015), involving 25 protected areas in 8 different countries, the Mediterranean Experience of Ecotourism (MEET) became an Association, launched by IUCN-Med (IUCN, 2017). The current MEET Network is therefore the result of two cross-border cooperation projects: MEET (2013-2015) by ENPI-CBC Med, and DestiMED (2016-2019) by the Interreg Med Programme (Noll et al., 2019).

MEET is now a target-oriented network that works as an advisor for Mediterranean protected areas and key-organizations regarding ecotourism ideals. The network acts as a Destination Management Organization (DMO), helping the involved Mediterranean protected areas and organizations developing a better design, manage, marketing and sale of ecotourism products in a more sustainable way. Moreover, MEET incorporates these products into a destination portfolio (MEET Guide) with strong branding and professional support. It is an attempt for conservation at its core, being designed to help parks in the Mediterranean countries, which play an important role in preserving the region’s threatened biodiversity (Noll et al., 2019).

Opposed to the traditional model of mass tourism based on the 3S “Sun, Sand & Sea”, MEET focuses on the 4C tourism model: Compassion, Connection, Community and Conservation (Noll et al., 2019). The wide shared goal of this network is to enforce and promote the conservation of Mediterranean protected areas while still respecting local culture, history and community, and still being able to generate economic benefits, that must be fairly distributed amongst the local communities (Noll et al., 2019).

MEET Network focuses on creating sustainable itineraries across the Mediterranean protected areas, having already achieved high standards of quality and sustainability on those included in the portfolio (Noll et al., 2019).

MEET Network is continuously growing and involving more partners, with the aim to continue purchasing the initial goals and reaching improvements regarding sustainable ecotourism practices in the Mediterranean. As it is visible in Figure 1-2, the Network counts on 12 partners, managers from 44 Mediterranean protected areas across 10 countries of the Mediterranean basin (Italy, France, Spain, Croatia, Jordan, Lebanon, Greece, Malta, Albania and Tunisia) and keeps on working with multiple tour operators, local communities, local service providers, and conservation and tourism experts to develop unique ecotourism products (Noll et al., 2019).

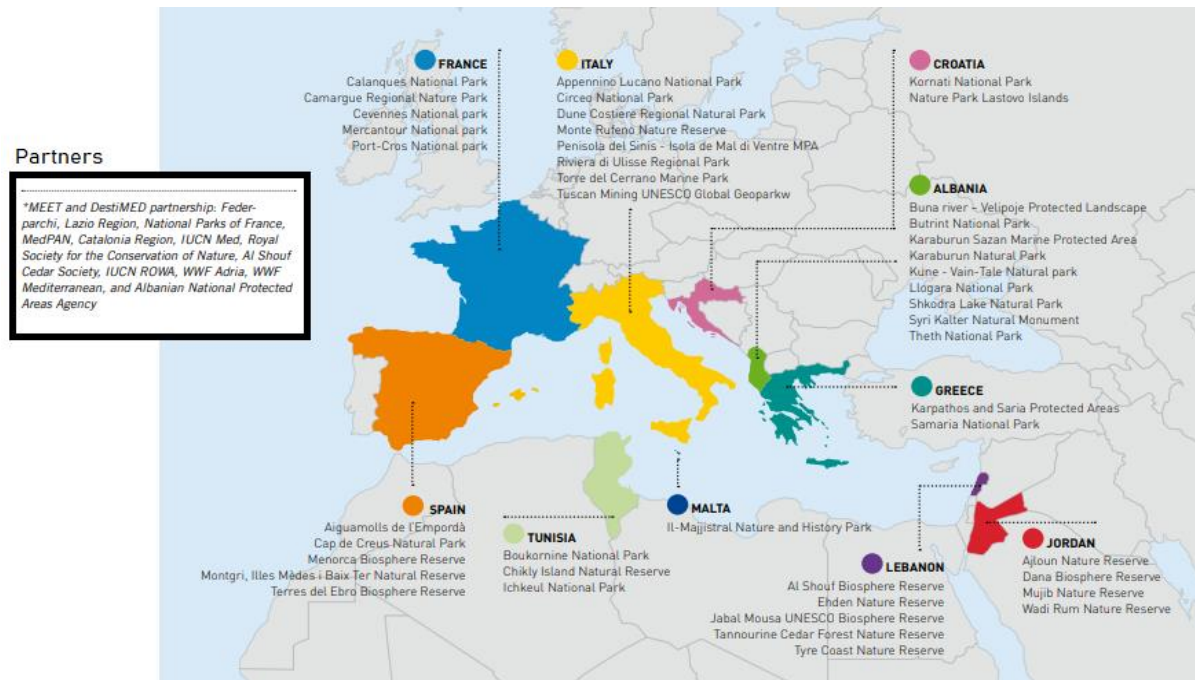


Figure 1-2 – Protected Areas involved in the MEET and DestiMED projects.
 Source: Noll et al., 2019

MEET Network cooperates highly with the DestiMED project. The DestiMED project is an extent of MEET, in the sense that it promotes the creation of standards and monitoring tools to measure and improve the sustainability and quality of ecotourism in protected areas in the Mediterranean region. DestiMED's protected areas will eventually transition to participate in the MEET Network after concluding their pilot actions (IUCN, 2017).

The MEET organization works towards the creation of ecotourism packages that must follow some predefined criteria. The eco touristic package must be, among other things, an itinerary of at least 3-4 days, focused on low season, targeted for small groups of tourists (max. 12), contribute to nature conservation, provide local experiences, include the clients in activities, fulfil the client's expectations and aim towards sustainability (Noll et al., 2019).

The visitors participating in a MEET product must be given the opportunity to interact with the local culture and nature directly, in a respectful way. The idea of the MEET product is to promote the visitor's environmental awareness by giving them high quality experiences with the local values (Noll et al., 2019).

The MEET package must be created and managed by 3 main local forces, called LEC (Local Ecotourism Cluster). The LEC is therefore constituted by the Protected Area, the ITO (Inbound Tourism Operator) and Local Service Providers.

The Protected Area must be responsible for managing the LEC itself and the ITO is responsible for managing the ecotourism itinerary. The Local Service Providers not only provide their services to the package, but they also can take part in decision-making inside the LEC. Throughout the process of establishing a LEC, there must always be an “open door” inclusion of those that are willing to cooperate and be part of the program. The Local Service Providers can be, among other things: recreation companies, local producers, restaurants, accommodation providers, transportation providers etc. (Noll et al., 2019) (see Figure 1-3).

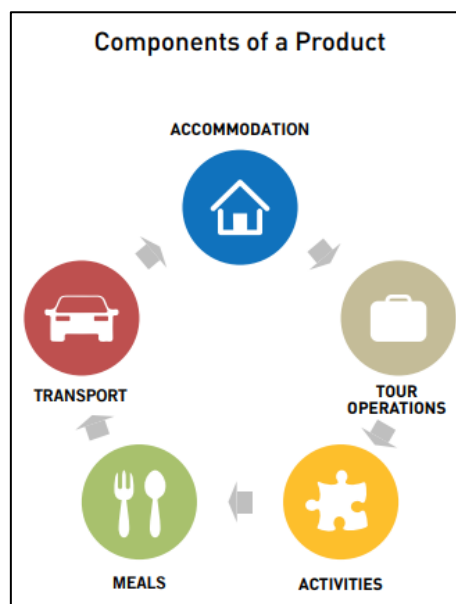


Figure 1-3 – Components of a MEET ecotourism product.
Source: Noll et al., 2019

The obligation of establishing these protocols between the protected area and local service providers promotes the joint of forces towards strong partnerships and sustainability perspectives in the region. Furthermore, the act of buying a MEET product must contribute to a conservation fund to the involved protected area and to the fair distribution of economic benefits amongst the local communities (Drumm et al., 2016; Noll et al., 2019).

Initiatives like MEET and DestiMED are crucial to the preservation of the Mediterranean and to the achievement of the 17 Sustainable Development Goals (SDGs). The SDGs are a universal call towards a more sustainable future, launched by the United Nations in 2015 and mandatory for all the UN state-members, as a way to create cooperation between parts, attempt to protect the planet and ensure that all people enjoy peace and prosperity by 2030.

The current threats to the Mediterranean’s integrity due to mass tourism and human pressure can jeopardize the sustainability goals for the future of our planet. Therefore, it becomes urgent to implement new strategies in the region as a way to attend its current needs and assure its integrity for future generations.

1.3. Goals of the Study

Considering the importance of reaching sustainable tourism management actions for Mediterranean protected areas through strong partnerships and best ecotourism practices, the main goal of this study is to evaluate the viability of creating a MEET branded ecotourism product in one of the non-MEET integrated protected areas of the Mediterranean basin.

Therefore, as a way to fulfil the main goal, the study will try to answer the following points:

- Assess the perspectives of local companies and operators around the Protected Area regarding Ecotourism and Sustainability;
- Assess the local interest and willingness of establishing a connection with ecotourism projects such as MEET Network;
- Build a simulacrum proposal of an ecotourism product for the region based on the MEET criteria and the local interest in the subject;
- Test/Verify the final product based on the MEET Manual and checklists;

2. Context: Case of Study

2.1. Croatia and Northern Adriatic as a strategic location

Croatia is a Mediterranean country, westernly surrounded by the Adriatic sea, located east of Italy and sharing borders with Slovenia, Hungary, Bosnia & Herzegovina, Serbia and Montenegro.

The geographical territory of the Republic of Croatia has always attracted numerous tourists, adventurers and travellers by its diversity and untouched natural beauty (Tišma et al., 2006).

The Adriatic coastline is filled with great natural, historical and cultural heritage, counting on more than 1000 islands and unique attractions that draw many tourists to the country every year (Tišma et al., 2006). Croatia has shown a significant growth in tourist arrivals throughout the years. The country attracts an average of 11,7 million tourists per year, having reached its peak in 2018, with 18,6 million tourist arrivals in accommodation facilities for the purpose (see Figure 2-1).

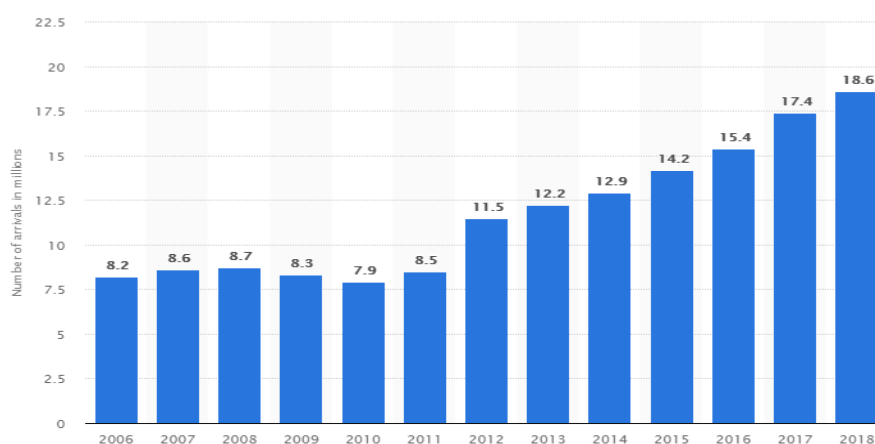


Figure 2-1 – Number of arrivals in tourist accommodation in Croatia from 2006 to 2018.
Source: Eurostat, 2019

Although most visitors come to Croatia because of the Adriatic Sea, a significant increase in the number of tourists who visit the continental parts has also been noticed (Tišma et al., 2006).

Like the rest of the Mediterranean countries, Croatia also struggles with mass and conventional tourism, due to the pressure it puts on sensitive areas (e.g. coastline, protected areas...).

In fact, Croatia has more than 400 protected areas (see Figure 2-2), with a total area of 7,476.19 km², meaning that approximately 13% of its territory is considered protected (Ministry of Tourism, 2019; Radović & Čivić, 2006). The primary purpose of proclaiming an area protected is the preservation of its ecological specificity (Ružić & Šutić, 2014).

Protected areas of nature, 2017			
	NUMBER	AREA km ²	MAINLAND
Total	408	7,476.19	8.49
National park	8	979.63	1.11
Nature park	11	4,320.48	4.91
Strict nature reserve	2	24.19	0.03
Special reserve	77	400.13	0.45
Regional park	2	1,025.54	1.16
Forest park	26	29.86	0.03
Important landscape	82	1,279.10	1.45
Natural monument	81	2.27	0.003
Horticultural monument	119	8.36	0.01

Figure 2-2 – Protected areas of nature, 2017, Croatia.
Source: Ministry of Tourism, 2019

However, during summer months, the most visited national park, Plitvice Lakes, exceeds more than 13.000 numbers of visitors daily, and in 1 year, the park exceeds the 1.2 million visitors (Ružić & Šutić, 2014). Such high numbers of visitors in such sensitive areas end up becoming a risk for the protection of the conditions that made the areas protected in the first place (Ružić & Šutić, 2014). The continuously increasing number of visitors in croatian protected areas causes large ecological risks such as impacts on soil or devastation of vegetation, not to mention the social snags in terms of the quality of experience from the visitor's point of view (Ružić & Šutić, 2014).

While mass tourism is almost impossible to be put to an end, Croatia still makes an effort to promote alternative forms of tourism (Tišma et al., 2006). In fact, in the year of 2019, two croatian protected areas entered the MEET program, collaborating with MEET Network to better promote ecotourism in the mediterranean region and to safeguard the goods of the Adriatic Sea (WWF, 2018).

This was a direct result of WWF Adria's work with two croatian parks: Nature Park Lastovo Islands and Kornati National Park. In cooperation with DestiMED, WWF Adria and the two parks, it was possible to create ecotourism offers with local suppliers that managed to be successfully tested with international ecotourism experts (WWF, 2018). The ecotourism packages entered the promotional phase in 2019 and are now offered to the market as part of the MEET Guide together with other Mediterranean protected areas participating in DestiMED (WWF, 2018).

After the official presentation of the successful results of Lastovo Islands and Kornati National Park, many other Croatian parks expressed interest in replicating the project's activities, including the national parks Brijuni and Mljet, nature parks Telašćica, Vranska Lake and Žumberak-Samoborsko Gorje, as well as 12 county public institutions (WWF, 2018).

This is a major opportunity to improve more sustainable tourism alternatives in the country and assure the preservation of protected values.

As we can see in Figure 2-3, the locations of the two new Croatian MEET parks are the following: Lastovo Islands, in the southern coastline and Kornati NP, in the middle coastline.



Figure 2-3 – MEET Croatian Protected Areas (south to north, accordingly: Lastovo Islands and Kornati NP).

When properly analysed, these locations could even be considered part of a strategic act to protect the Croatian coastline, as well as the Adriatic marine wildlife, that acknowledgedly represents one of the richest Mediterranean areas regarding marine biodiversity. In fact, the Adriatic sea, when compared with other Mediterranean waters, reveals high concentrations of endangered, threatened, vulnerable and endemic species, especially in the northern Adriatic (Coll et al., 2010).

Despite its uniqueness, the region of the northern Adriatic is under great human pressures, especially due to the amount of cruise tourism happening in the area of Venice lagoon (Carić & Mackelworth, 2014). UNESCO has published a report stating that the existing practices might put the area on the List of World Heritage in Danger, declaring the urgency in resolving the management issues of over-crowding, environmental and health risks (Carić & Mackelworth, 2014; UNESCO, 2014).

Impacts of human activity, like mass tourism, in combination with global warming effects, are leading the Mediterranean basin to show signs of species loss. Global warming effects may be the main cause for the increased rarity or even disappearance of cold-water species, like the rare deep-water white coral, *Lophelia pertusa* (Coll et al., 2010). The coldest parts of the Mediterranean sea (Gulf of Lions and northern Adriatic) could act as a sanctuary for the cold-temperate species (Coll et al., 2010), and that's why it is even more important to find strategies to preserve these regions.



Figure 2-4 – Adriatic sub-basins.
Source: DHMZ, 2020

Looking at Figures 2-3 and 2-4, we can see that the two Croatian protected areas that now belong to the MEET program are located in the sub-region of Central Adriatic, which contributes to an extensive protection of the values here present, through the act of better ecotourism practices. However, there is still no inclusion of a northern Adriatic protected area in MEET, which could be a potential benefit for the Mediterranean marine wildlife protection, valorisation and awareness.

Brijuni National Park is an archipelago situated in the Istrian County, located in the north part of Croatia and coincidentally in the northern Adriatic as well. Brijuni is composed of 14 islands and was established as a National Park in 1983. The site is protected for its autochthonous Mediterranean holm oak forests, its unique marine wildlife and rich cultural and historical heritage (Public Institution Brijuni National Park, 2016).

Besides the paleontological evidences (dinosaur footprints), the historical sites (Roman and Byzantine ruins), the terrestrial running-free wildlife (deers, hares, squirrels...) and the birdlife importance of Natura 2000 (European shag, black-throated loon, common kingfisher...), the waters of Brijuni are significant as spawning place for fish and represent a unique oasis for typical sea species of the Northern Adriatic, like *Posidonia oceanica* or *Pinna nobilis*, for example (Public Institution Brijuni National Park, 2016).

The diversity offered in Brijuni Islands attracts an average number of 161.775 visitors per year, according to the Management plan 2016-2025 and the Financial Report 2016-2017 of the Public Institution of Brijuni National Park. These documents have shown that the numbers of visitors keep on rising: just from 2010 to 2016 it was possible to see a growth of 26% on the numbers of visitors.

It is estimated that the tourism sector represents around 80% to 90% of the total income of Brijuni NP, revealing that the late rising on the numbers of visitors to the islands is considerably good for the park's economy. However, in order to keep the stability between nature and economy, there's a constant demand to monitor tourism properly and develop new alternatives, since the model applied in the park relates mainly to mass tourism.

Like previously mentioned, Brijuni was one of the parks to admittedly show their interest in participating in ecotourism projects, such as MEET, after hearing about the successful results of Kornati NP and Lastovo Islands. The inclusion of Brijuni in MEET programs could pose a true benefit for the region, not only for the heritage's protection and status of the park, but also for the Mediterranean preservation as a whole, since this northern Adriatic sub-region is still not included in the MEET guide. The location of Brijuni National Park, in combination with the other two Croatian protected areas that are already included in MEET, could indeed fulfil a strategy model for the protection of the Croatian coastline and the Adriatic's unique values, through the promotion of the best ecotourism practices (Figure 2-5).



Figure 2-5 – Brijuni NP as a strategic location for the protection of the Mediterranean in MEET Network.

It is clear that mass tourism will not be nearly over, but the importance of creating alternatives is urgent. That is the fundamental ideal of why MEET was created in the first place and that is still the MEET Network's goal nowadays.

Because MEET products do not only depend on the Protected Area but also in Local Service Providers, the development of an ecotourism product based on MEET's criteria could be profitable to local companies of recreation, accommodation, transportation, alimentation and others, since these would have the chance to participate and collaborate with each other and have their services or products marketed as a high-quality labelled good to foreign publics.

The importance of stakeholders and partnerships is a major deal when trying to reach sustainability standards, and it has actually become the 17th SDG (Sustainable Development Goals), according to the United Nations.

Projects like MEET bring the alliance it takes to reach the sustainability goals aimed for the Mediterranean protected areas, becoming a common benefit for all parts involved.

Given all of the above, this study will apply the goals of assessing the viability of creating a MEET branded ecotourism product around the Protected Area of Brijuni National Park, in Croatia. This region can not only highly benefit from the best ecotourism practices, provided by MEET Network, but it can as well serve as a strategic location to protect the northern Adriatic marine life, that represents high levels of importance to the Mediterranean basin and must be preserved at all costs.

2.2. Brijuni National Park

Nature protection and management of protected areas in Croatia is regulated by the Nature Protection Act (NN 80/13). According to Article 113 of the same Act: “The National Park is a large, predominantly unchanged land and/or sea area of exceptional and multiple natural values, which includes one or more than one preserved or slightly modified ecosystems and its primarily intended role is the preservation of the original natural and landscape values.” (Public Institution Brijuni National Park, 2016).

Brijuni National Park is one of eight national parks in the Republic of Croatia. This category of protection was determined because the area is defined as one of the most biologically valuable sea areas of the country. Along with its biological features, Brijuni also hosts unique cultural-historical and geological-paleontological values, being established as a National Park and Memorial Site on November 1st 1983, by the National Park Act and the Brijuni Memorial Site (NN 46/83 and later amendments 57/89, 05/90 and 47/91) (Public Institution Brijuni National Park, 2016).

According to IUCN, Brijuni National Park falls into Category II of protected areas (“covers large natural or almost natural areas with the purpose of protecting entire ecosystems, the processes that take place and the species they support”), and the whole area of the Park is also included in the ecological network of the Republic of Croatia.

In the Republic of Croatia, the ecological network NATURA 2000 was proclaimed by the Ecological Network Directive (NN 124/13, NN 105/15). Brijuni is an internationally important area for birds and for wild species and habitat types and has been evaluated along with the waters of the western coast of Istria. Data referring to the Brijuni area is listed below (Table 2-1 and Table 2-2).

Table 2-1 – Conservation Area Significant for Birds (POP) of the Ecological Network Directive (NN 124/13, NN 105/15). Source: Public Institution Brijuni National Park, 2016

Code and area name	Conservation goals	
HR1000032 Waters of Western Istria	Wild taxa	
	Black-throated loon	<i>Gavia arctica</i>
	Red-throated loon	<i>Gavia stellata</i>
	European shag	<i>Phalacrocorax aristotelis desmarestii</i>
	Common tern	<i>Sterna hirundo</i>
	Sandwich tern	<i>Sterna sendvicensis</i>
	Common kingfisher	<i>Alcedo atthis</i>

Table 2-2 – Conservation Areas Significant for Species and Habitats types (POVS) of the Ecological Network Directive (NN 124/13, NN 105/15). Source: Public Institution Brijuni National Park, 2016

Code and area name	Conservation goals	
HR2000604 Brijuni National Park	Habitat types	
	NATURA Code	Habitat type
	8330	Flooded or partly flooded sea caves
	1170	Reefs
	1120	Neptune grass beds (<i>Posidonion oceanicae</i>)
1240	Rocks and cliffs of the Mediterranean coasts covered by endemic species <i>Limonium</i> spp.	

Brijuni is an archipelago composed by 14 islands along the western coast of Istria peninsula. The largest island is called Veliki Brijuni and the second largest is called Mali Brijuni (see Figure 2-6).



Figure 2-6 – Brijuni National Park with marked boundaries.
Source: Public Institution Brijuni National Park, 2016

Brijuni National Park hosts an undeniable complex amount of values, ranging from an amine climate to a vast diversity of natural, historical and cultural significance.

All of the following paragraphs are extracted or adapted from the Management Plan 2016-2025 of the Public Institution Brijuni National Park, as October 2016. These paragraphs aim to describe and enlighten the relevant characteristics of Brijuni National Park, as a way to better understand the study site's ecological importance.

1. Climate

According to Köppen's classification of climate, Brijuni has the so-called "Camellia climate", a moderately warm rainy climate without a dry period and with a hot summer (Cfa) (Peel et al., 2007).

Summers are pleasant with an average air temperature of about 23°C, and mild winters have an average of about 6°C. The average relative humidity is lowest in July, at 70% and the highest in December at 82%. The average annual rainfall is 817 mm. Snow and hail are rare events on Brijuni islands. Summer sea temperatures range from 22 to 25°C and this season is characterized by onshore sea breezes, while offshore winds dominate in the winter (bura).

This kind of mild, Mediterranean climate with plenty of sun, heat and humidity in the air, provides for lush vegetation growth and a comfortable environment on the islands (Public Institution Brijuni National Park, 2016).

2. Landscape Diversity

The landscape of Brijuni has changed considerably through time, gaining its present appearance in the late 19th and early 20th centuries. Paul Kupelwieser, an Austrian industrialist who became owner of the Islands in 1893 and the forester Alojz Čufar created the landscape parks in Brijuni by choosing and planting native plant species along with plants brought from different parts of the world. The concept was based on the tradition of the English landscape garden and today it results in a landscape of exceptional harmony. With the interference of these men, in just a few years the Islands were transformed into a landscape with gentle elevations, spacious meadows along the seashore, pebble beaches and relatively shallow bays. The indented coastline is enhanced by the dynamics of the surrounding relief (Public Institution Brijuni National Park, 2016).

One of the key elements of the Brijuni landscape design is the use of grassy surfaces. Meadows and water surfaces are the foundation of the park's composition and the main features generating the overall atmosphere, enabling easier orientation and far reaching views. The second design element is the volume of forest masses, which visually connect with the meadows in a sharp and accentuated vertical contrast, without the typical forest undergrowth. The shaped forest masses are in some parts enriched by planted cedars, cypress or pine trees and a compact forest mass of holm oak, laurel trees or pine trees in the background (Public Institution Brijuni National Park, 2016).

Furthermore, one of the oldest golf courses in Europe, advertised in the 1930s as the golf course where it is possible to play during winter months, highly contributes to the unique Brijuni landscape. The course was renovated in the last few years - only half of it initially – in order to obtain 18 holes. Since no pesticides are used for lawn cultivation, this is the only "ecological" golf course in this area. Herds of deer graze and walk on the meadows undisturbed, creating unique views and golfing experience for visitors (Public Institution Brijuni National Park, 2016).

On smaller islands, the Mediterranean macchia descends to the sea. Visually, this specific combination of green meadows, forests, macchia and the blue-green sea creates unique landscape views, whether it is seen from the sea, land or from above.



Figure 2-7 – Brijuni Archipelago from aerial photography. Source: Public Institution Brijuni National Park, 2016

Since the aesthetic value of the landscape of this area is set as one of its basic values, its preservation and improvement is possible exclusively through the preservation of the balance between natural and human intervention (Public Institution Brijuni National Park, 2016).

3. Cultural & Historical Heritage

A good geographical and strategic position, along with a pleasant climate, natural resources and fertile soil, favoured the Islands' population since prehistoric times. The first traces of human life on the Islands were found at the Neolithic/Eneolithic. The best preserved Bronze Age settlement is located on the island of Veliki Brijuni and others from the same period can also be found in the islands of Sv. Nikola and Mali Brijuni (Public Institution Brijuni National Park, 2016).

Intense human activity continued throughout time, as evidenced by the numerous remains of residential and economic estates (*villae rusticae*) and other Roman buildings on the islands of Veliki and Mali Brijuni. Most impressive are the remains of the grandiose complex in Verige Bay, on Veliki Brijuni, which stretched a length of 1 km along the bay. The complex consisted of economic facilities and a luxuriously equipped villa, temples, a *palestra*, baths and a pond. After the fall of the Western Roman Empire, the Islands were briefly under the rule of the Eastern Goths followed by the Byzantine rule until the year 778. The most important site from the Byzantine period is the Castrum, a fortified settlement on an area slightly larger than a hectare, that was developed around the original Roman *villa rustica* concept from the 1st century (Public Institution Brijuni National Park, 2016).



Figure 2-8 – a) Roman evidences in Verige Bay; b) Verige Bay from above; c) Byzantine Castrum.
Source: Public Institution Brijuni National Park, 2016.

The Islands were later in the possession of the Patriarchate of Aquileia, falling under the Venetian rule in 1331. The Venetian period was marked by numerous plagues epidemics and malaria which caused the depopulation of the Islands. After the fall of the Venetian Republic in 1797, Brijuni were briefly under the Austrians, and after that, under Napoleon's rule. In 1815 the Islands became part of the Austrian Empire, where they posed a strategic military significance. Several prominent points of the islands, such as Fort Brioni and Fort Peneda, on Veliki Brijuni, are still preserved evidences of that time. Even though the Islands were part of Austrian territory, they actually belonged to the Franzini family, from Venice, until 1893 (Public Institution Brijuni National Park, 2016).

In 1893, an Austrian industrialist called Paul Kupelwieser bought the islands and around the year of 1900 he managed to rid the Islands of malaria, with the help of the bacteriologist Robert Kochwith. Furthermore, with huge investments and by using existing resources, Kupelwieser also managed to transform the islands into a health resort and tourist destination in a very short period of time. During this period, there were many species introductions to the park's ecology, such as deers, mouflons, hares and peacocks, which had a significant influence on the park's natural system. There was also a range of introduced exotic species, some of which lived in cages, within fenced areas, and some moved freely, mostly in Veliki Brijuni. From 1912, Carl Hagenbeck, owner of the then famous Zoological Gardens near Hamburg, set up a station for the acclimatization of animals on Veliki Brijuni, before they were to be transported onwards to European zoos (Public Institution Brijuni National Park, 2016).

After the fall of the Austro-Hungarian Monarchy, the Islands fell under Italian rule. Brijuni soon developed into a world-famous holiday resort, oriented towards sports and entertainment. In 1922 one of the largest golf courses in Europe was built, along with new tennis courts, and a polo club was founded. The economic crisis of the late twenties affected the Island as well, so after the suicide of Karl Kupelwieser in 1930, Brijuni became property of the Kingdom of Italy (1936). During the Second World War, Brijuni were occupied by the Italian army. After the fall of Italy in 1943, the Germans took over power and stayed on the Island for a short time (Public Institution Brijuni National Park, 2016).

Towards the end of the war, in April 1945, the Allies bombarded the Islands. The liberated Islands were annexed to the so-called Yugoslavian B zone and in 1949 they became the official residence of Josip Broz Tito, ruler of Yugoslavia. During Tito's time, many presidential residences were built, of which many are still used for the residential purposes of the President and the Government of Croatia, and a part of it is under the jurisdiction of MORH (the Honorary Battalion and the Croatian Navy). During the presidency of Josip Broz Tito, exotic animals came to the Islands mostly as gifts from friendly overseas countries. Unfortunately, the taxidermized animals are, due to historical circumstances, mostly without the necessary documentation. Still alive today are the descendants of Zebras and Indian cattle that came to Brijuni to live in the currently called Safari Park, as well as a lama, an elephant, Cameroon goats and ostriches. Foreign species are no longer being introduced in the Brijuni area (Public Institution Brijuni National Park, 2016).

4. Geodiversity

According to the Nature Protection Act (NN 80/13), geodiversity is defined as the diversity of soils, rocks, minerals, fossils, relief formations, underground structures and phenomena as well as all the natural processes that have created them through geological periods, including the Brijuni ichnofossils, i.e. geological records of animal activity (Public Institution Brijuni National Park, 2016).

In geological and geomorphological terms, between 10 to 20 thousand years ago, Brijuni was an integral part of the Istrian mainland. It was the rise of the sea level after the last ice age that turned to be the key factor shaping the Adriatic coastline, forming the Brijuni Archipelago as we know it today (Public Institution Brijuni National Park, 2016).

Based on their geological structure, the islands were formed during the lower Cretaceous period with sediments of crystalline-structured hard limestone also known as marble limestone. The rock mineral raw material that is part of this formation is horizontally layered, easily breakable, white or light-yellow coloured, abundant in clay and metasilicic acid, strong and great as building material. In fact, due to its quality as building material, the stone from Brijuni was highly valued already during Venetian times and was exported and used throughout Europe (Venice, Ancona, Vienna). There are traces of stone exploitation visible on almost all the islands of the archipelago.

Furthermore, regarding the palaeontology evidences recorded on the archipelago, around 200 Theropod and Sauropod dinosaur footprints were recorded at four locations on Veliki Brijuni as well as on the islands of Vanga, Galija and Vrsar. The footprints date back to the Early Cretaceous period (130 to 100 million years ago). Along with the dinosaur footprints, ripple marks from 100 million years ago and fossilized gastropods called *nerinea* were recorded in Veliki Brijuni. Among the youngest paleontological finds is the bone breccia, a formation where parts of ancient mammals' bones can be seen (Public Institution Brijuni National Park, 2016).

5. Biodiversity

5.1 – Land

5.1.1 – Terrestrial Habitats

Under the influence of the general climate of this zone, Brijuni is mostly composed of holm oak forests, having its characteristics relatively well developed in some parts of the Park. These holm oak forests are in fact a mixed forest with macchia, holm oak and black ash. This typical composition is found in several parts of Veliki Brijuni and in some places of Mali Brijuni. The fenced forest east of the "White Villa" on Veliki Brijuni is considered the most beautiful forest of that type in Croatia and the most valuable vegetation complex of the entire Brijuni Islands. Beside the typical species (holm oak and black ash), the macchia is made up of numerous shrubs (mock privet, strawberry tree, turpentine tree, mastic, laurestine, myrtle and tree heath) and many climbing plants (common smilax, old man's beard, wild asparagus, southernwood and dog rose). The laurel tree subassociation has also developed in various parts of Veliki Brijuni. Furthermore, a variety of grasslands associations compose the vast majority of Brijuni's lands (Public Institution Brijuni National Park, 2016). In the island of Veliki Brijuni there are also 2 locations of artificial lakes/ponds that form a wetland type of habitat, providing shelter, rest and food to a variety of internationally birdlife of importance.

Different plant communities alternate along the Island's coastline, depending on the coast type and the distance from the sea. Some of these form relevant habitat-types considered of international protection, such as the case of the endemic halophytic community of statice and the narrowleaf plantain (*As. Plantagini-Limonietum cancellati* H-ic. (1934) 1939). These communities grow on the shore reefs, consisting of a small number of endemic species widely distributed (Public Institution Brijuni National Park, 2016).

According to the Public Institution Brijuni National Park documentation of 2016, the legal Croatian framework concerning habitat classification (Travnjaci, 2005) and the studies regarding landscape and spatial identity performed in 2015 and 2016 by Oikon d.o.o. Institute of Applied Ecology, Table 3 shows the different terrestrial habitats existent in Brijuni National Park.

Table 2-3 – Terrestrial Habitats of Brijuni NP.

Source: Public Institution Brijuni National Park, 2016; Travnjaci, 2005; Oikon d.o.o. Institute of Applied Ecology (2015)

NCH mark	HABITAT TYPE
A.1.	Stagnant surface inland waters and wetlands
C.3.5.	Submediterranean and epimediteranean dry grassland #
C.3.6.	Rocky pastures and dry grasslands of the eu- and steno-Mediterranean
D.3.1. / D.3.4.	Mediterranean Shrubs and Bushes
E.8.1.	Mixed, sparse homogeneous evergreen forests and macchia of holm oak and kermes oak #
E.9.2. / E.9.4.	Anthropogenic forest stands of conifers and broadleaf trees plantations
F.3. / F.4	Gravelly seashore / Rocky seashore
F.4.1.	Rocky shores with halophyte communities (<i>Limonium</i> spp.) #
I.1./I.2./I.5./I.6./I.8.	Cultivated non-forested areas and habitats with weeds & ruderal vegetation
J.2./J.3./J.4./J.5.	Built and industrial facilities

Habitats marked with # are endangered and rare habitat types of national and European importance, according to the Directive on habitats types, habitat map and endangered and rare habitat Types (NN 88/14), based on the Nature Protection Act (NN 80/13 (Public Institution Brijuni National Park, 2016).

5.1.2 – Terrestrial Flora

Due to the climatic characteristics of the Islands, the majority of the floristic elements on Brijuni have real Mediterranean characteristics, while Submediterranean species are far less represented, both by the number of species and habitat size. Besides the holm oaks, it is possible to find some other important autochthonous Mediterranean plant elements, such as: holly, strawberry-tree, myrtle, terebinth, mastic tree, heather and flowering ash, among others.

The most recent inventories of native vascular flora of Brijuni registered around 365 taxa – without counting the imported dendroflora. The imported dendroflora counted approximately 184 taxa with species such as the stone pine (*Pinus pinea* L.), the Aleppo pine (*Pinus halepensis* Mill.), the Turkish pine (*Pinus brutia* Ten.), the cypresses (*Cupressus* sp.) and the cedars (*Cedrus* sp.), that have dominated the landscape of Veliki Brijuni. The dendroflora of Brijuni is rich in exotic plants and is very interesting in terms of botanical and forestry perspectives, since numerous species act as a potential seed base and mother plant for cutting and grafting propagation.

There are 42 endangered taxa recorded in Brijuni NP of which 4 taxa (9.5%) are critically endangered (CR), 7 taxa (16.7%) are endangered (EN), 11 (26.2%) are vulnerable (VU), 9 (21.4%) near threatened (NT) and 11 taxa (26.2%) are data deficient (DD). There are 33 strictly protected species among the endangered species of Brijuni Archipelago.

As a special feature of the Brijuni flora, it is worth mentioning the *Juniperus deltoides* R.P. Adams - a new species of the *Juniperus* in Croatia recorded on the island of Mali Brijuni, as well as the *Ampelodesmos mauritanica* (Poir.) - T. Durand & Schinz (rope grass) - a rare species of Croatian flora that until recently was considered extinct for the North Adriatic area (Public Institution Brijuni National Park, 2016).



Figure 2-9 – Rope grass - *Ampelodesmos mauritanica*.
Source: Public Institution Brijuni National Park, 2016

5.1.3 – Terrestrial Fauna

Apart from the introduced and easily observable mammals on the main islands of Veliki and Mali Brijuni, the lands and forests of the archipelago also host a variety of populations of other fauna members. The most known group of invertebrates inhabiting Brijuni archipelago are butterflies, with 44 recorded species of diurnal (*Rhopalocera*) and 331 species of nocturnal butterflies. (Public Institution Brijuni National Park, 2016). The inventory and mapping of herpetofauna of the islands has recorded two amphibian species: the marsh frog (*Pelophylax ridibundus*) and the *Pelophylax kurtmulerii*, and four species of reptiles: the European pond turtle (*Emys orbicularis*), which is also a permanent resident of the Brijuni pond, the red-eared slider (*Trachemys scripta*), the non-poisonous western whip snake (*Hierophis viridiflavus carbonarius*) and the Italian wall lizard (*Podarcis siculus*) (Public Institution Brijuni National Park, 2016).

As for freshwater ichthyofauna, due to high eutrophication and landfilling of the artificial lakes (pond and saline), the only fish species existent in these habitats are the introduced eastern mosquitofish (*Gambusia holbrooke*) along with the so-called goldfish (*Carassius* sp.). The area of the Saline is also an extremely important seasonal settlement for northern bird populations, being the most interesting site for wetland migratory birds in Brijuni. By the end of the summer many different bird species come to the Saline on their way to the south, allowing the observation of wigeons, whistling ducks, diving ducks, swallows and many species of herons. The arrival of the great white egrets, the black storks and the bitterns also indicates that this area is very important for such rare and endangered species, which here find their place for resting and feeding. The birdlife of the islands has in total 151 recorded species. The species of black-throated loon (*Gavia arctica*), red-throated loon (*Gavia stellata*), European shag (*Phalacrocorax aristotelis desmarestii*), sandwich tern (*Sterna sendvicensis*), common tern (*Sterna hirundo*) and common kingfisher (*Alcedo atthis*), have placed Brijuni as an Area of Ecological Network and as a NATURA 2000 Area under the Directive of Birds (Public Institution Brijuni National Park, 2016).

The outer islands of the Brijuni Archipelago are nestling places for seagulls, terns, pigeons and the European shag. In fact, the Brijuni Islands are one of the five most important nestling places for rare genus of cormorants in the Adriatic (by comparing the number of active nests in the last couple of years, an increase in nest numbers can be observed) (Public Institution Brijuni National Park, 2016).



Figure 2-10 – a) Deer (*Axis axis*); b) European shag (*Phalacrocorax aristotelis desmarestii*); c) Long-fingered bat (*Myotis capaccini*). Source: Public Institution Brijuni National Park, 2016; IUCN Redlist

There are 28 mammal species recorded in the Park, of which 15 are bats. Of the 15 identified chiropters, two are globally Near Threatened (*Miniopterus schreibersii* & *Nyctalus lasiopterus*) and one is globally Vulnerable (*Myotis capaccini*) while both are Endangered nationally. Of other mammals present on the Islands, the most interesting ones are the hedgehog (*Erinaceus* sp.), red squirrel (*Sciurus vulgaris*), brown hare (*Lepus europaeus*), axis deer (*Axis axis*), fallow deer (*Dama dama*) and mouflon (*Ovis aries musimon*) (Public Institution Brijuni National Park, 2016).

5.2 – Sea

5.2.1 – Marine Habitats

The sea area represents almost 80% of the total area of Brijuni National Park, being one of the most important values of protection. The sea is shallow, oligotrophic (low in nutrients and with low primary production), with an average depth of about 35 meters and large distance underwater visibility due to its transparency and low amount of suspended sediments (Public Institution Brijuni National Park, 2016).

Brijuni National Park's marine habitats are known for their seabed life communities (biocenosis). In the supralittoral zone, the most important of these communities are those developing on sandy and pebble seashores. In all parts of the Mediterranean, these communities are increasingly under the pressure of tourism, but fortunately in Brijuni they are still well preserved. Within the infralittoral zone, rocky seabeds dominate up until 10 metres of depth while sandy, muddy and detrital seabeds are found in areas of greater depth. The best developed biocenosis on the solid foundation is the one of infralittoral algae, often dominated by brown algae and yellow tube sponges (*Aplysina aerophoba*) and the *Chondrilla nucula* species. In areas of greater depth and more pronounced sea currents, coraligenic and semi-dark caves communities develop occasionally. Of communities that develop on moving substrates (sand and mud), the most common are the fine uniform sands and muddied sands communities on protected seashores, particularly associations with the *Cymodocea nodosa* species. In deeper areas with more pronounced sea currents there are the communities of coastal detrital seabeds. Meadows of *Posidonia oceanica*, a seagrass species, cover a relatively small area, yet this is one of the largest, if not the largest, settlement of *Posidonia* on the west coast of Istria (Public Institution Brijuni National Park, 2016). Table 2-4 shows all the sensitive marine habitats found in Brijuni Archipelago.

Table 2-4 – Sensitive marine habitats of the Brijuni NP according to the National Classification of Habitats. Endangered and rare habitat types are marked with # and determined according to the Directive on habitat types, habitat map, endangered and rare habitat types and on conservation measures for habitat types (NN 7/06, 119/09).

Source: Public Institution Brijuni National Park, 2016.

NCH designation	Type of habitat
F.1.2.	Supralittoral muds [#]
F.2.2.	Supralittoral sands [#]
F.3.2.	Supralittoral gravels and stones [#]
F.4.2.	Supralittoral rocks [#]
G.2.1.	Mediolittoral muddy sands and muds [#]
G.2.2.	Mediolittoral sands [#]
G.2.4.	Mediolittoral hard seabeds and rocks [#]
G.3.2.	Infralittoral fine sands with more or less mud [#]
G.3.4.	Infralittoral stones and gravels [#]
G.3.5.	Neptune grass meadows [#]
G.3.6.	Infralittoral hard seabeds and rocks [#]
G.3.8.3.	Underwater archaeological sites
G.4.1.	Circalittoral muds [#]
G.4.2.	Circalittoral sands [#]
G.4.2.2.	Biocenosis of seashore detritic seabeds [#]
G.4.3.	Circalittoral of hard seabeds and rocks [#]
G.4.3.1.	Coralligenous biocenosis [#]
G.4.3.2.	Biocenosis of semi-dark caves (as an enclave in the infralittoral) [#]

5.2.2 – Marine Flora

Currently, the Public Institution of Brijuni National Park has a list of marine flora that consists of 53 algae species, of which 23 are red algae species, followed by brown and green algae with 14 species each. Probably the most significant algae recorded in the Brijuni area is the endemic brown algae bladder wreck, or *Fucus virsoides* (Public Institution Brijuni National Park, 2016).

Due to small number of research projects and poor insights into the existing data, a much larger number of algae species is to be expected in the results of future investigations.

Four species of seagrass have been recorded: the Neptune grass (*Posidonia oceanica*), the slender seagrass (*Cymodocea nodosa*), sea wrack (*Zostera marina*) and dwarf eelgrass (*Zostera noltii*). Seagrasses cover a significant surface of the Brijuni seabed and, besides being protected and important marine flora elements, they also are often home to other protected species of marine fauna members such as the noble pen shell (*Pinna nobilis*), a protected mediterranean bivalve mollusk (Public Institution Brijuni National Park, 2016).



Figure 2-11 - Noble pen shell among Neptune grass (*Posidonia oceanica*).
Source: Public Institution Brijuni National Park, 2016

5.2.3 – Marine Fauna

Many strictly protected species of marine animals are found in Brijuni underwaters, and therefore, this is one of the most important characteristics of its ecological importance. Species such as the noble pen shell (*Pinna nobilis*), the marine sponge (*Axinella cannabina*) the orange puffball sponge (*Tethya aurantium*), the date shell (*Lithophaga lithophaga*), an endemic species of tunicate, the ascidian (*Polycitor adriaticus*), the European lobster (*Homarus gammarus*) and others, peacefully inhabit the park's waters (Public Institution Brijuni National Park, 2016).

The seabed abounds in sponges, shellfish, sea urchins, crustaceans and fish. Among fish some of the most numerous are sea basses, gilthead, grey mullets, soles, groupers, conger eels, dentexes and black umbers. Research has recorded 64 species of coastal fish and it is often possible to see the cartilaginous fish in the Park area, which is a rare sight nowadays in the Adriatic (Public Institution Brijuni National Park, 2016).

The waters of Brijuni, as mentioned before, are significant as a spawning place for fish and represent a unique oasis for typical sea species of the Northern Adriatic, having its preserved fish stocks considered as one of the greatest assets of this area and even of the whole Adriatic.

According to observations of the Park rangers and the expert protection department, the bottlenose dolphin (*Tursiops truncatus*) is a permanent resident of Brijuni waters and the loggerhead sea turtle (*Caretta caretta*) is also a frequent visitor. Both species are strictly protected under the Directive on Strictly Protected Species (NN 144/13, NN 73/16) (Public Institution Brijuni National Park, 2016).



Figure 2-12 – Loggerhead sea turtle - *Caretta caretta*.
Source: Public Institution Brijuni National Park, 2016

In the past, some species that were never seen in the Adriatic were found in the seas of Brijuni for the first time. Some species unknown to scientists up to then, like the soft coral *Alcyonium brionense* (Kuekenthal 1906) or the variety of the sponge *Ircinia variabilis fistulata* (Szymanski 1904), were described in Brijuni for the first time (Public Institution Brijuni National Park, 2016).

Table 2-5 shows the last inventory made on marine fauna species on the waters of Brijuni NP, but it is worth mentioning that it can be outdated for the same reasons as marine flora data (Public Institution Brijuni National Park, 2016).

Table 2-5 – Marine Fauna Species of Brijuni NP.
Source: Public Institution Brijuni National Park, 2016

GROUP	NUMBER OF RECORDED SPECIES
Sponges (Porifera)	37
Flatworms (Platyhelminthes)	2
Cnidarians (Cnidaria)	28
Molluscs (Mollusca)	104
Spoon worms (Echiuroidea)	1
Bristle worms (Polychaeta)	66
Sipunculid worms (Sipuncula)	1
Crabs (Crustacea)	79
Moss animals (Bryozoa)	15
Echinoderms (Echinodermata)	19
Tunicate (Tunicata)	19
Vertebrates (Vertebrata)	64
TOTAL	435

3. Methods

Considering the purpose of this study, a planned methodology was built in order to determine whether it is viable or not to create a MEET branded ecotourism package around Brijuni National Park, in Croatia. The methods are divided as follows:

1) Determination of the study area

As Brijuni National Park is an uninhabited archipelago, the evaluation of the local companies and operator's opinions regarding the study's issues had to be expanded to the mainland. However, if the service providers were too far distant from the protected area, the transportation of visitors would become harder to perform and less sustainable (due to fossil fuel exploitation), going against MEET's ideals of sustainable approaches of ecotourism products.

As so, the study area was defined inside a buffer of 30km around Fažana, a coastal town that hosts the harbour from where the Brijuni boats take off every day.

Using GIS tools (ArcMap 10.6.1), the study area is visible in Figure 3-1.

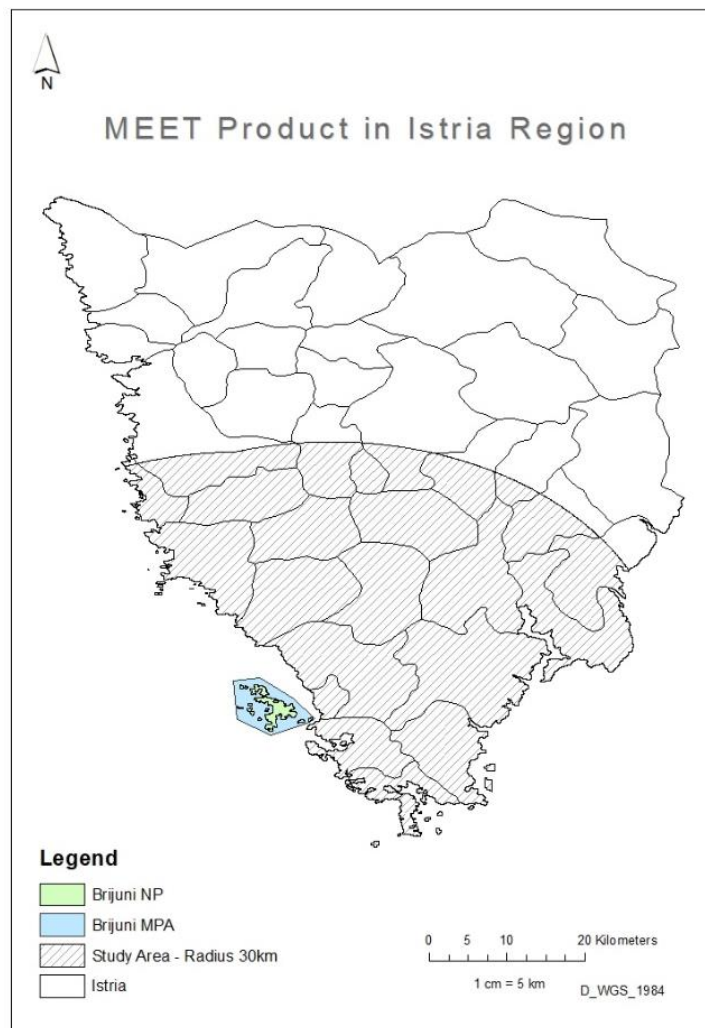


Figure 3-1 – Study area: 30km buffer around Fažana, Istrian peninsula, Croatia.

2) Data collection of local relevant companies and operators

Since the goals of this study target tourism-related companies and operators, it is necessary to evaluate what type of businesses exist in the defined area and which of them could be compatible with the ideal of MEET. Therefore, using bibliography, local tourism brochures, Brijuni's staff knowledge, the insights of University of Economics and Tourism of Pula and local tourism websites, it was possible to come across a full list of 70 local service providers that might be useful in the construction of the hypothetical MEET ecotourism package.

The companies were chosen according to the service they provide and how that service could potentially be included in the eco touristic MEET package. Therefore, the collected companies, can include services such as Accommodation, Tourism Agencies, Local Producers (olive oil, wine, etc...), Recreation (scuba diving, biking centres, museums...), Public Institutions, Private Institutions, Restaurants and Transportation businesses.

The full list of the targeted local companies is present in Annex I, where it can be consulted.

3) Development and distribution of an Online Survey

A questionnaire is one of the most helpful tools when the aim is to understand the public's opinion on certain topics. This survey aims to approach Sustainability, Ecotourism and MEET concepts.

The development of the Online Survey was performed on Google Forms platform, as a way to facilitate its distribution and posterior analysis of the responses. One of the considerations taken during the construction of this survey was to keep it the shortest possible and with short-typed answers, since bibliography has shown that shorter surveys are more likely to have positive effects on the responses (Kellerman & Herold, 2001).

The answers' method was also simplified by using pre-selected choices, such as "Yes" and "No" type of answers, 1 to 5 evaluations or simple box selection of contents. The few open answers were also short-typed, mostly with 2 or 3 words of usage. The survey, in Annex II, took approximately 10-15 minutes to be fulfilled by the respondents. The contents addressed were approached in the most complete way within possible, as an attempt to gather every information needed, while still maintaining a short-typed questionnaire.

The survey was divided in the following groups:

0. **Contact informations:** Name, Address, Contact.
1. **Service informations:** Type of service, Eco-labels, Staff, Administration and Legal informations.
2. **Ecotourism & Sustainability:** Perspectives and practices regarding these issues, by the eye of the respondent.
3. **MEET:** Perspectives and interests regarding this organization, by the eye of the respondent.

The questions were developed based on the MEET Manual (where the ideals and goals of MEET Network are available) and also based on some of the questions already existent in MEET's self-assessment survey, which works as a self-verification method for the local service providers

participating in the current MEET programs (provided by Carla Danelutti, MEET Network's executive secretary). All the questions regarding Ecotourism, Sustainability and MEET perspectives aimed to allow a full understanding of the respondent's ideologies, interests, practices and future possibilities of partnerships.

After obtaining the final version of the Online Survey (Annex II), its distribution was made via e-mail and phone calls, to all the companies listed in Annex I. Attached to each contact attempt, there was always a short presentation regarding the current study. In addition, in the beginning of each one of the chapters of the Online Survey, a brief explanation of the concepts was provided, accordingly. The contacts, either via email or phone, sought to clarify and enlighten the companies about the subject as much as possible, so it would become easier to respond to the online questionnaire afterwards.

4) Analysis and scored ranking of the Online Survey's replies

After receiving the responses to the Online Survey, it becomes possible to analyse them statistically. Google Forms platform is a Statistical & Qualitative Data Analysis Software, meaning that from the moment the respondents start filling in the survey, Google Forms starts to analyse it through basic parametric statistics, presenting the results in the form of bar charts or pie charts. This is very useful to acknowledge the percentages of responses to a certain answer and take conclusions regarding the general local perspectives on the topics of this study.

The first stage of this analysis aimed to assess the percentage of responses in relation to the total number of companies consulted. The absence of response or the lack of interest in participating in the survey are decisive factors when selecting the potential companies to be included in the next step of the methodology (a hypothetical MEET ecotourism package). This provides evidence of the general motivation and interest of the local companies to participate in such ecotourism projects.

Even though the general perspectives are already important conclusions, it is also necessary to analyse each respondent separately. The answers to each question of the survey are what will define the connection points between the respondents and MEET Network.

Ideally, the closest the perspectives of the respondent are to the MEET's concept, the easier it would be to create partnerships between these. Therefore, since the survey was built to reveal the respondent's ideologies and practices, it is possible to compare and place all of the respondents in a scored ranking. This ranking will help to achieve a better perspective regarding the highest and lowest scored local companies, being the highest ones the closest to the MEET Network's ideal. This will then facilitate the choices between which companies shall be used for the future ecotourism package.

To begin with the execution of the scored ranking, it was necessary to analyse which of the survey's questions were highly defining of the proximity with the MEET's criteria of sustainability and ecotourism as well as the questions that better defined the respondent's interest in creating partnerships and future self-improvements. Analysing Annex II and MEET Manuals of 2016 and 2019 (Drumm et al., 2016 and Noll et al., 2019), the majority of the questions were considered defining. However, some of the questions presented in the survey were merely informative or used as support tools, to better understand the respondent's background and reinforce the posterior conclusions. Therefore, the non-defining questions on the survey were mostly regarding business information, education degrees or personal experiences (Q1.1, Q1.2.1, Q1.5, Q2.2 and Q3.1). Nonetheless, there was one non-defining

question that covers sustainability perspectives that was not considered for the scoring. This question (Q2.18) was an attempt to understand the relation between the respondent and the Sustainable Development Goals (SDGs) launched by the United Nations. However, while this can be considered valuable additional information, it is still not a requirement of MEET Network criteria, serving merely as a supportive instrument for further discussions.

Once the non-defining questions were identified, it was possible to begin with the scored ranking of the companies. To do so, for each response of the survey, possible scores were attributed. Since the answers were mostly evaluations of 1 to 5 and in the majority of them the “5” represented a closeness to the MEET’s ideals, it was defined that the ranking of the companies would be a summation of scores. The companies with higher scores have higher places in the ranking. In all of these 1-5 questions, the respondents have the quotation of the number they selected, except in Q2.8, where the scores are reversed. The 1 to 5 scale can also be translated into a qualitative evaluation where 1=Very Low, 2=Low, 3=Medium, 4=High and 5=Very High.

For the answers of “Yes” and “No”, the majority of the affirmative answers confirmed a higher proximity with MEET’s consensus. Therefore, the scores attributed were “5” and “1”, respectively, except for Q2.12, where the scores were reversed. These types of questions represent a higher weight in the scoring, since they represent total absence or total presence of agreement with MEET criteria. To finalize, in Q2.10, the answers available were “Yes”, “No” and “Not yet”, where the scores attributed were “5”, “1” and “3”, respectively. The “Not yet” and “3” represent a neutral response and score, because while the respondent may not be fully committed to the concept yet, he reveals to have space for future improvements. Figure 3-2 shows the subtitles of possible points for each question of the survey.

Group 1					
Q1.2	1	5			
Q1.3	1	5			
Q1.4	1	2	3	4	5
Q1.6	1	5			
Q1.7	1	5			
Q1.8	1	5			
Group 2					
Q2.1	1	2	3	4	5
Q2.3	1	2	3	4	5
Q2.4	1	2	3	4	5
Q2.5	1	2	3	4	5
Q2.6	1	2	3	4	5
Q2.7	1	2	3	4	5
Q2.8	1	2	3	4	5
Q2.9	1	2	3	4	5
Q2.10	1	3	5		
Q2.11	1	2	3	4	5
Q2.12	1	5	(REVERSED)		
Q2.13	1	5			
Q2.14	1	5			
Q2.15	1	5			
Q2.16	1	5			
Q2.17	1	5			
Group 3					
Q3.2	1	2	3	4	5
Q3.3	1	2	3	4	5
Q3.4	1	2	3	4	5
Q3.5	1	2	3	4	5
Q3.6	1	2	3	4	5
Q3.7	1	2	3	4	5
Q3.8	1	2	3	4	5

*(REVERSED) = If the person chose the highest value or the affirmative "Yes" of the question, the points attributed will be the lowest and vice-versa.

Figure 3-2 – Possible scores for each defining question of the Online Survey.

According to Figure 3-2, the maximum value of the ranking would be 145 points, the minimum value would be 29 and the neutral would be 87 points (calculated with the median between max. and min.). With a simple summation of the points it becomes possible to rank the companies according to each group of the survey (1, 2 and 3) and have a broader perspective on their final place in the table.

For a more accurate representation of how the total points of the respondent connect to the MEET Network’s ideals, each Group of the survey was attributed with different levels of importance.

Group 1 was decided to have the least importance in the calculus, since the questions in this group mainly approached staff, legal and minor management issues, which does not pose a big deadlock between MEET and the companies itself, since it is passible of easy future improvements.

Group 2 and Group 3 were decided to have the highest and similar levels of importance. The questions in Group 2 related mostly to the companies’ perspectives and practices regarding Ecotourism and Sustainability ideals, which is an important linkage factor. Even though this is a major link between the companies and the MEET Network, if the companies have a less positive performance in this Group, they can still improve these fields in the future if they effectively aspire to collaborate with MEET Network. MEET is always responsible to provide support and guidance to new businesses as a way to improve their current sustainability standards once they engage in the evaluation process for participating in MEET Guide. Finally, Group 3 is the group where the companies are directly enquired on their interest in collaborating with MEET Network and with Brijuni National Park. This group allows a more direct answer in understanding the engagement of local service providers, therefore also having a strong importance in the calculations of the scored ranking.

Given the different number of questions in each group, different weight levels were attributed to each Group in calculations to achieve the importance criteria defined.

The Total Score of each respondent was given based on the following equation:

$$\text{Total Score} = (\text{PG1} \cdot 0.2 + \text{PG2} \cdot 0.3 + \text{PG3} \cdot 0.5)$$

PG1 – Points of Group 1

PG2 – Points of Group 2

PG3 – Points of Group 3

Based on the Total Score formula, the maximum score would be 47.5, the minimum score would be 9.5 and the neutral value would be 28.5. To present these values in a more perceptible way to the viewers, the calculus was adapted to a 100% scale, as it is shown in the following equation:

$$\text{Total Score \%} = [(\text{PG1} \cdot 0.2 + \text{PG2} \cdot 0.3 + \text{PG3} \cdot 0.5) \cdot 100] / 47.5$$

Given this final calculus, the maximum score of the ranking is now 100%, the minimum score is 20% and the neutral value is 60%. This means that all of the companies ranked above 60% are able to be included in the ecotourism package, and the closer the respondent gets to 100%, the more apt they will be for the role.

5) Creation of a hypothetical MEET eco touristic product

Once the scored ranking is achieved, it is then possible to select the highest scored companies to include their services on a hypothetical MEET branded ecotourism product.

The creation of the hypothetical eco touristic product was based on the criteria of the MEET Manuals of 2016 and 2019 (Drumm et al., 2016 and Noll et al., 2019). The chapters considered for this purpose were those where the manuals teach about “Creating a MEET ecotourism product” and about “Incorporating elements of sustainability”. The rest of the chapters of both manuals were not considered for this stage of the study, as it would imply that the product was already in action or that the LEC was already formed.

The target-group for this specific package, according to MEET Network’s standards, is English speaking nature-oriented travellers, interested mainly in soft adventure and cultural tourism, seeking alternatives to mass tourism (Noll et al., 2019). According to Weaver (2005), the MEET type of ecotourist profile manifests both Soft and Hard characteristics, such as “Deep interaction with nature” (Hard) but “Physical comfort” (Soft) at the same time. Consequently, this product is built focusing on small groups (max. 12) of experiential travellers that prioritize spending on experiences, activities and meals, but that do not intend hard physical adventures. The MEET traveller profile is, in general, tech savvy, with a higher level of education and often experienced in traveling to both traditional and exotic destinations (Noll et al., 2019). The main age groups are Baby Boomers (born in 1940s to 1960s) and Gen X (1960s to 1980s), although Millennials (1980s to 2000s) are also an ever-growing market (Noll et al., 2019).

The basis of this step was to build a 3+ days eco touristic package, including, if available, services such as accommodation, recreation, transportation, tourism agencies and food suppliers. The idea was to also include activities where the targeted visitors would learn about the local cultures and nature values of the region. Interaction between locals and visitors was also appreciated for this step, as well as promotion of direct contact with nature elements and conservation strategies for Brijuni National Park. This methodology step was fully dependent on the suppliers that responded to the previous questionnaire. This means that the only services available to be included in the package were the ones whose respondents filled in the Online Survey and who reached at least a 60% score in the ranking.

The construction and description methods of the package were inspired based on the examples of other MEET products already active in other Mediterranean protected areas, such as Lastovo Islands and Kornati National Park’s MEET itineraries.

6) Verification of the eco touristic product

After reaching a final structured example of an eco-touristic package, the product can then be submitted to a verification method, based on MEET Manual adapted checklists, as a way to obtain valid feedback on its eventual execution.

Even though the MEET Manual by Noll et al. (2019) already includes a pre-done checklist for the users' utilization, not all of the questions were considered valid for the current study's product. Since some of these pre-defined checkmarks were related to a product that was already in action or that already had a formed LEC, there was a necessity of an adaptation. Therefore, the checklists used for this specific step were adapted to the context of the present study and, based on the chapters used to build the product, some other relevant verification marks were added.

The full checklist used for this verification step can be found in Annex III.

This methodology can provide tools to stimulate the protected area of Brijuni National Park to further engage in ecotourism projects, such as MEET, and improve the sustainability standards of the area. Once the National Park knows its potential allies and recognises the verification of a hypothetical ecotourism package by MEET Network's criteria, the way to new partnerships becomes wide open. Even if the verification does not obtain full approval, the column of "Observations" will provide room for future improvements in behaviours and practices not only of the protected area, but also of local service providers that are interested in following a more sustainable approach to tourism performances.

4. Results

After applying the chosen methodologies, the results were divided in 3 main sectors: 1. Online Survey's responses, 2. Proposal of a MEET ecotourism product and 3. Verification of the product through checklists. The outcomes went as following:

4.1 Online Survey's responses

As a way to better understand the background of the totality of the enquired companies, the results of the online survey come to reveal the true insight of the local opinions regarding the study's issues.

For a total of 70 enquired companies (Annex I), 35 have successfully replied to the Online Survey, meaning that 50% of the initial sample was active for the current study, while the other 50% either did not take interest or will to participate (Figure 4-1).

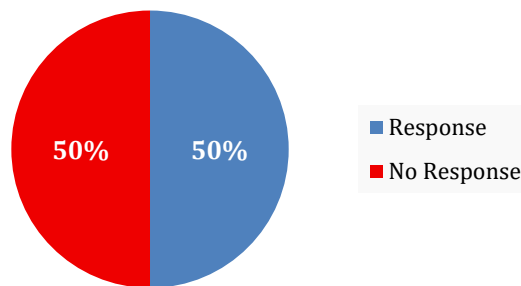


Figure 4-1 – Percentage of responses to the Online Survey.

Of the 35 analysed companies, the results show that the vast majority were located in the municipalities of Pula (8 respondents), Vodnjan (8 respondents) and Fažana (3 respondents). Even so, there were also a few (16 respondents) in a more distributed area within the 30km buffer around Brijuni National Park, as it is shown in Figure 4-2.

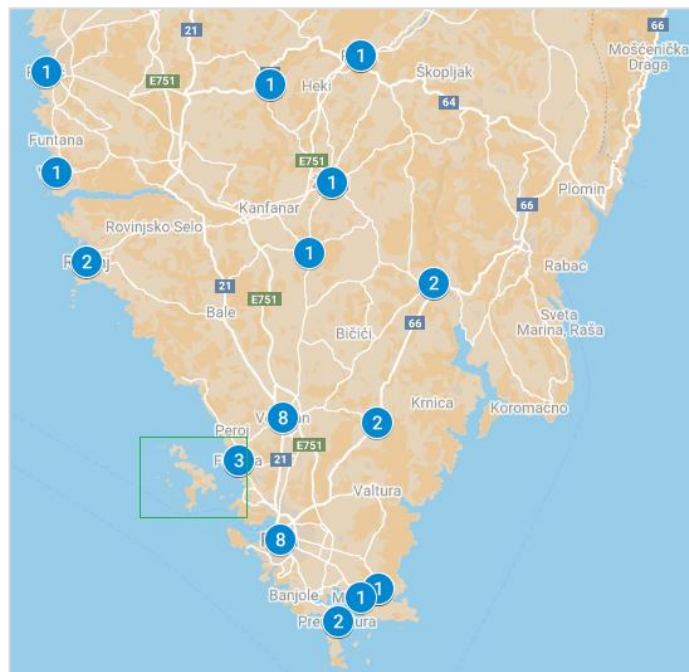


Figure 4-2 – Number of respondent companies per Municipality.

1.1. Responses to Group 1 of the Online Survey

Questions of Group 1 of the Survey were mainly related to the type of services, staff, management and function of the respondent’s company.

For Q1.1, each respondent could select one or more than one type of services within their businesses. Therefore, the results in Figure 4-3 show the percentages of different types of services that were included in the responses.

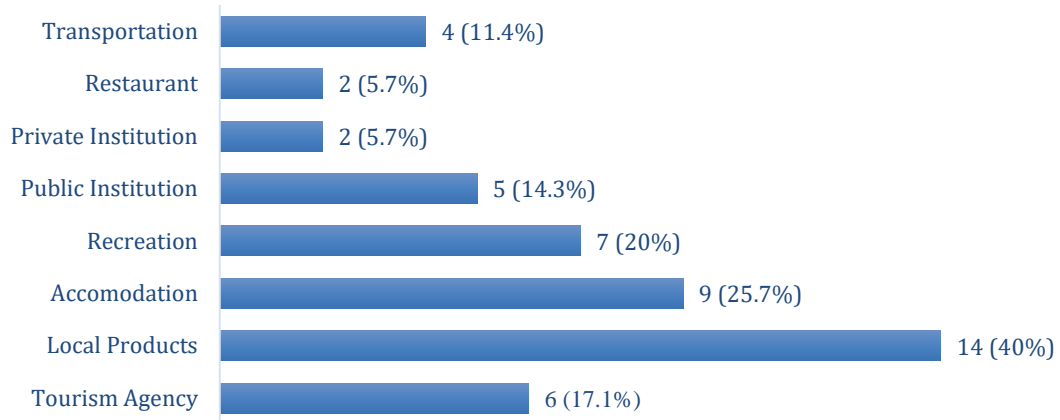


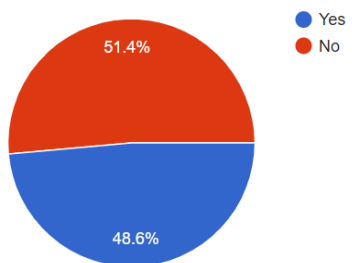
Figure 4-3 – Q.1.1. Type of services from the survey's respondents.

Local products were the highest representative business for this study, with 40%, followed by accommodation facilities, with 25.7%, while restaurants and private institutions were the lowest representative services, with only 5.7% each.

In terms of the eco certification regarding the services and products of the companies, the results have shown that 48.6% of the respondents already have some type of eco validation. The most predominant ecolabels were “Eco Domus”, aimed at accommodation facilities, and non-specified labels for Organic/Eco/Bio production, aimed for agriculture and local production (Figure 4-4).

1.2. Is your service Eco-certified in any way?

35 responses



1.2.1. If you replied "Yes" in the previous question, please indicate the respective Eco label(s).

16 responses

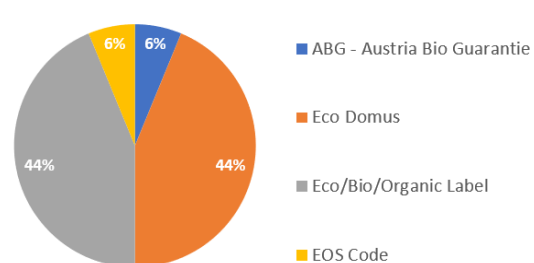


Figure 4-4 – Q.1.2. Results for Eco certification of the respondents.

The non-specified labels for Organic/Eco/Bio production were identified based on expressions used by the respondents such as “Eko Certifikat”, “Bio Production”, “Organic Agriculture”, “Eko/Bio” and similar terms.

As for questions 1.3, 1.4 and 1.5, the results have shown that 91.4% of the companies do operate in low season (Figure 4-5), the education levels of the staff/employees are, in its majority, bachelor or technical (42.9% and 28.6%, respectively), as it is visible in Figure 4-6, and in a scale from “Very Low (1)” to “Very High (5)”, the majority of the companies only collect between 2 or 3 (Low or Medium) amount of data about their clients (Figure 4-7).

1.3. Do you operate in low season?
35 responses

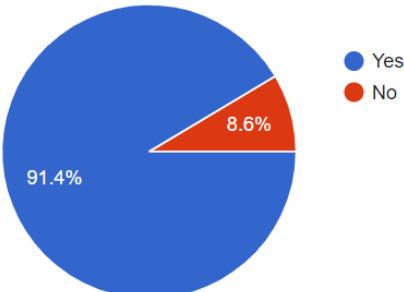


Figure 4-5 – Survey's responses to low season operation.

1.5. What is the average education level of your employees?
35 responses

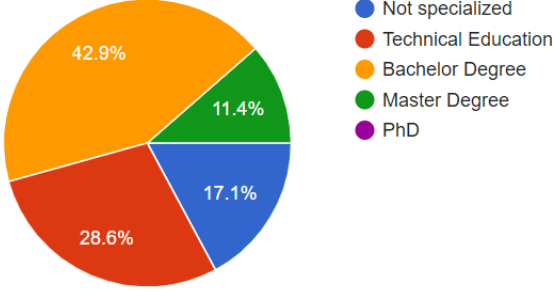


Figure 4-6 – Education level of the respondent's employees.

1.4. How much data do you collect about your clients?
35 responses

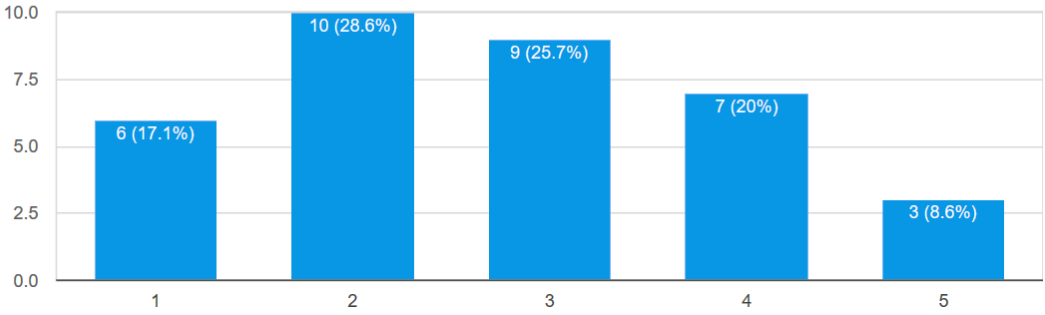


Figure 4-7 – Q.1.4. Data collection of the companies' clients.

Furthermore, according to the responses to Q1.6, Q1.7 and Q1.8, the results have shown that the majority (82.9%) of the respondent businesses are owned by local residents and that 100% of these businesses are hiring mostly local or national residents as their employees. Also, 100% are in compliance with all local, national, and international regulations, maintaining up-to date labour, land use, environmental, health and safety, operational permits/licenses and approvals as required by law within the regions of operation (see Figure 4-8).

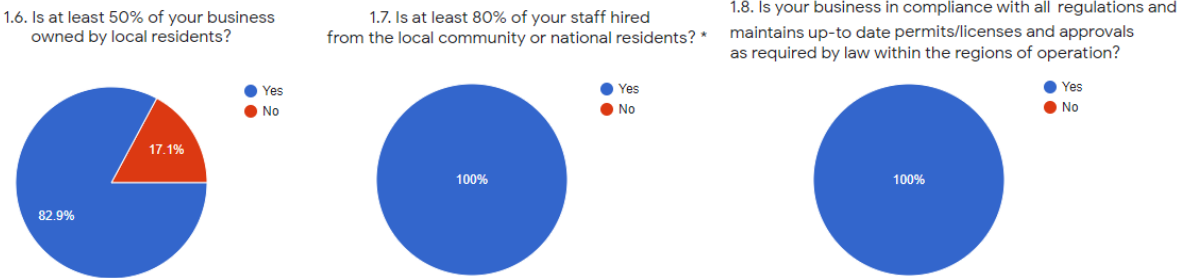


Figure 4-8 – Responses results to Q1.6, Q1.7 and Q1.8 of Group 1 of the Online Survey.

1.2. Responses to Group 2 of the Online Survey

Questions of Group 2 were mostly related to the perspectives and ideals of the companies regarding Ecotourism and Sustainability issues. Figure 4-9 shows the average knowledge and personal insights of the respondents regarding the concept of Ecotourism (Q2.1 & Q2.2). According to the results, on a scale of “Very Low (1)” to “Very High (5)”, the majority of respondents have a Medium (3) to High (4) familiarity with the concept (31.4% and 37.1%, respectively). Even though 5.7% have Very Low (1) and 11.4% have Low (2) insights about the topic, 14.3% have a Very High (5) knowledge about it. In total, 57.1% of the respondents have been clients of Eco touristic businesses (Figure 4-9).

2.1. How deep are you familiar with Ecotourism?

2.2. Have you ever been a client of Ecotourism businesses?

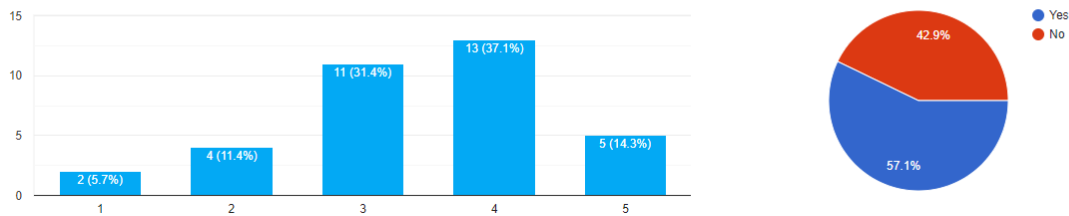
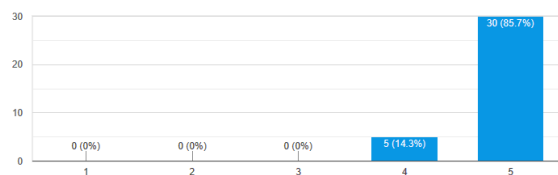


Figure 4-9 – Results of Q2.1 and Q2.2.

For the answers regarding nature conservation, local communities’ well-being and sustainable approaches as major elements on the Ecotourism industry, the results have shown that 100% of the respondents distribute their qualitative attribution to these topics as Medium (3), High (4) or Very High (5), being Very High and High the greatest incident replies (Figure 4-10).

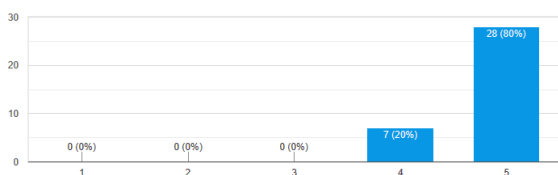
2.3. Please select the importance that you would attribute to Nature Conservation and Environmental Education in ecotourism businesses.

35 responses



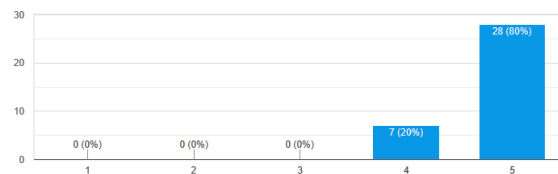
2.4. Do you agree that low-season tourism can become a potential benefit for local economies?

35 responses



2.5. Do you believe Ecotourism could bring a better life-quality for local communities?

35 responses



2.6. Do you agree that tourism approaches should become more sustainable in the future?

35 responses

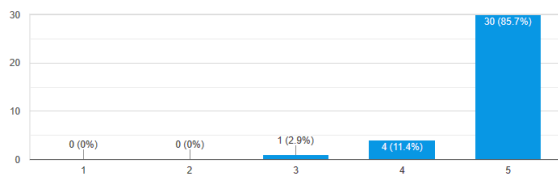
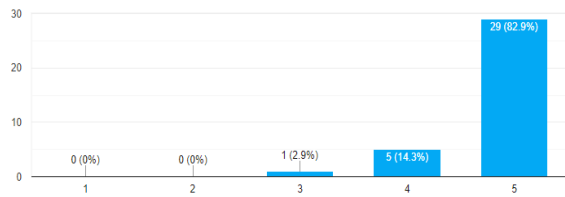


Figure 4-10 - Results of Q2.3, Q2.4, Q2.5 and Q2.6.

Furthermore, the results of Q2.7 and Q2.8 have revealed the perspectives of the respondents regarding the tourism sector in the region. While Q2.7 has shown that the majority (82.9%) consider Tourism as a Very Important (5) sector in the Istrian region, Q2.8 has come to prove that most of the respondents are not fully content with how the tourism industry is currently operating in the region. According to Figure 4-11, 60% answered with a Medium (3) level of satisfaction, 8.6% answered with a Low (2) level of satisfaction and 22.9% answered with a Very Low (1) level of satisfaction to the system of mass tourism widely implemented in the region. Only 5.7% are Highly satisfied and 2.9% Very Highly satisfied with such system.

2.7. In your opinion, how important is tourism for the Istrian region?
35 responses



2.8. How pleased are you with the traditional mass tourism approaches in the Istrian region?
35 responses

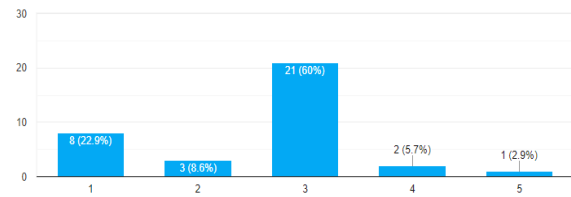
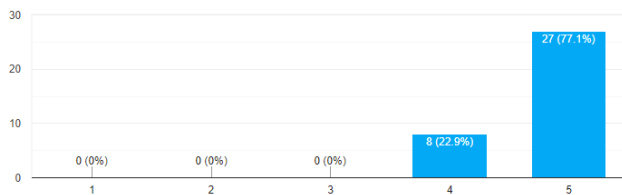


Figure 4-11 – Answers to Q2.7 and Q2.8 of the Online Survey.

Regarding Q2.9, 77.1% of the companies consider that the Istrian region can Very Highly (5) benefit from ecotourism approaches and 22.9% believe the region can Highly (4) benefit from it (Figure 4-12). Results of Q2.10 reveal that, in fact, 54.3% of the respondent companies already practice some form of Ecotourism, 37.1% not yet perform any forms of Ecotourism but might do it in the future, and 8.6% do not perform any type of Ecotourism activity (Figure 4-12).

2.9. How do you think that the Istrian region can benefit from ecotourism approaches, such as ecotourism packages and projects?
35 responses



2.10. Does your company support or participate in any forms of Ecotourism?
35 responses

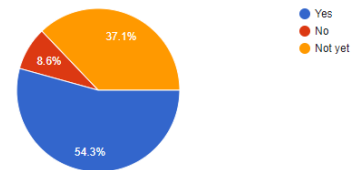


Figure 4-12 – Answers to Q2.9 and Q2.10 of the Online Survey.

As for the Sustainability conceptions and sustainable practices within the companies, Q2.11 aimed to make the respondent self-evaluate their business on a scale from Very Low (1) to Very High (5). Figure 4-13 shows the results: 31.4% self-evaluated as Medium (3) Sustainable, 62.9% considered their business Highly (4) Sustainable and 5.7% Very Highly (5) Sustainable.

2.11. How would you self-evaluate your own business in terms of Sustainability standards?
35 responses

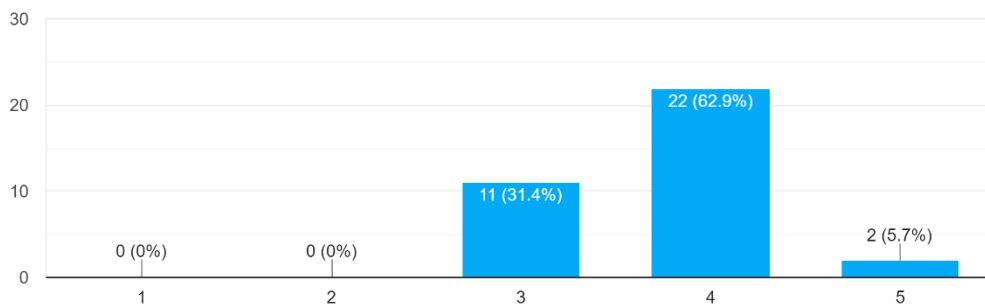


Figure 4-13 – Results of Q2.11 of the Online Survey.

Still regarding the Sustainability concept, the respondents were also enquired to select some of the 17 SDGs (Sustainable Development Goals) launched by the United Nations, considered relatable or important to each respondent business. The results regarding this topic (Q2.18) are presented in Figure 4-14, where it is possible to see the percentage of respondents that selected each one of the 17 SDGs. The highest incident selected SDG was n°12 (Responsible Consumption and Production) with 67.6% and the lowest incident selected SDGs were n°1 (No Poverty) and n°10 (Reduced Inequalities), with 17.6% each (Figure 4-14).

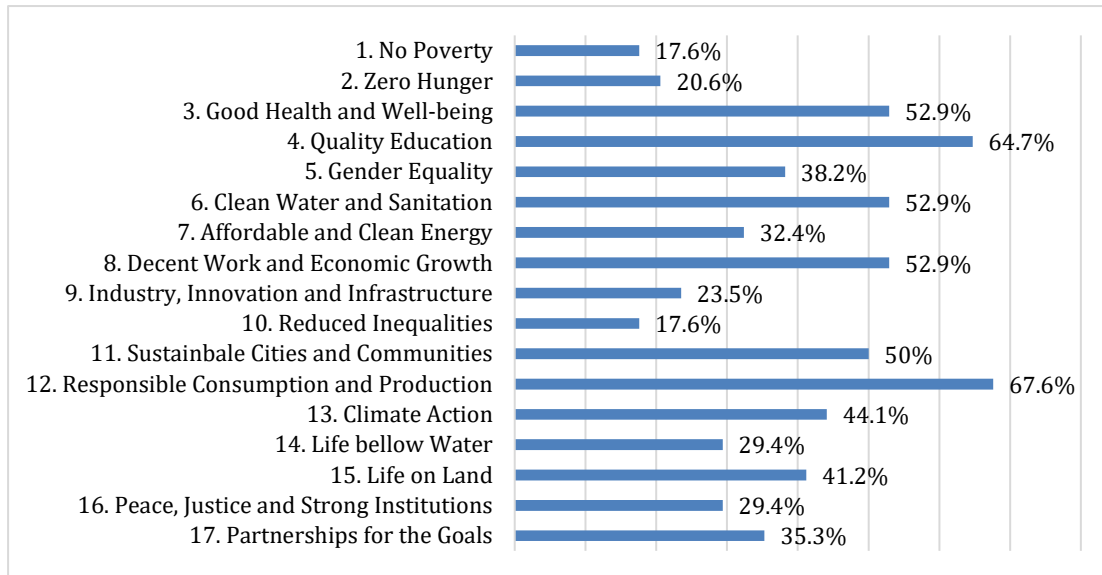


Figure 4-14 - Results of Q2.18 of the Online Survey.

The final results of Group 2 relate to the retrieved questions from the original MEET questionnaire, showing compliance, or lack of it, with the MEET requirements. While for Q.212, Q.2.13 and Q.2.14 the results show a majority of compliance with the requirements (94.3%, 91.4% and 65.7%, respectively), Q2.15, Q2.16 and Q2.17 show a majority of lack of compliance with MEET’s necessities (71.4%, 68.6% and 62.9%, respectively) (Figure 4-15).

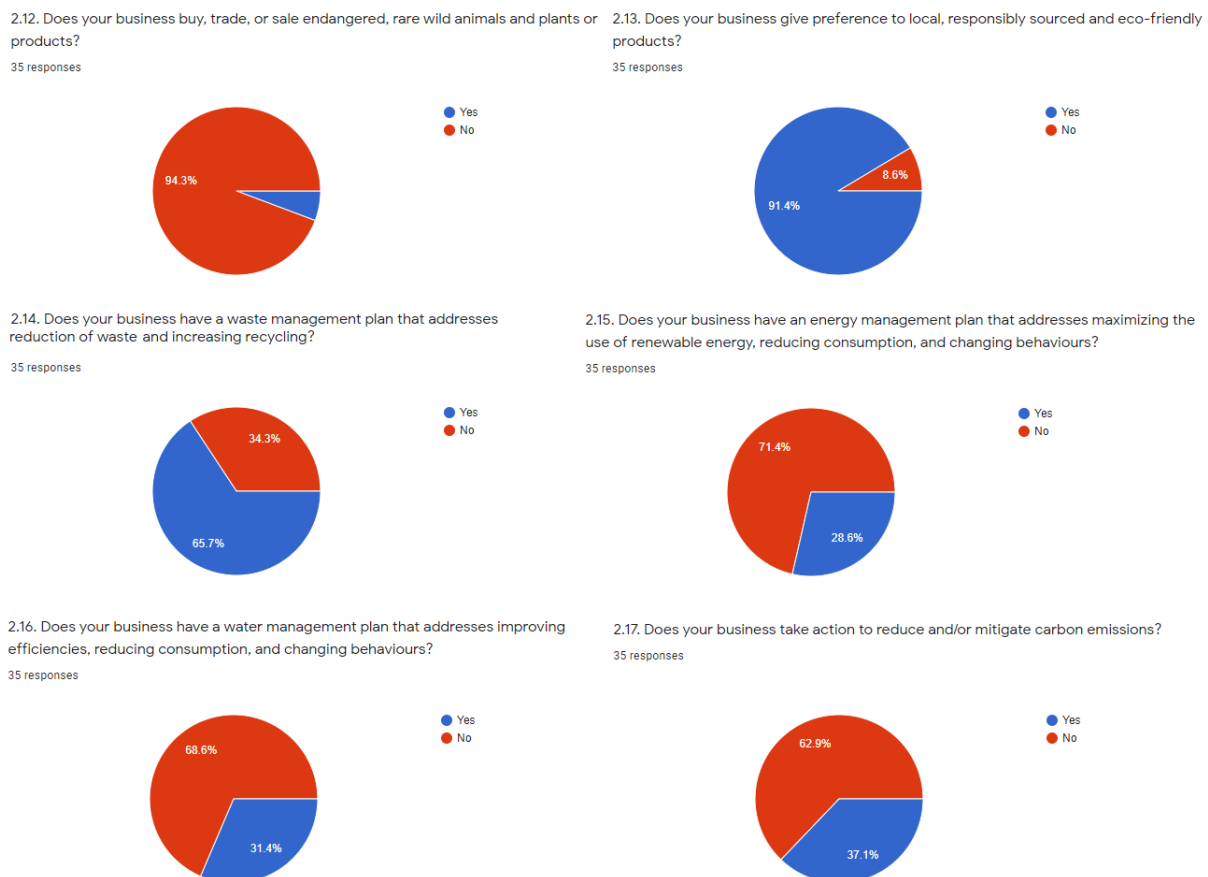


Figure 4-15 – Results of Q2.12, Q2.13, Q2.14, Q2.15, Q2.16 and Q2.17 of the Online Survey.

1.3. Responses to Group 3 of the Online Survey

The 3rd and final Group of the Survey enquired the local suppliers and operators directly about their real interest in collaborating with Ecotourism projects, specifically MEET, and their motivations in engaging with Brijuni National Park. Figure 4-16 shows the results regarding the previous knowledge of the enquired entities about MEET and about the intended goals of this organization. According to Figure 4-16, the majority (82.9%) of respondents did not have knowledge about the existence of MEET before participating in the present study. Even so, 48.6% have Highly (4) understood the goals of this organization, followed by a Medium (3) or Very High (5) understanding of the goals, with 22.9% each. Only 5.8% did not understand the concept and goals of this organization (2.9% Very Low (1) and 2.9% Low (2)).

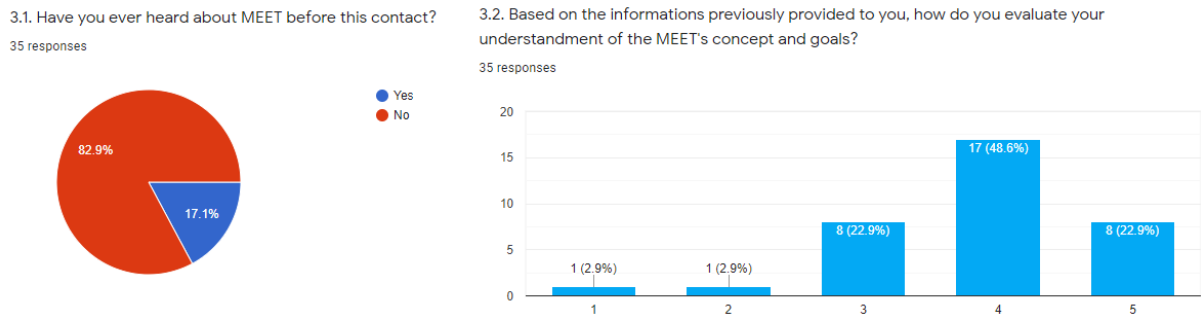


Figure 4-16 – Results of Q3.1 and Q3.2 of the Online Survey.

The following answers of Group 3 (Q3.3-Q3.8) reveal a majority of Medium (3), High (4) and Very High (5) interest of the participants to engage with MEET Network and Brijuni National Park, being High (4) and Very High (5) the most incident answers (see Figure 4-17). However, there was still a minimal percentage of Low (2) and Very Low (1) feedbacks, regarding Q3.3, Q3.7 and Q3.8.

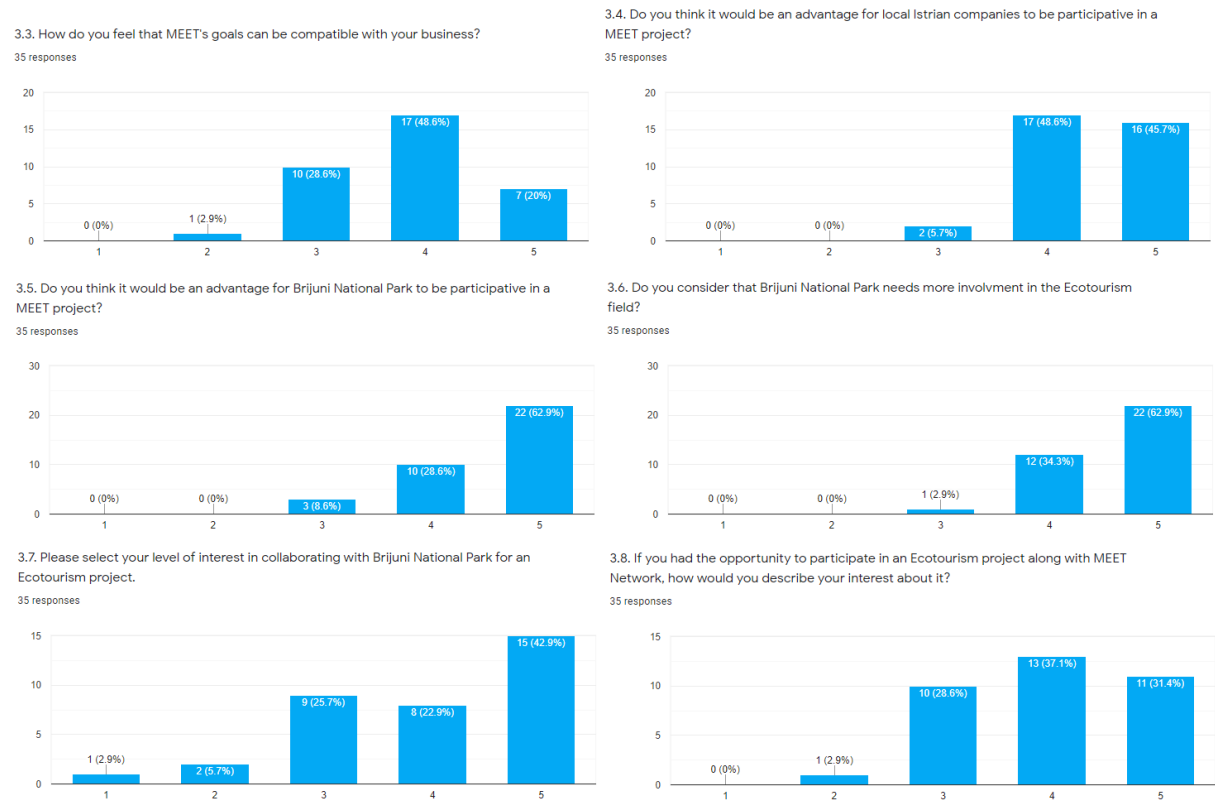


Figure 4-17 – Results of Q3.3, Q3.4, Q3.5, Q3.6, Q3.7 and Q3.8 of the Online Survey.

5.2. Scored Ranking of the respondent companies

After obtaining all the responses and applying the previously explained methodology, the following scored ranking was achieved (see Table 4-1). The highest score possible for this evaluation was 100%, the lowest score possible was 20% and the neutral score was 60%. As it is visible in Table 4-1, all the respondents have achieved a score above the acceptable neutral value, and more than half of the respondents have reached a score above 80%. Full description of the obtained Ranking is in Annex IV.

Table 4-1 - Scored Ranking of the respondent companies.

Name of Company	Type of service(s)	Ranking (%)
Lavarino Royal	Accommodation	95,6
Villa Ladonja	Accommodation	92,4
Oleificio Baioco	Olive Oil & Accommodation	92,2
Holiday Home Sabin	Accommodation	91,8
OPG PRENC	Hemp products	91,6
Villa Milica	Accommodation	91,4
Brist d.o.o.	Olive Oil	88,6
Hippocampus	Scuba Diving	88,6
Villa Benić	Accommodation	88,6
OPG Balija	Olive Oil	86,7
FILS d.o.o.	Transport	86,3
Administrative Department for Tourism - County of Istria	Public Institution	85,5
Rovinj Sub - Diving Center	Scuba Diving	85,1
Istrian de Dignan Ecomuseum	Museum & Restaurant & Local Products & Private Institution & Accommodation & Transport	84,0
House Una	Accommodation	82,9
G Chiavalon	Olive Oil	82,3
IstraKayak	Kayaking	81,9
OPG KOMPARIĆ MARKO	Olive Oil & Fig products	80,4
The Old Diver	Scuba Diving	79,6
OPG Vita	Olive Oil	78,9
URSARIA	Olive Oil	78,7
OPG Matteo Belci (MELOTO)	Olive Oil	78,7
Stancija St. Antonio	Olive Oil	78,3
OPG Lupieri Cadenela	Olive Oil	77,3
Brijuni Hotels & Villas	Accommodation & Restaurant & Public Institution	76,2
Istria Tours	Tourism Agency	74,3
ZEATOURS	Tourism Agency	74,3
A.T.I. d.o.o.	Tourism Agency & Transports	73,7
KALAVOJNA	Wine	73,3
IRTA d.o.o.	Public Institution & Private Institution & Tourism Agency & Recreation	73,1
IDA - Istrian Development Agency	Public Institution	72,8
Diving Pula	Scuba Diving	72,6
Javna ustanova Kamenjak	Public Institution	69,7
Scuba Libre	Scuba Diving	65,3
OPG DORIAN SILJAN	Eco grown vegetables	63,4

5.3. Proposal of a MEET Ecotourism Product

Based on the previous results, especially on the Scored Ranking of the respondent companies, it was possible to elaborate a proposal of a MEET Ecotourism Product, incorporating exclusively the respondent services with a score higher than 60% and giving special attention to those businesses with a closer score to 100%.

One of the core differentiators of a MEET ecotourism product is that it is based in protected areas, while being integrated with local communities and local service providers, thereby creating a unique niche-market product in the Mediterranean that supports conservation (Noll et al., 2019).

The target-group for this specific package, according to MEET Network's standards, is English speaking nature-oriented travellers, interested mainly in soft adventure and cultural tourism, seeking alternatives to mass tourism (Noll et al., 2019). According to Weaver (2005), the MEET type of ecotourist profile manifests both Soft and Hard characteristics, such as "Deep interaction with nature" (Hard) but "Physical comfort" (Soft) at the same time. Consequently, this product is built focusing on small groups (max. 12) of experiential travellers that prioritize spending on experiences, activities and meals, but that do not intend hard physical adventures. The MEET traveller profile is, in general, tech savvy, with a higher level of education and often experienced in traveling to both traditional and exotic destinations (Noll et al., 2019). The main age groups are Baby Boomers (born in 1940s to 1960s) and Gen X (1960s to 1980s), although Millennials (1980s to 2000s) are also an ever-growing market (Noll et al., 2019).

The idea is to provide these targeted groups with a package of high-quality levels (10/10), in a perspective of natural, cultural and personal quality time.

MEET ecotourism products are supposed to include a combination of a Tour Leader (responsible for organization, logistics and general information) and Local Guides (subject matter, destination, or naturalist experts) (Noll et al., 2019). Therefore, one of the determinations of this MEET product's proposal is to incorporate a Tour Leader that remains with the group for most of the time, helping tourists to participate in all the activities and communicating with local people. Furthermore, incorporation of Local Guides would serve as a link to the community, culture, history, cuisine, nature and local essence of the destination.

This package is planned at a 6-day itinerary across the islands of Brijuni National Park, plus a glimpse of a few local municipalities. It includes activities, accommodation, as well as transportation from Arrival point to Exit point in Croatia. Transfers on the mainland can be provided by some of the respondent companies (see Table 6), within the usage of small vans (able to include the entire group). Transfers to/through the islands can be performed with the official Brijuni Boat or other boat service providers (such as diving/kayaking/paddling suppliers). Accommodation options are multiple, according to the survey's responses. However, for this specific proposal, tourists would be allocated in one of Brijuni's Villas, for most of the nights, while still having the chance of experiencing two nights in other local facilities, on the day of Arrival (near Pula) and day of Departure (near Vodnjan). Meals would include a variety of local gastronomy, provided by local chefs. Additionally, each day would be aimed to include different activities and experiences provided by local recreational providers. This package proposal promotes vital interaction moments between ecotourists and local suppliers, as well as a dynamic participation of the clients with the park's conservation strategies.

The product description attempts to be captivating with the usage of inviting images and catchy words. The “Islands of Wonders” is a slogan that aims to attract the target-group to go to Croatia, as a way to experience a multitude of wonders found in one particular archipelago, away from the crowds.

The marketing of this product would be over the responsibility of MEET Network, which represents and markets its portfolio of ecotourism products to outbound tour operators and other interested tourism businesses, by attending tourism trade shows, meeting with tour operators and marketing itself online and through other channels (Noll et al., 2019).

This specific package aims to include a responsible share of the multiple natural, historical, cultural and gastronomical values that are found in the region, following the MEET’s requirements while still being legally feasible according to the Brijuni National Park’s frameworks.

Itinerary Description:

The first day includes a Sightseeing tour around Pula City’s historical sites, giving a general and historic view of the economic centre of Istria Peninsula to the visitors. The second day is dedicated to the Mediterranean Flora and Mediterranean Flavours of Brijuni Islands, where visitors are allowed to interact with mediterranean flora in specific activities and are also allowed to taste typical products of the region. The third day composes an experience of the Underwater World of Brijuni, where visitors are given the opportunity to dive, snorkel, paddle and/or kayak among Brijuni’s sea life, and, by the end of the day, visitors will also be able to have a full boat tour around the islands on a sunset & dolphin sightseeing. The fourth day is dedicated to the terrestrial fauna of Brijuni, where visitors are taught about the fauna members of the islands and where they are able to experience direct identification and monitoring of the mammals, helping the park’s conservation staff. The fifth day includes a full tour of the historical, paleontological and landscape formations of the entire island of Veliki Brijuni, where visitors have the opportunity to learn about these important values and also to actively participate in conservation measures: either Invasive Plant Species removal or Beach Cleaning, as a way to promote and support landscape status and habitat protection. Finally, the sixth day, includes a cultural and traditional experience for visitors, where they have the opportunity to interact with local folklore in a multitude of activities. The seventh day is Departure day, where visitors will be transferred to their Exit point of the country.

The contact between the tour operator and the customer is supposed to be done online, before, during and after the purchase of the product. Purchasing the product can also be performed via online methods. During the trip, the goal of the tour operator should be to engage with the client in a personal (but professional) level, promoting a good relation and instigating the future return of the client. After the client’s departure, the tour operator should keep in contact, either with “throw-back” memories of the trip, either sending newsletters promoting future experiences.

The price of the product was estimated based on page 73 of MEET Manual, Noll et al. (2019), having in consideration that Croatia falls under the category B of countries, such as Malta. Therefore, according to that information, the price estimation for this product is at a minimum of 100€ per day per person, a maximum of 250€ per day per person and an average price of 163€ per day per person.

The proposed flyer can be consulted in Annex V and the itinerary in Annex VI.

5.4. Verification of the Product through checklists

The verification of the product’s components was analysed in 5 sections, including different numbers of verification marks per section, with a totality of 65 verification marks.

Checklist’s Sections:

1. General Information (16 verification marks)
2. Included Services (15 verification marks)
3. Included Activities (14 verification marks)
4. Sustainable & Conservation components (10 verification marks)
5. Product’s presentation to the public (10 verification marks)

The results of the checklist verification, by section and percentage, went as following:

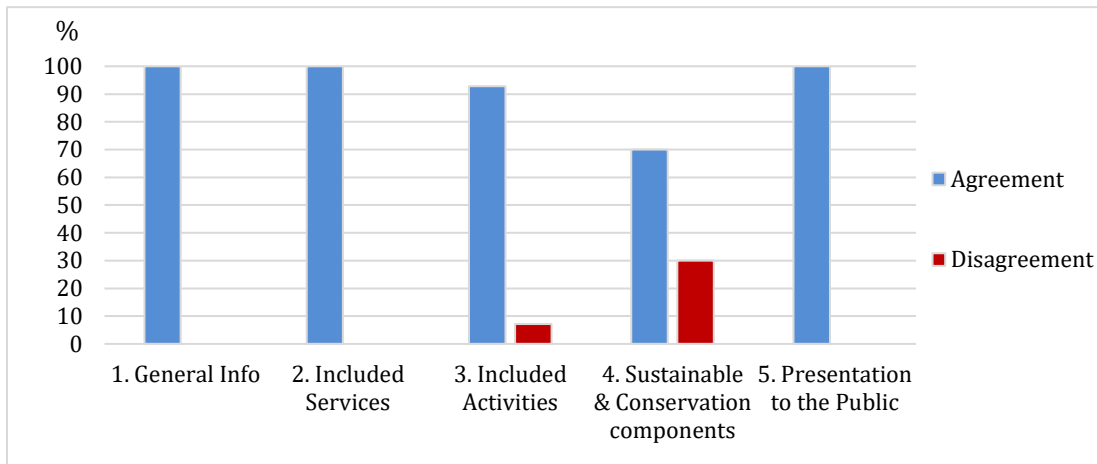


Figure 4-18 – Verification of the product’s compliance with MEET, by section.

As it is visible in Figure 4-18, the compliance with MEET is around 100% in all the sections except for section 3. Included Activities, where 92.9% are in agreement and 7.1% in disagreement with MEET requirements, and for section 4. Sustainable & Conservation components, where 70% are in agreement and 30% in disagreement.

Globally, the results of the product’s verification showed that out of 65 verification marks, only 4 were not in compliance with the MEET’s requirements. Translated to percentage analysis, the agreement percentage of this product with MEET’s requisitions is around 93.8% and the disagreement percentage is around 6.2% (Figure 4-19). The fulfilled checklist, observations and suggestions, is in Annex III.

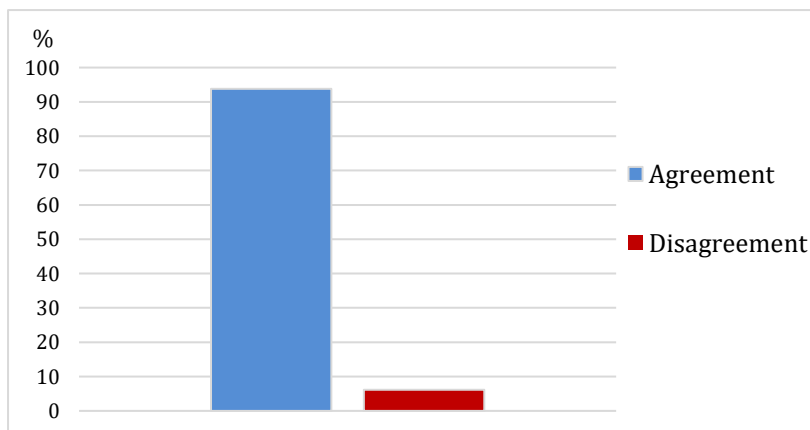


Figure 4-19 – Verification of the product’s compliance with MEET, globally.

6. Discussion

At the same time that the northern Adriatic is considered one of the most important regions of the whole Mediterranean basin, it continuously suffers the consequences of the mass tourism pressures, which threatens the region's natural and cultural heritage (Carić & Mackelworth, 2014). Currently, there is an active organization called MEET Network that comes to provide the necessary tools for Mediterranean protected areas to create more sustainable options of tourism strategies, through the best ecotourism practices.

As a way to safeguard the multiple values and integrity of the northern Adriatic sea, this study has attempted to assess the viability of creating a MEET Ecotourism product around Brijuni National Park, a croatian protected area, in the western Istrian coastline, and coincidentally located in the northern Adriatic sea. This study surges due to the urgent need to promote better ecotourism options for the protection of such important areas, by creating protocols, partnerships and common goals amongst local communities and other entities, towards a more sustainable future in the tourism sector. To do so, this study focused on understanding how the local touristic suppliers perceive the subjects of ecotourism, sustainability and partnerships for the goal. The distribution of an online survey, within a buffer zone around the selected protected area, was the main methodology to reach these local touristic businesses and understand their points of view. Moreover, the survey's results allowed conclusions regarding eventual allies or possible obstacles for Brijuni National Park to go forward with a MEET program in the future. Furthermore, with the survey's responses, it was possible to develop a proposal of an ecotourism product, following MEET's requirements, which, when verified through checklists, present a clear statement and visible arguments for answering to the hypothesis of this study.

Taking into consideration the variety of obtained results, the analysis and interpretation of the data covers a complex performance of details and interdisciplinarity.

Looking at the Online Survey's responses, it is visible that this data has presented an important tool to better understand and evaluate the opinions of the local touristic businesses regarding the studied subjects. According to the results, 35 out of 70 companies have partaken in the study analysis, meaning that 50% of the initial sample was active for this study. According to Isaac & Michael (1995), in cases of exploratory research and pilot studies, small sample sizes of 10 to 30 are enough, but may lead to statistical insufficiency (Hill, 1998). Determining sample size for an e-survey is not a simple nor a unidirectional procedure (Hill, 1998). Despite a large amount of literature on the topic, seemingly in all cases of the process there is always an element of arbitrary informed judgement and personal choice involved, which must be properly addressed and justified (Hill, 1998). It is important to mention that for this specific study, the 70 companies were selected based on their higher potential to be included in a hypothetical MEET Ecotourism product. It is also important to consider that it is extremely hard to estimate the totality of the parent population of all the tourism businesses on the study region, since many are sometimes not registered online and not easily accessed for statistical purposes. Furthermore, Kotrlik & Higgins (2001) mentioned that collection methods such as surveys and other voluntary participation methods, usually have response rates well below 100%. Salkind (1997) recommended oversampling while mailing out surveys, increasing the sample size by 40%-50% to account for lost mail and uncooperative subjects (Kotrlik & Higgins, 2001). Given all of the above, even though a 50% rate of responses may seem good enough for the present study, it must be clearly stated that it is mainly due to the specific context, which, in this case, is a merely exploratory research, aiming to test if there is any relation between the local engagement and the studied subjects (null hypothesis).

Out of the totality of respondents, a higher engagement in the study was noticeable by the geographical closeness of the business in relation to the National Park. This can be explained by the fact that these localities already profit from their proximity with the National Park, having an inherent interest in engaging with it. In simpler terms, this result can be easily justified by the fact that closer companies were highly valued and more approached for this study, as it would be more profitable and more sustainable to use those in a MEET product instead of far distant ones. As for the type of services responding to this study, the main ones were Local Products, Accommodation and Recreation. Once again, these ones were far more approached during the survey delivery compared to other services. This might have happened because during the research for potential participants for this study, there was a higher exposure of these type of services either from local brochures, local fairs or even from local entities (the protected area and Pula University of Economics and Tourism). The services' representativeness for this study lacks in Food suppliers (such as restaurants) or even Transportation suppliers, which would be interesting to improve in further researches. Regardless, from the totality of the participant services, it was positive to observe that nearly half of these are already eco-certified in some way and that almost 100% operate in low season, are in compliance with legal frameworks and give preference to local/national employees over foreign ones, contributing highly to the facilitation of the implementation of a MEET protocol in the future.

Even though the familiarity of the respondents with the concept of Ecotourism is not, in general, deeply profound, more than half of them have experienced Ecotourism as clients and the vast majority has some idea about the concept. This translates to the fact that even though a small percentage selected a Very Low or a Low amount of knowledge about the topic, in further answers, almost 100% of the respondents still selected a High or a Very High consideration of fundamental elements such as Nature Conservation, Sustainability and Local Communities' well-being in the Ecotourism subject.

The suppliers' opinions have come to prove the high importance that the tourism sector represents for the economy of Mediterranean countries, according to Figure 4-11. Although, at the same time, they have also come to express their somewhat discontentment with the operation of this sector based on mass-tourism strategies. This is a positive signal for future engagements, since Ecotourism provides good alternatives that might appeal the dissatisfied portion of the local businesses and stimulate them to invest in further eco improvements. In fact, the respondents have clearly stated that they believe that the Istrian region could highly benefit from ecotourism approaches, and more than half of them already support some form of this eco sector. This comes to bring these local suppliers even closer to MEET's ideals, which, once again, poses another beneficial link for future protocols.

Amongst the sustainability conceptions and behaviours of the suppliers, there was a slight controversy within the results. While the majority self-evaluated themselves as "Highly Sustainable" (Figure 4-13), that is not completely verified in the subsequent answers (Figure 4-15). Even though the majority are in compliance with not exploiting rare or endangered species, giving preference to local products and having a Waste management plan, when directly enquired about their management plans for other important sectors such as Energy, Water or Carbon Emissions, it is visible that the majority does not fulfil these sustainability requirements. These results are interesting in the sense of comparison between self-evaluations and actual real-life verifications. While one might be self-perceived at a certain level of sustainability, when actually reviewing the real parameters that define that level, one might be surprised. This is also a very good statement for continuously implementing plans of performance auditing for environmental purposes within the region's touristic companies, at least as a methodology of self-awareness and opportunity for future improvements.

According to a study by Barisic & Vukovic (2014), Croatia is far behind other developed countries regarding performance auditing in tourism sectors, even though it is a major tourism destination in the Mediterranean. The same study also states that the country requires a higher development and a deepened understanding of the importance of auditing in the tourism efficiency and its influence in the overall economy (Barisic & Vukovic, 2014).

Even though the respondent companies have a long way until reaching all of the sustainable requirements, this does not necessarily pushes them apart from MEET Network, but instead, calls for the purpose of this organization, which is helping these destinations becoming more environmentally responsible and aware.

Still regarding the suppliers' sustainability perspectives, it is interesting to see that the most selected SDGs (>50%) were: 12. Responsible Consumption & Production, 4. Quality Education, 3. Good Health & Well-Being, 6. Clean Water & Sanitation and, finally, 8. Decent Work & Economic Growth. Since there is an increased engagement of the local companies towards these topics specifically, these could become starting point departments for self-improvement of these businesses. Moreover, as the main respondents were related to Local Production and Accommodation, it is normal and expected of SDG n°12 to be the highest one selected. Furthermore, SDGs such as 1. No Poverty, 2. Zero Hunger or 10. Reduced Inequalities, for example, had a very low incidence, possibly due to the fact that Croatia is a developed country within European Union, which allows its inhabitants not to suffer directly the consequences of such subjects, when in comparison to other underdeveloped countries. To finalize the SDGs topic, it was unfortunate to see that SDGs such as 13. Climate Action, 14. Life below Water or 15. Life on Land, were poorly appreciated by the respondents (<45%), especially because the Istrian region has a vast natural component and unique biodiversity. However, it should be stressed that this specific question was probably one of the most demanding ones for the respondents (due to multiple selection of factors), which might have contributed to a lack of attention or a certain neglect for the meticulousness of the answer itself. Either way, the eventual collaboration between these companies and MEET Network could improve these values, and it would be interesting to study the evolution of such, in case Brijuni National Park eventually engages in a MEET project, in the future.

The last group of the Online Survey has allowed a direct observation of the respondents' opinions regarding their real motivations to engage with MEET and Brijuni National Park in a future case scenario. Even though the majority of these suppliers have never heard about MEET Network before, overall, they have presented some considerable level of understanding concerning the goals of this organization (Figure 4-16), which was tirelessly stressed during all of the contact attempts. When directly enquired about the level of compatibility between the MEET goals and their own business' goals, the opinions ranged from a Low to a Very High compatibility, being Medium and High the main selected responses (Figure 4-17). Although a majority of Medium to High compatibility is not to be considered a bad result, the incidence of lower compatibility values could be justified by the fact that MEET organization has some strict conditions regarding sustainability and responsible environmental behaviours, which, according to previous responses, are not entirely intrinsic to these local companies, making them reconsider their goals' similarity. High sustainability standards may scare some of the local suppliers at first sight, but those must not be considered impossible to achieve in a long-term partnership with a common-goal oriented relation. Moreover, all of the respondents have acknowledged the importance of a MEET project either for local companies either for Brijuni National Park. The vast majority has also considered that Brijuni should get a higher involvement with Ecotourism practices. As for the personal interest in creating protocols either with Brijuni or MEET, the local suppliers have shown mostly positive feedbacks. The fewer negative feedbacks for these specific questions may come

from the fact that new projects usually are not immediately welcomed, especially by local businesses that operate in a certain way for a long time.

Furthermore, some companies have shown (via e-mail or phone call) some reluctance regarding working specifically with Brijuni, due to its traditional mass-tourism approaches. Local resentment towards national parks and designated protected areas can rise when the area is viewed to be of principal benefit to tourists rather than the local businesses (Ceballos-Lascurain, 1992; Wearing, 2001). These types of initial mistrusts are common among the sector's stakeholders (Silva & McDill, 2004) but can easily be overcome with a formal presentation locally assembled, with further clarifications of the process and an established common bond. Despite the small percentages of mistrusts, it must be admitted that such high levels (>60%) of local engagement is extremely optimistic for future partnerships and eventual implementation of a MEET project in the region.

The optimistic answers for this study's online survey translated into a very good Scored Ranking, where all of the respondents were placed above the neutral value (>60%), previously established as a minimum standard to match MEET's requirements. It was also encouraging to see that more than half of these local suppliers are actually above 80% on the ranking, which are very good results for a pilot study with no precedents in the subject. The ranking has allowed a glimpse of the real-life touristic operators available for an eventual MEET product. According to this ranked list, all of the mandatory services to be included in a MEET package are available: Accommodation, Recreation, Local Products, Transports, Food Suppliers (restaurants) and Tourism Agencies, with a plus of Public and Private Institutions having an interest in the topic. According to Noll et al. (2019), an ecotourism cluster composed of engaged and diverse stakeholders can play an important role in local sustainable development. The ranking results of the present study are a great way to perceive the high potential that this region has in the ecotourism subject. Moreover, these scores come as a visible instrument to be presented to Brijuni National Park, where the potential allies are clearly identified, which may encourage the park's management to bet on a MEET protocol in cooperation with such businesses. Furthermore, for this specific study, a proposal of a MEET product was performed, as a way to create an extra corporeal groundwork to be presented to the Park's management, as an exemplification of future processes, aiming to instigate the Park to go forward into the ecotourism's best practices. The proposed product includes a variety of opportunities, either for local suppliers to expand their clients and their regional collaborations, either for the National Park to work towards more sustainable approaches of tourism strategies, either for the visitors, to have a personalized experience of the highly valuable components of the Northern Adriatic, away from the masses.

The product proposal was based on the target-group established by MEET (nature-oriented travellers with both Soft and Hard features of ecotourist profiles) and aimed at small groups (max. 12). These markets include large nature and culture-oriented segments who value an experience that is conservation-oriented and usually have a mid to high expenditure capacity, which is highly stimulating to improve the local economies during low season (Noll et al., 2019). Besides including the requested services (accommodation, transportation, recreation, local food supply and tourism operators), providing transfers for arrivals/departures and allowing a personalized experience (with a Tour Leader following the group the majority of the time), this package proposal distributes the activities along an itinerary of 6 days, with departure on the 7th day. The choice of a 6-7 days itinerary was based on the already existent MEET offer in Croatia, given that Kornati and Lastovo Parks are already in the MEET portfolio and both have similar durations for their packages.

The distribution of different thematic days throughout the itinerary was a choice based on an easier organization and management of the package. If one day is dedicated to the Sea, the sea-related suppliers will only be needed for that specific day, while if another day is dedicated to cultural values, the experts on that field will also be targeted for that specific date, allowing an easier management flexibility of such resources.

The inclusion of different thematic elements (Terrestrial Flora & Fauna, Marine Flora & Fauna and Local Culture, History & Cuisine) in detriment of just a few specialized subjects, was explored due to the vast complexity of heritages present in Brijuni Islands, which is exactly what the target-group of MEET ecotourist profiles aim to experience when purchasing such packages – a nature oriented experience, with inclusion of cultural, gastronomical and historical values).

Moreover, there was a constant attempt to include moments of deeper connection with nature conservation strategies in this product, not only because that is one of the most important MEET requirements, but also because Brijuni National Park could really use the help of ecotourists to perform such dynamic activities. For instance, occasionally, the park's biologists and nature-related staff get together at the end of their workday to monitor the numbers of mammals. This is done as a management strategy to furtherly control the herbivorous' populations on the islands, which is important to safeguard the park's vegetation conditions in the future. However, since these employees already have a high workload during their daily schedule, this monitoring procedure is sometimes delayed or not performed as often as it could be. The inclusion of such events for MEET ecotourists, with the proper guidance, can be extremely helpful for the park's nature conservation department and can be exciting for visitors as well. According to Noll et al. (2019), european ecotourism packages can hardly compete with African safaris, for example, in terms of mammals' observations. Given the fact that deers and mouflons are easily observable on the main island of Brijuni National Park, it is a big plus to include such experience in this package, as it will stand out from the rest of the european destinations included in the portfolio.

The fact that this product proposal includes optional activities and considers seasonal factors is a way to demonstrate some viable options to the protected area, in case it intends to participate in MEET or in any other version of ecotourism approaches in the future. However, it must be stated that there should be an expanded thought into the insertion of substitute activities for the ones that are weather-dependent. Furthermore, the inclusion of an estimated price, based on a similar category country (Malta) (Noll et al., 2019), was basically the only way to obtain an approximate pricing idea of such package. Since nor the Local Ecotourism Cluster (LEC) is formed, neither the protocols are established, the real-life achievement of such values would have to be discussed amongst the involved parts.

The proposed product is, according to the checklists, almost fully in compliance with the MEET's requirements, failing only in some specific sustainable matters and weather-dependent activities. Overall, if these potential stakeholders were to join on a MEET project now, with this specific proposed package, there were few obstacles to be overcome: the establishment of an official protocol amongst parts had to be submitted, mistrusts amongst the most scepticals had to be demystified, sustainable matters had to be reviewed either for the local suppliers either for the National Park and the product itself had to be discussed, accepted, planned and managed properly amongst the entire cluster (in terms of real-life pricing, marketing, itinerary, substitute activities, customer-client interconnection...etc).

In Croatia, sustainable tourism is widely recognized among the priorities in strategies and plans, but there are usually some deficiencies delaying the success of the process, such as the incomplete integration into development plans, the deprived share of the total and diverse offer or the unfinished incentive and supportive environment with all of the standard elements (information, awareness, education, technical assistance, financing, networking, promotion, etc.) (CEETO, 2018). Fortunately, at the same time, there is a current trend of rapidly growing numbers of green initiatives and more systematic financing for green touristic projects such as eco-labelling, green energy, designing "green" tourism activities and specialisation of tourist agencies dedicated to nature conservation and sustainable development (CEETO, 2018).

Systematic work on strengthening the capacity of tour operators to deliver products of "nature tourism" through regular cooperation with nature protection public institutions and other destination management organizations is in the pioneering phase in Croatia (CEETO, 2018).

This study can be considered a good contribution to the pioneering phase that Croatia is currently experiencing in the fields of sustainable tourism, ecotourism and new models for tourism strategies. The overall message provided by this study, in a global perspective, is that it is viable and fundamental to implement a networking system amongst the region's tourism suppliers, the protected area and MEET Network. The local touristic communities and entrepreneurships are willing to work towards an ecotourism approach and a more sustainable strategy in the future. The identification of potential allies and possible obstacles for the implementation of a MEET ecotourism product in Brijuni National Park, has come to provide a backgrounded tool for encouraging this region to bet on such approaches and invest on preserving its heritage through the best ecotourism practices. The main goal of such investments is not necessarily an increase in the number of visitors in destinations of natural value, but instead, if the development goes towards sustainability, it can become beneficial, with higher involvement of local communities, more frequent use of green technologies, increased awareness, etc. (CEETO, 2018). The selected region for this specific study could highly benefit from such approaches and, if successful, it could even become an example for other areas, expanding the ecotourism market and its potential advantages.

This subject can undoubtedly become a linkage between communities and the reaching point of the Sustainable Development Goals (SDGs) established by the United Nations, as an instrument to promote cooperation, awareness and a better life-quality for present and future generations.

7. Conclusions

This study has come to demonstrate that it is viable to work towards a MEET Ecotourism Product around Brijuni National Park, due to the highly positive engagement of local suppliers during the study. Even though some of the local entities still need to improve their behaviours towards sustainability matters, most have shown a strong will to develop their strategies in the future. MEET Network is the perfect ally to help this region to become more environmentally aware, while still maintaining the economic benefits that tourism provides.

In the future it would be interesting that Brijuni National Park submitted a MEET appliance, with an open space for local businesses to get integrated (even those who did not take part in this study analysis), creating alternative options to mass tourism and safeguarding the protected area's integrity.

If implemented, this product proposal would have to be properly discussed, edited, accepted, planned and managed according to the involved parts, counting on the improvements of some sustainable matters and the inclusion of substitute activities for the ones that are weather-conditioned.

The inclusion of other nearby Protected Areas (such as Kamenjak Nature Park) in a MEET package would be something to consider, to amplify the regional cooperation of classified areas of importance.

Furthermore, since other two Parks of Croatia are included in the MEET portfolio, it would be motivating if these could join forces with Brijuni National Park, to attempt an interconnected ecotourism package, where visitors could experience the full parts of Croatia's Adriatic sea (South – Lastovo Islands, Center – Kornati National Park and North – Brijuni National Park), while promoting its nature conservation and enhancing its cultural heritage.

The advantages of such implementation could potentialize the region's involvement in environmental matters and enrich the tourism industry towards a brighter and a more sustainable future.

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Annexes

Annex I – List of the companies selected for the study.

Number of enquired companies: 70.

Name of Company	Municipality	Type of service	E-mail:	Tel.:
Restoran Vodnjanka	Vodnjan	Restaurant	info@vodnjanka.com	N° +385052511435
T.O. Kod Milana	Vodnjan	Restaurant	kodmilana@gmail.com	N° +385052511264
Agritourism Sai	Vdonjan	Restaurant	kladija2sia@net.hr	N° +385052511033
Guranis	Vodnjan	Multiple	sabozac@net.hr	N° +385917881390
Batana Eco-Museum	Rovinj	Museum	info@batana.org	N° +38552812593
House of Istrian Olive Oil	Pula	Museum	info@oleumhistriae.com	N° +38552661235
Istrian de Dignan Ecomuseum	Vodnjan	Museum	istriandedignan@gmail.com	N° +385993503590
Kazun Park	Vodnjan	Museum	castelier.doo@gmail.com	N° +385912005600
RTA d.o.o.	Pazin	Biking	info@istria-bike.com	N°+38552434029
Istra Riding	Barban	Horse Riding	ranch@pu.t-com.hr	N° +385989829073
IstraKayak	Premantura	Kayaking	lovrobarbalic@gmail.com	N° +385098440977
Istria Bike Guide	Fazana	Biking	visitfazana@gmail.com	N° +385915568484
Starfish Diving Center	Vrsar	Scuba Diving	info.starfish.dc@gmail.com	N° +385098335506
Hippocampus	Fazana	Scuba Diving	info@hippocampus.hr	N° +385994006922
Rovinj Sub - Diving Center	Rovinj	Scuba Diving	info@rovinj-sub.hr	N° +385052821202
Diving Pula	Pula	Scuba Diving	danevski@gmail.com	N° +385989541690
Diving Shark	Medulin	Scuba Diving	info@diving-shark.hr	N° +385098366110
Orca Diving Center	Pula	Scuba Diving	marin@orcadiving.hr	N° +385989904246
Scuba Libre	Ližnjan	Scuba Diving	info@scuba-libre.net	N° +385989893200
The Old Diver	Rovinj	Scuba Diving	theolddiver@net.hr	N° +385098368344
Mergus Diving Center Puntizela	Pula	Scuba Diving	info@relaxt-abgetaucht.de	N° +385989033003
FILS d.o.o.	Medulin	Transport	films@films.hr	N° +38552383000
A.T.I. d.o.o.	Pula	Tourism Agency & Transports	petra@ati.hr	N° +385911255361
ALBATOOURS	Pula	Tourism Agency	info@albatours.hr	N° +385098656175
ZEATOOURS	Pula	Tourism Agency	info@zeatours.hr	N° +385052215202
AdriasTours	Medulin	Tourism Agency	info@adriastours.com	N° +385098694767
Uniline Tour Operator	Pula	Tourism Agency	info@uniline.hr	N° +385052390000
Istria Tours	Pula	Tourism Agency	sini@istria-tours.hr	N° +385994012153
G Chiavalon	Vodnjan	Olive Oil	tedi@chiavalon.hr	N° +38552511906
OPG Lupieri Cadenela	Vodnjan	Olive Oil	alupieri@msn.com	N° +385996493844
OPG VALTER ŠARIĆ Olea Prima	Vodnjan	Olive Oil	info@oleaprima.com	N° +38552511781
Stancija St. Antonio	Vodnjan	Olive Oil	info@stancija-st-antonio.hr	N° +38598481030

OPG KOMPARIĆ MARKO	Pula	Olive Oil & Fig products	marko.komparic@gmail.com	Nº +38598535669
OPG DORIAN SILJAN	Pula	Eco grown vegetables	dorian.siljan@gmail.com	Nº +385996992177
KAMPANJOLA	Svetvinčenat	Craft beer	kampanjola.bira@gmail.com	Nº +385989348231
OPG PRENC	Tinjan	Hemp products	nikolaprenc1@net.hr	Nº +385915422536
KALAVOJNA	Marčana	Wine	kalavojna@inet.hr	Nº +38598690164
Teraboto	Vodnjan	Olive Oil & Wine	teran1968@net.hr	Nº +385098668094
Oleificio Baioco	Vodnjan	Olive Oil	ester.geissa@gmail.com	Nº +385991904990
OPG Vita	Vodnjan	Olive Oil	vita.oliveoil@gmail.com	Nº +385098824181
BRIST d.o.o.	Vodnjan	Olive Oil	paul@brist-olive.hr	Nº +385052512415
Fameja Matošević	Rovinj	Olive Oil & Wine	matosevic.mladen@gmail.com	Nº +385989606758
Olea Prima	Vodnjan	Olive Oil	info@oleaprima.com	Nº +385996804580
OPG Banjolac	Banjole	Olive Oil	mariobanjolac@gmail.com	Nº +385052573067
OPG LORIS BAJKIN	Vižinada	Olive Oil	opg.bajkin@gmail.com	Nº +385915695960
OPG Matteo Belci	Vodnjan	Olive Oil	giannabelci@gmail.com	Nº +385098283616
URSARIA	Vrsar	Olive Oil	ursaria@ursaria.hr	Nº +38552772265
Medea Winery	Vodnjan	Wine	info@medea.hr	Nº +385994267841
Agroprodukt d.o.o.	Vodnjan	Olive Oil & Wine	info@agroprodukt-pula.hr	Nº +385052543443
OPG Balija	Fažana	Olive Oil	nicoletta.balija@gmail.com	Nº +385052521565
Vina Benazić	Pula	Wine	info@vinabenazic.com	Nº +385977987643
Villa Milica	Šajini	Accommodation	franko.sifari@gmail.com	Nº +385992226772
Casa Menta	Marčana	Accommodation	villa.casamenta@gmail.com	Nº +385996000346
Villa Gelci	Labin	Accommodation	nensi.diminic@gmail.com	Nº +38552857092
Villa Marten	Kanfanar	Accommodation	info@villa-marten.eu	Nº +38552830677
Home & Apartments Sabina	Pula	Accommodation	sabina.lizzul@gmail.com	Nº +385989290718
Kuća Una	Svetvinčenat	Accommodation	biba@medit.hr	Nº +385915271500
Lavarino Royal	Marčana	Accommodation	valentina.zgomba@gmail.com	Nº +385989270853
Villa Benić	Žminj	Accommodation	villabenic@gmail.com	Nº +385976383134
Villa Deep Blue	Labin	Accommodation	m.frankovic@novatec.hr	Nº +385912543693
Villa Ladonja	Barban	Accommodation	vila.ladonja@gmail.com	Nº +38552580013
Brijuni Hotels & Villas	Brijuni NP	Accommodation & Restaurant	natasa.stojkovski@np-brijuni.hr	Nº +38552525861
Hotel Lone, Hotel Eden, Hotel Monte Mulini	Rovinj	Accommodation	info@maistra.hr	Nº +385052800250
Allegro Hotel Rabac, Hotel & Casa Valamar Sanfior, Miramar Hotel Rabac	Rabac	Accommodation	reservations@valamar.com	Nº +385052465000
Hotel Parentium Plava Laguna	Poreč	Accommodation	reservations@lagunaporec.com	Nº +385052411500
IDA - Istrian Development Agency	Pula	Public Institution	marin.lerotic@ida.hr	Nº +385052381900
LAG - Local Action Group	Vodnjan-Dignano	Private Institution	lag.juzna.istra@gmail.com	Nº +385052512408
Administrative Department for Tourism	Poreč-Parenzo	Public Institution	Edi.Akilic@istra-istria.hr	Nº +38552351601
Natura Histrica	Pula	Public Institution	info@natura-histrica.hr	Nº +385052351520
Javna Ustanova Kamenjak	Premantura	Public Institution	strucni.voditelj@kamenjak.hr	Nº +385052575283

Ecotourism and Sustainability Perspectives of Istrian Local Service Providers

Welcome!

My name is Telma Figueiredo, I'm a portuguese MSc student in the Faculty of Sciences of Lisbon University.

I'm developing my thesis in Brijuni National Park, with the goal to study and evaluate the potentials in creating an Ecotourism product around this protected area, based on the criteria of MEET – Mediterranean Experience of Eco Tourism, an Association of Mediterranean Protected Areas that grew out of an EU funded program.

With this survey, and your coloboration, I will be able to get to know more about the local interests regarding ecotourism approaches in the region, as well as the current state of the sustainable standards happening at the moment.

Please fill in this questionnaire with honesty and thanks in advance for your kindness and cooperation.

The survey takes approximately 10 minutes. Thank you!

***Required**

Business & Contact Information

Please provide your business and contact informations below.

Name of the company: *

Your answer

Street Address: *

Your answer



Municipality: *

Your answer

Contact Name: *

Your answer

E-mail: *

Your answer

Tel.: *

Your answer

1. Service Informations

In this chapter you will be asked about informations regarding the type of service you provide as well as some management and staff related data.

Please select the most relatable answers about your business.



1.1. Type of Service: *

Please select the service(s) related to your company:

- Tourism Agency
- Local Products (olive oil, wine, truffles...)
- Accomodation (hotels, villas...)
- Recreation (diving centers, museums...)
- Public Institution (governmental...)
- Private Institution (entrepreneurship...)
- Restaurant
- Transportation (bus, transfers, taxi...)

1.2. Is your service Eco-certified in any way? *

"Eco-certified" stands for a national or international label attributed to your business by an accredited entity (Ex: Eco Domus, Prijatelj Okoliša, Nature Plus, Ecologo...)

- Yes
- No

1.2.1. If you replied "Yes" in the previous question, please indicate the respective Eco label(s).

Your answer

1.3. Do you operate in low season? *

- Yes
- No



1.4. How much data do you collect about your clients? *

Ex: nationality, gender, age, education level, number of clients per year etc...

1 2 3 4 5
None. Considerable amount.

1.5. What is the average education level of your employees? *

- Not specialized
- Technical Education
- Bachelor Degree
- Master Degree
- PhD

1.6. Is at least 50% of your business owned by local residents? *

A local resident is someone who lives in or is from the surrounding community.

- Yes
- No

1.7. Is at least 80% of your staff hired from the local community or national residents? **

- Yes
- No



1.8. Is your business in compliance with all local, national, and international regulations and maintains up-to date labor, land use, environmental, health and safety, operational permits/licenses and approvals as required by law within the regions of operation? *

Yes

No

2. Ecotourism & Sustainability Perspectives

According to The International Ecotourism Society (TIES), Ecotourism is now defined as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education", where education is meant to be inclusive for both staff and guests. Ecotourism is about uniting conservation, communities, and sustainable travel, therefore, it is highly connected with the Sustainability concept.

In 1987, the United Nations Brundtland Commission defined Sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs." According to the United Nations, Sustainable development requires an integrated approach that takes into consideration environmental concerns along with economic development.

A successful sustainable development agenda requires partnerships between governments, the private sector and civil society, as a way to work towards a shared vision and common goals.

Given the need to join forces to work towards a more sustainable future, in 2015, the United Nations (UN) released the 17 Sustainable Development Goals (SDGs) as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. The implementation of the 17 Goals are mandatory for all the UN State Members and they include the most diverse dimensions of Sustainability, from environmental aspects to socio-cultural approaches.

In this chapter please select the answers that translate the honest relationship of your business with Ecotourism and Sustainability approaches.

2.1. How deep are you familiar with Ecotourism? *

1 2 3 4 5

Not familiar at all. Very familiar.



2.2. Have you ever been a client of Ecotourism businesses? *

This question is merely regarding the personal experience of the individual filling in the questionnaire.

Yes

No

2.3. Please select the importance that you would attribute to Nature Conservation and Environmental Education in ecotourism businesses. *

1 2 3 4 5

Not so important. Very important.

2.4. Do you agree that low-season tourism can become a potential benefit for local economies? *

1 2 3 4 5

I don't agree. I totally agree.

2.5. Do you believe Ecotourism could bring a better life-quality for local communities? *

1 2 3 4 5

I don't believe. I strongly believe.



2.6. Do you agree that tourism approaches should become more sustainable in the future? *

	1	2	3	4	5	
I don't agree.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I totally agree.

2.7. In your opinion, how important is tourism for the Istrian region? *

	1	2	3	4	5	
Not so important.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very important.

2.8. How pleased are you with the traditional mass tourism approaches in the Istrian region? *

Traditional & Mass Tourism is the act of visiting a leisure destination with large amounts of people at one time. These approaches refer to mostly Sun, Sand & Sea and high-season types of tourism, as it currently happens in Istria coastline.

	1	2	3	4	5	
Not pleased.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very pleased.

2.9. How do you think that the Istrian region can benefit from ecotourism approaches, such as ecotourism packages and projects? *

	1	2	3	4	5	
It won't benefit.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	It can benefit a lot.



2.10. Does your company support or participate in any forms of Ecotourism? *

Ex: projects, programs, activities, workshops, monetary contributions towards nature conservation etc...

- Yes
- No
- Not yet

2.11. How would you self-evaluate your own business in terms of Sustainability standards? *

- Not sustainable. 1 2 3 4 5 Very sustainable.
-

2.12. Does your business buy, trade, or sale endangered, rare wild animals and plants or products? *

- Yes
- No

2.13. Does your business give preference to local, responsibly sourced and eco-friendly products? *

- Yes
- No



2.14. Does your business have a waste management plan that addresses reduction of waste and increasing recycling? *

- Yes
 No

2.15. Does your business have an energy management plan that addresses maximizing the use of renewable energy, reducing consumption, and changing behaviours? *

- Yes
 No

2.16. Does your business have a water management plan that addresses improving efficiencies, reducing consumption, and changing behaviours? *

- Yes
 No

2.17. Does your business take action to reduce and/or mitigate carbon emissions? *

- Yes
 No



2.18. Please select one or more than one of the Sustainable Development Goals that you consider most relatable to your own companie's goals.

The Sustainable Development Goals (SDGs) were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

- 1. No Poverty
- 2. Zero Hunger
- 3. Good Health and Well-being
- 4. Quality Education
- 5. Gender Equality
- 6. Clean Water and Sanitation
- 7. Affordable and Clean Energy
- 8. Decent Work and Economic Growth
- 9. Industry, Innovation and Infrastructure
- 10. Reduced Inequalities
- 11. Sustainable Cities and Communities
- 12. Responsible Consumption and Production
- 13. Climate Action
- 14. Life below Water (marine biodiversity)
- 15. Life on Land (terrestrial biodiversity)
- 16. Peace, Justice and Strong Institutions
- 17. Partnerships for the Goals



3. MEET Concept

MEET or Mediterranean Experience of Eco Tourism is an Association of Protected Areas that grew out of an EU funded project, with the goal to develop an ecotourism model for Mediterranean Protected Areas to promote a better seasonal distribution of tourism flows in this area.

Nowadays, this Association continues integrating new areas to expand the conservation and economic benefits of sustainable, respectful and nature-oriented tourism across the Mediterranean Basin.

MEET Network encourages Protected Areas to collaborate with Tourism Agencies and Local Service Providers, as a way to create an ecotourism itinerary that should be managed and agreed between all the participative entities.

MEET not only provides support and coaching for all the participants during the process, but also advertises and takes responsibility of marketing the itinerary to the targeted public, promoting environmental and economic benefits for the region implied.

Even though many Mediterranean Protected Areas, such as Brijuni National Park, have big approaches to High-Season and Mass Tourism practices, the idea of MEET is to create Eco alternatives that can provide more sustainable options for the future.

In this chapter please select the answers that better translate your understanding and interests towards MEET.

3.1. Have you ever heard about MEET before this contact? *

Yes

No

3.2. Based on the informations previously provided to you, how do you evaluate your understanding of the MEET's concept and goals? *

1 2 3 4 5

I did not understand at all. I fully understood.

3.3. How do you feel that MEET's goals can be compatible with your business? *

1 2 3 4 5

Not compatible. Totally compatible.



3.4. Do you think it would be an advantage for local Istrian companies to be participative in a MEET project? *

	1	2	3	4	5	
Not at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes, for sure.

3.5. Do you think it would be an advantage for Brijuni National Park to be participative in a MEET project? *

	1	2	3	4	5	
Not at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes, for sure.

3.6. Do you consider that Brijuni National Park needs more involvement in the Ecotourism field? *

	1	2	3	4	5	
Not at all.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Yes, for sure.

3.7. Please select your level of interest in collaborating with Brijuni National Park for an Ecotourism project. *

	1	2	3	4	5	
Not interested.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very interested.



3.8. If you had the opportunity to participate in an Ecotourism project along with MEET Network, how would you describe your interest about it? *

	1	2	3	4	5	
Not interested.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Very interested.

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Annex III – Checklists for product’s verification.

Adapted from Drumm et al., 2016 and Noll et al., 2019.

Developing of a MEET ecotourism Product				
Nº	Questions	Yes	No	Observs. and Sugs.
Section 1 – General Information of the Product				
1.1-	Is the core of the product in at least one Mediterranean PA?	X		Brijuni National Park is the targeted MPA, but according to the results of the survey it would be possible to include another one: Kamenjak Nature Park.
1.2-	Is the product integrated with local communities and local service providers? (niche-market)	X		
1.3-	Is the product targeted on English speaking nature-oriented travellers interested mainly in soft adventure and cultural tourism?	X		
1.4-	Is the package a nature and cultural oriented tourism product?	X		
1.5-	Is the product focused on a 3+ days itinerary?	X		
1.6-	Is the product adaptable to various durations?	X		Although this package is aimed for 6 days, it is adaptable to less days (where some of the activities will not take part), or to more days (with more activities or the same activities within a longer period of time).
1.7-	Is the product adaptable to different numbers of participants?	X		Yes, with a max. of 12 participants (according to the MEET Guide).
1.8-	Is the product aimed for groups of max. 12 participants per Tour Leader?	X		
1.9-	Does the product focus on low-season programs?	X		The product focuses mostly in Spring and Autumn seasons. Summer is a chaotic season in Brijuni due to mass tourism and Winter, especially January, is very hard due to the winds that cross the region.
1.10-	Are there different types of programs in the product, according to the different seasons?	X		

1.11-	Is the product encouraging the purchase of goods from local markets or similar?	X		
1.12-	Does the product include a full-time tour leader/guide?	X		
1.13-	Does the product include guidance for arrivals and departures to/from airport?	X		
1.14-	Does the product include a combination of tour leaders and tour guides?	X		The tour leaders and tour guides would be the responsibility of the ITO, but there would be a combination of guides, especially in Brijuni sightseeing tours.
1.15-	Are the tour leaders/guides fluent in English?	X		
1.16-	Are local tour leaders/guides preferred over foreign ones?	X		According to the local tourism agencies responses to the survey, the staff would be mainly locals or Croatians.
Section 2 – Services included in the Product				
2.1-	Does the product include at least one ITO (inbound tourism operator)?	X		
2.2-	Does the product include accommodation providers?	X		
2.3-	Does the product include local food suppliers?	X		
2.4-	Does the product include recreation providers?	X		
2.5-	Does the product include transportation providers?	X		
2.6-	Are at least 80% of the service providers in the package locally owned and operated?	X		
2.7-	Does the product include local, “authentic” and small-scale accommodation?	X		
2.8	Are small-scale traditional facilities with a particular attention for the use of alternative energy sources being favoured in the design of this ecotourism products?	X		In the majority of them yes, such as Villa Milica, where electrical energy is produced from renewable resources, the waste is recycled, plastics are used at the minimum, cleaning products are ecologically certified and natural materials are preferred wherever possible.
2.9-	Are mass-tourism type structures avoided for accommodation?	X		Even though Brijuni’s Hotel is a mass-tourism type of structure, the MEET guests have the opportunity to stay on a personalized Villa while in the island.
2.10-	Are the minimum comfort-related standards applied to accommodation? (ex: private bathrooms, hot water...)	X		
2.11-	Is the local cuisine and its history a part of the product?	X		Especially on day 2 and day 6, the food has a storytelling behind it.

2.12-	Are there different meal options available in the product? (ex: vegan options)	X		It must be informed to the chefs so they can provide multiple options. But it is possible.
2.13-	Are the meals and beverage locally sourced, sustainable and authentic?	X		Mostly, that is the focus of the product (local meals, fresh ingredients and sustainable food resources).
2.14-	Are there possibilities of picnic or packed lunches in the product?	X		
2.15-	Does the product include the possibility of alliances with private and public sectors, NGOs and development agencies?	X		The product includes the opportunity of Public and Private Institutions collaboration in educational activities and protocol establishments.
Section 3 – Activities included in the Product				
3.1-	Does the product include Soft Adventure activities? (Segment that involves physical activities with little physical risk. Ex: cycling, hiking, snorkelling...etc)	X		
3.2-	Does the product include non-invasive Cultural activities? (Ex: interaction with locals, visiting local architecture, art, handicraft...)	X		
3.3-	Does the product include Culinary activities? (Ex: eating in agro-tourism farms, cooking meals, picking vegetables...)	X		
3.4-	Does the product include Wildlife-Watching activities? (non-birdwatching, big mammals...)	X		
3.5-	Does the product include Historical and Archaeological activities? (“hidden-gems” – they should not be the main focus of the product, even though it is good to include them in it.)	X		
3.6-	Is the product including non-central activities? (such as hard-adventure, birdwatching, beach...etc)	X		
3.7-	Does the product promote an active interaction of the visitors? (clients should participate in activities, not merely watch them)	X		
3.8	Does the product allow free time for visitors?	X		
3.9-	Does the product consider alternative activities for the ones that are weather-dependent?		X	It does allow a flexibility for shifting the days according to weather conditions and some activities can be switched accordingly (instead of gardening outside, doing an herbarium inside), but overall, there is not a set of clearly identified activities that serve as substitutes for rainy/windy days.

3.10-	Does the product include optional components? (ex: optional visit to town/island A or B)	X		Visit to Safari or Tour around Archeological sites are optional activities.
3.11-	Is there a story-telling moment between locals and visitors in the package?	X		In the Viewpoint on Day 3 and in the Istrian de Dignan Ecomuseum on day 6.
3.12-	Does the package include at least two experiential nature-based activities?	X		
3.13-	Does the tour package include at least one experience meeting local chefs or food providers?	X		
3.14-	Does the product include activities that include environmental awareness of visitors?	X		
Section 4 – Sustainable & Conservation components				
4.1-	Is the product incorporating practical and non-invasive conservation activities? (such as trail cleaning or species monitoring)	X		
4.2-	Does the product include sustainable options of transportation instead of fossil fuel-powered vehicles? (such as electric cars, bikes or walking)	X		
4.3-	When non-sustainable vehicles are used, is it informed to the travellers about any compensation measures adopted? (such as CO2 off-set mechanisms)		X	The current companies included in the product do not practice this, but it is mandatory to be addressed before/during the visit if this product gets into action.
4.4-	Is the use of energy and natural resources being minimized? (ex: LED lamps or reducing laundry etc.)		X	It is not fully minimized, since the Hotel and Boat of Brijuni take a significant waste of energy and natural resources.
4.5-	Are all the components of the supply chain (restaurants, hotels, stores etc) consistent with environmental sustainability criteria?		X	Not all of them are certified or even complying with all the environmental sustainability criteria.
4.6-	Is there access to the tourists to any locations (restaurants, stores, amusement parks, markets...) where endangered species are being commercialized?		X	Even though some respondents mentioned in the survey that they sold “rare species”, they referred to local products and not threatened species.
4.7-	Does the product incorporate a “Conservation Contribution” for conservation activities benefiting the PA? If yes, is this contribution quoted in the product description?	X		

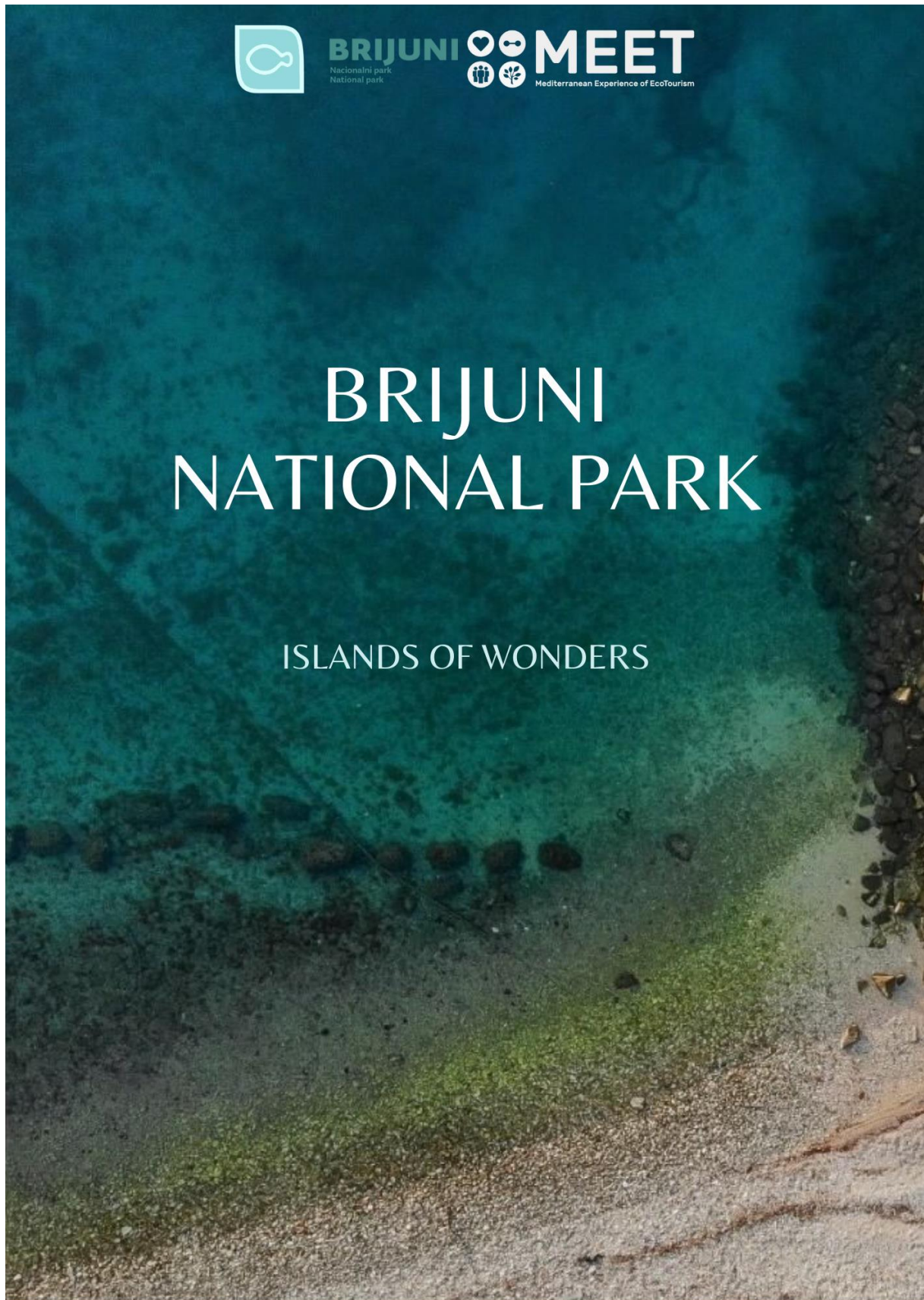
4.8	Does the product include interpretation, creating awareness about the importance and the challenges of conserving a nature?	X		
4.9-	Does the package include at least one sustainable form of transport (if feasible)?	X		
4.10-	Is the product including services or activities related to the disturbance, trade or sale of endangered, rare wild animals, plants or products?		X	Even though the product includes activities with a rare breed of cattle, Boskarin, it does not imply the animal's disturbance but instead its care.
Section 5 – Product's presentation to the public				
5.1-	Is the product description and program written in English?	X		
5.2-	Is there a native English-speaker (or equivalent level of knowledge of the language) reviewing the text of the product description?	X		
5.3-	Is there a simple and visual document about the rules and appropriate behaviours the visitors should follow in the Park, appealing to the environmental awareness?	X		Brijuni National Park already has it disposed on the website and on the entrance of the park.
5.4-	Does the product have a nice title?	X		
5.5-	Does the product have a catchy pitch?	X		
5.6-	Is the product description easy to read and features engaging imagery?	X		
5.7-	Does the product description include the main experiential highlights and activities?	X		
5.8	Does the product description include the style of tour, length, and seasons/time of year the tour runs?	X		
5.9-	Does the product description include MEET branding components regarding conservation and sustainable issues?	X		
5.10-	Does the product description include a price?	X		The true expenses of the package were not calculated, since it is merely hypothetical. However, the estimative, according to MEET Manual 2019, is something around Min. 100€ p/day and Max. 250€ p/day.

Annex IV – Scored Ranking of the Online Survey.

Name of Company	Municipality	Type of service	Points G1	Points G2	Points G3	G1+G2+G3	Total Score	Total Score %
Lavarino Royal	Marčana	Accomodation	24	77	35	136	45,4	95,6
Villa Ladonja	Barban	Accomodation	28	71	34	133	43,9	92,4
Oleificio Baioco	Vodnjan	Olive Oil & Accomodation	26	72	34	132	43,8	92,2
Holiday Home Sabin	Pula	Accomodation	28	70	34	132	43,6	91,8
OPG PRENC	Tinjan	Hemp products	30	75	30	135	43,5	91,6
Villa Milica	Barban	Accomodation	30	73	31	134	43,4	91,4
Brist d.o.o.	Vodnjan	Olive Oil	23	70	33	126	42,1	88,6
Hippocampus	Fazana	Scuba Diving	19	71	34	124	42,1	88,6
Villa Benić	Žminj	Accomodation	24	76	29	129	42,1	88,6
OPG Balija	Fazana	Olive Oil	23	67	33	123	41,2	86,7
FILS d.o.o.	Medulin	Transport	23	73	29	125	41	86,3
Administrative Department for Tourism - County of Istria	Poreč	Public Institution	28	70	28	126	40,6	85,5
Rovinj Sub - Diving Center	Rovinj	Scuba Diving	25	63	33	121	40,4	85,1
Istrian de Dignan Ecomuseum	Vodnjan	Museum & Restaurant & Local Products & Private Institution & Accomodation & Transport	27	65	30	122	39,9	84,0
House Una	Svetvinčenat	Accomodation	30	63	29	122	39,4	82,9
G Chiavalon	Vodnjan	Olive Oil	29	66	27	122	39,1	82,3
IstraKayak	Premantura	Kayaking	25	58	33	116	38,9	81,9

OPG KOMPARIĆ MARKO	Pula	Olive Oil & Fig products	27	61	29	117	38,2	80,4
The Old Diver	Rovinj	Scuba Diving	23	59	31	113	37,8	79,6
OPG Vita	Vodnjan	Olive Oil	18	58	33	109	37,5	78,9
URSARIA	Vrsar	Olive Oil	26	64	26	116	37,4	78,7
OPG Matteo Belci (MELOTO)	Vodnjan	Olive Oil	24	57	31	112	37,4	78,7
Stancija St. Antonio	Vodnjan	Olive Oil	27	61	27	115	37,2	78,3
OPG Lupieri Cadenela	Vodnjan	Olive Oil	28	57	28	113	36,7	77,3
Brijuni Hotels & Villas	Brijuni NP	Accomodation & Restaurant & Public Institution	19	58	30	107	36,2	76,2
Istria Tours	Pula	Tourism Agency	22	63	24	109	35,3	74,3
ZEATOURS	Pula	Tourism Agency	24	55	28	107	35,3	74,3
A.T.I. d.o.o.	Pula	Tourism Agency & Transports	29	59	23	111	35	73,7
KALAVOJNA	Marčana	Wine	18	59	27	104	34,8	73,3
IRTA d.o.o.	Pazin	Public Institution & Private Institution & Tourism Agency & Recreation	21	60	25	106	34,7	73,1
IDA - Istrian Development Agency	Pula	Public Institution	19	61	25	105	34,6	72,8
Diving Pula	Pula	Scuba Diving	25	50	29	104	34,5	72,6
Javna ustanova Kamenjak	Premantura	Public Institution	20	62	21	103	33,1	69,7
Scuba Libre	Ližnjan	Scuba Diving	25	45	25	95	31	65,3
OPG DORIAN SILJAN	Pula	Eco grown vegetables	26	43	24	93	30,1	63,4

Annex V – Brijuni National Park MEET Flyer.



ISTRIA REGION

Istria is a Croatian county and the biggest Croatian peninsula, situated in the northern Adriatic. It is a place abundant in tradition, enchanting gastronomy, coastal wonders, clear sea and green inlands, rich in history. The Romans colonized and established major centres in the region (Pula, Poreč, Labin), building urban standards and introducing roads. The development and importance of Istria was testified by the construction of the amphitheatre, the Arch of Sergii and the Temple of Augustus in Pula. Today, the city of Pula is the economic centre of Istria. The Istrian peninsula is very particular and well known for its attractive towns adorning the coastline, while its inland valleys harbour ancient forests, medieval towns and excellent vineyards. The landscape diversity (valleys, beaches, fertile plains, rocky shores, green forests...) combined with the rich gastronomy (fresh seafood, prime white truffles, wild asparagus, top-rated olive oils and award-winning wines), enriched by the strong historic charm (from Neolithic to Roman relics) and well preserved traditions (endemic cattle - *Boškarin* and folk costumes), make the region unique at all levels.



Experiences: Pula City sightseeing, Wine & Olive Oil tasting, Traditional Olive Picking, Traditional Bread Making, Feeding the Boškarin, Learning Folk Costumes, Gardening Local Vegetables.

BRIJUNI NATIONAL PARK

Brijuni is one of the most interesting archipelagos in Istria Peninsula, composed by 14 islands disposed on the northern Adriatic sea. The islands were established as a National Park and Memorial Site on November 1st 1983. This category of protection was determined because the area is defined as one of the most biologically valuable sea areas of the country. Along with its biological features, Brijuni also hosts a pleasant climate along with unique cultural-historical and geological-paleontological values. Furthermore, Brijuni is also part of Natura 2000 classification, as an internationally important site for birds and habitats protection.



CULTURAL & HISTORICAL HERITAGE

Intense human activity was present in Brijuni islands throughout time, as evidenced by the numerous remains since the Neolithic up until the Socialist Federal Republic of Yugoslavia. Some of the best preserved historical and cultural remains are those of Roman and Byzantine periods. The Roman ruins of residential and economic estates (*villae rusticae*) bring the history back to the present, being one of the most important visited sites in Veliki Brijuni. The Castrum, a fortified settlement from the Byzantine period, was developed around the original Roman villa rustica concept from the 1st century, allowing a visible interconnection between different periods of history in one single place.



Experiences: Brijuni's Ruins sightseeing, Snorkeling/Diving through Underwater Ruins.

LANDSCAPE DIVERSITY

In the late 19th century, the industrialist Paul Kupelwieser and the forester Alojz Čufar shaped the landscape of Brijuni with the use of native and exotic plant species. With the interference of these men, in just a few years the Islands were transformed into a landscape with gentle elevations, spacious meadows along the seashore, pebble beaches and relatively shallow bays. Visually, the specific combination of green meadows, forests, macchia and the blue-green sea, creates unique landscape views, whether it is seen from the sea, land or from above. The landscape of the main island, Veliki Brijuni, also hosts one of the oldest golf courses in Europe, where no pesticides are used for lawn cultivation, making this the only "ecological" golf course in the area.



Experiences: Boat Tour around the islands, Zelenikovac trail (landscape formations).

GEODIVERISTY

The palaeontology evidences recorded on the archipelago are a very rich part of its heritage. Around 200 Theropod and Sauropod dinosaur footprints were recorded at four different locations on Veliki Brijuni as well as on the islands of Vanga, Galija and Vrsar. The footprints date back to the Early Cretaceous period (130 to 100 million years ago). Along with the dinosaur footprints, ripple marks from 100 million years ago and fossilized gastropods were recorded in Veliki Brijuni. Among the youngest paleontological finds is the bone breccia, a formation where parts of ancient mammals' bones can be seen.



Experiences: Walking the Path of Dinosaurs, Sightseeing Geological Formations.

HABITAT DIVERSITY



Brijuni National Park has a multitude of important habitat types of international concern. Regarding Terrestrial Habitats, under the influence of the general climate of this zone, Brijuni is mostly composed of a mixed forest with macchia, holm oak and black ash. The laurel tree subassociation is also common in the forests of Brijuni. As for the Marine Habitats, Brijuni is known for its considerably well preserved seabed communities. Meadows of *Posidonia oceanica*, a seagrass species, cover one of the largest, if not the largest, settlement of *Posidonia* on the west coast of Istria.

In total, Brijuni hosts an amount of at least 3 Terrestrial Habitats and 18 Marine Habitats that are endangered and/or rare, of national and European importance, according to the Habitat Directive.

Experiences: Beach Cleaning OR Invasive Species Removal.



TERRESTRIAL BIODIVERSITY

TERRESTRIAL FLORA

Due to the climatic characteristics of the Islands, the majority of Brijuni's flora have real Mediterranean characteristics. There are more than 400 species of plants recorded. Besides the holm oaks, it is possible to find some other important autochthonous Mediterranean plant elements, such as: holly, strawberry-tree, myrtle, terebinth, mastic tree, heather and flowering ash, among others. As a special feature of the Brijuni flora, it is worth mentioning the *Juniperus deltooides* R.P. Adams – a new species of *Juniperus* in Croatia recorded on the island of Mali Brijuni, as well as the *Ampelodesmos mauritanica* (rope grass) – a rare species of Croatian flora that until recently was considered extinct for the North Adriatic area.



Experiences: Olive Picking, Mediterranean Gardening, Herbarium Workshop.

TERRESTRIAL FAUNA



Brijuni's lands are inhabited by a multitude of autochthonous (native) and allochthonous (imported) animal species. The most common invertebrate present on the islands are butterflies, with 44 recorded species of diurnals and 331 species of nocturnals. The birdlife of Brijuni has in total 151 recorded species. Bird species such as the black-throated loon, red-throated loon, european shag, sandwich tern, common tern and common kingfisher, have placed Brijuni as an Area of Ecological Network and as a NATURA 2000 Area, under the Directive of Birds. The Brijuni Islands are one of the five most important nestling places for rare genus of cormorants in the Adriatic. Mammals are also easily spotted on the islands. Approximately 28 mammal species were recorded in the Park, of which 15 are bats. Among others, some of most interesting mammals present on the islands are the hedgehog, red squirrel, brown hare, axis deer, fallow deer and mouflon.

Experiences: Trail of Insects and Birds, Identification and Monitoring of Brijuni's Mammals.

MARINE BIODIVERSITY

MARINE FLORA

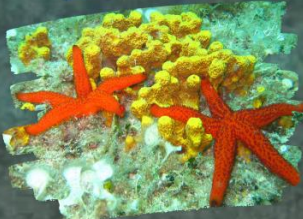
Brijuni National Park has a rich list of marine flora. Approximately 53 algae species were recorded on these waters, of which 23 are red algae species, followed by brown and green algae with 14 species each. One of the most significant algae recorded in the Brijuni area is the endemic brown algae bladder wreck, or *Fucus virsoides*. Typically mediterranean seagrasses cover a significant surface of the Brijuni seabed. Four species of seagrass have been recorded: the Neptune grass (*Posidonia oceanica*), the slender seagrass (*Cymodocea nodosa*), sea wrack (*Zostera marina*) and dwarf eelgrass (*Zostera noltii*).



Experiences: Diving/Snorkeling.

MARINE FAUNA

One of the main reasons for the protection status of Brijuni's waters is, undoubtedly, its marine wildlife. The seabeds of Brijuni abound in sponges, shellfish (such as the protected noble pen shell - *Pinna nobilis*), sea urchins, crustaceans and fish. The waters of Brijuni are significant as a spawning place for fish and represent a unique oasis for typical sea species of the Northern Adriatic, having its preserved fish stocks considered as one of the greatest assets of this area and even of the whole Adriatic. Some of the most numerous fish are sea basses, giltheads, grey mullets, soles, groupers, conger eels, dentexes and black umbers. Important marine animal species such as the bottlenose dolphin (*Tursiops truncatus*) are permanent residents of Brijuni waters and the loggerhead sea turtle (*Caretta caretta*) is also a frequent visitor.



Experiences: Diving/Snorkeling, Paddling OR Kayaking, Dolphin Sightseeing.

BRIJUNI NATIONAL PARK

ISLANDS OF WONDERS

Let the northern Adriatic amaze you with its beautiful nature, crystal clear waters and undeniable vivid history and culture!

On top of the amazing nature here present, you will be able to find multiple historical and cultural gems, as well as paleontological evidence. The islands comprise a multitude of hidden relics worth visiting.

IN BRIJUNI YOU CAN DEFINITELY FEEL LIKE YOU WENT BACK IN TIME AND ARE NOW PART OF HISTORY YOURSELF!

INHALE the salty air of the Northern Adriatic and feel it blending with the aroma of pine trees surrounding you. **EXHALE** to the sounds of birds singing and the wind blowing, gently.

Meet the wild deers hopping around the main island of Veliki Brijuni and find some peace and tranquility in the secluded swings and viewpoints of the Brijuni's forest!

Come and dive in a magnificent crystal clear seaworld, full of colourful life and interesting creatures.

ENJOY YOUR TIME IN THESE MEDITERRANEAN PARADISE ISLANDS!

FROM 100€ per day!

The purchasing of this product includes a percentage that will contribute directly to a conservation fund for the National Park.



BRIJUNI
Nacionalni park
National park

<https://www.np-brijuni.hr/en>

Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 1

Day 1 - ARRIVAL + PULA CITY

Transfer from Pula airport to Accommodation

Accommodation settling

Welcoming presentation + local snacks

Guided tour and storytelling through the historical sites of Pula City. In the City of Pula, visitors will have the chance to be guided through the ancient Roman relics here present:

- 1. Pula Arena**, the only remaining Roman amphitheatre to have four side towers and with all three Roman architectural orders entirely preserved.
- 2. Arch of Sergii**, an honorary triumphal arch and originally a city gate (29-27 BC).
- 3. Temple of Augustus**, a Roman temple considered one of the best complete Roman monuments, outside Italy.



Dinner will be held in a typical Istrian Food restaurant.

Back to the Accommodation & Rest time in the Accommodation

Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 2

Day 2 - BRIJUNI FLORA & MEDITERRANEAN TASTING

Breakfast in Accommodation

Transfer to Fazana + Boat trip to Veliki Brijuni.

Settle down in Brijuni's Hotel or one of Brijuni's Villas.

Guided visit to **Boathouse interactive Museum**.

Inside this Interpretation and Education Center, the interactive exhibition is divided into six thematic units: "Brijuni Time Machine", "Brijuni Archipelago", "Mainland," "Submarine World", "Threats" and "Awareness".



The visitors will then bike towards the Mediterranean Garden, with a quick stop on one of the **oldest Olive Trees in the Mediterranean!** The method of carbon analysis (by applying the radioactive isotope of carbon C14 on the wood sample taken from the tree trunk) showed that the olive tree is about 1600 years old!

Lunch time will be a beautiful picnic in **Mediterranean Garden**.



Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 2

Day 2 - BRIJUNI FLORA & MEDITERRANEAN TASTING

Brijuni's Mediterranean Flora

After lunch time, an expert will give a brief insight about the Mediterranean Garden and the importance of Mediterranean flora. Visitors will then proceed to visit the fields of Brijuni's Olive Trees and here, according to season, they will be able to participate in **olive picking** or to participate in any form of **gardening with relevant mediterranean species** - ex: Workshop of how to make an herbarium OR Endemic plant stock.



Possible Mediterranean species for the activities: *Myrtus communis*, *Quercus ilex*, *Laurus nobilis*, *Pistacia turbigensis*, *Juniperus oxicedrus*, *Phyllirea latifolia*...



Sunset, Viewpoint and Tasting the Mediterranean

As the sunset approaches, the guide should now bike along with the visitors to Brijuni's Viewpoint. Here, visitors will be welcomed by some regional/local producers of Olive Oil and Local Wines, with some fresh bread, for a **tasting experience** of the different types of delicacies produced in the Istrian Region, including Brijuni's olive oil. Here, the visitors will also have the experience to **interact with true local producers** that know all about the process and execution of the **true mediterranean flavour**. It will be possible to purchase some of the products directly with the producer, contributing to the economy of these local businesses.

Afterwards, visitors will get some rest at Accomodation.

Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 3

Day 3 - UNDERWATER SEALIFE

Breakfast at Accommodation

Biking until Verige Bay.

Snorkeling/Diving experience in the Educational underwater trail of Verige Bay. Here, visitors will be able to experience the unforgettable underwater world of Brijuni. They will dive along this underwater trail, exploring the Roman ruins still submerged, and discover numerous fascinating sea creatures, guardians of the area since Roman times.



Most likely visible sea-creatures: brown algae bladder wreck (*Fucus virsoides*), seagrass (such as *Posidonia oceanica*), the protected noble pen shell (*Pinna nobilis*), jellyfish, sea urchins and numerous fish such as sea basses, gilthead, grey mullets, soles, groupers, conger eels, dentexes and black umbers.

Lunch will be held in the fields of Verige, where a picnic will be prepared.

After lunch, a certified Diving boat will now take the visitors to Mali Brijuni, where visitors will have the opportunity to **dive/snorkel** in a different location for a better perspective of the underwater sea-world of the Park. The visitors will also have the opportunity, if wanted, to experience an afternoon of **Paddling or Kayaking** in this location. By the sunset, visitors will go for a **Dolphin sightseeing** around the islands.



In the evening, visitors will be back to Veliki Brijuni, where they can enjoy a quiet dinner time in the Brijuni Restaurant.

Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 4

Day 4 - ANIMALS OF BRIJUNI'S FORESTS

Breakfast at Accommodation

Experience a full-sight tour around some of the most secluded trails of Veliki Brijuni. The aim during this day tour is to present a challenge for visitors to **learn about Brijuni's fauna** and also **take action in important conservation measures!**

Learn about the running-free animals of the islands

Visitors will be learning about the wild fauna members of Brijuni in some of the forest trails around the island. One of the most common invertebrates present on the islands are butterflies, with about 44 species of diurnals, that will be easily spotted during the visit. In the **Belvedere trail**, visitors will learn about **butterflies and multiple insects**. As for birds, visitors will have a brief insight about the most common and important species (such as the common kingfisher or the common tern) along the visited trails and, according to season, visitors might as well visit the **Saline**, where the expert will provide insights regarding not only the birds of the Saline but also the **importance of wetlands for migratory birds**.



Understand the Exotic & Farm Animals of Brijuni.

If it is of the tourists' interest, there is a possibility to visit the museum of Tito, where visitors will be able to understand why the island still hosts some exotic animals nowadays. This tour will also include a visit to Safari Park, where it is possible to see some of the remaining (and alive) exotic and farm animals from that period. Since these animals were provided to Tito as gifts in the past, the post-generations are now taken care of in this part of the island.



Lunch will be based on quick snacks and sandwiches, in a particularly secluded area of the forest, with net swings and trees' shadow.

Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 4

Day 4 - ANIMALS OF BRIJUNI'S FORESTS

After lunch, visitors will have the opportunity to participate in a **workshop on how to identify the mammals'** presence indicators - feces, footsteps etc, and to visibly recognize them. Visitors will be provided with simple hand-guides, as they will use this information in another activity later this day. The big mammals of Brijuni are the Axis Deer *Axis axis*, Fallow Deer *Dama dama* and Mouflon *Ovis aries musimon*. It is also common to find presence indicators or direct observations of the Brown Hare *Lepus europaeus*.

The afternoon will be given with free time for the visitors to enjoy the island as they please.

Meet and Count Brijuni's running-free Mammals!

As the sunset approaches, the big mammals start to spread along the grasslands of Brijuni. At 7pm, the visitors will be split in 4 or 5 groups and each group will be given an electric car and a specific route. All the groups will start their route at the same time, and during that period, visitors will be given the chance to **help the biologists of the park to monitor the mammals**, by keeping track of the numbers of deers, mouflons and hares spotted during the route. They should use the identification guides provided earlier as well as binoculars and a field sheet to fill in the counted numbers of individuals and species.



When the activity is over, the field sheets should be delivered to the responsible expert.

Dinner time will be held in the Brijuni's restaurant.



At 21pm, the visitors will participate in a **BAT NIGHT** activity, where an expert will be using ultrasound as an identification method for bat species of the islands. Out of 28 mammal species recorded on Brijuni, 15 of these are bats. Bats are extremely important species, as they help regulate plagues by feeding on them. The visitors will be educated about these animals on this interactive **workshop** of basic identification and also learning on how to build Bat's shelters.

Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 5

Day 5 - HISTORY, LANDSCAPES & HABITATS

Breakfast at Accommodation

Visitors will bike along with the Tour Leader to **Zelenikovac trail**, where an expert will guide them through the woods and coastline, explaining the flora, landscape and geological formations of the path. Along this pleasant trail and shady coast, visitors can see 25 information boards with numerous information on various cultural and historical features around them. Geological-paleontological phenomena (dinosaurs' footprints, fossilized shells of the nerinea gastropod, ripple marks of various sizes and bone breccia) can also be found here. Some birds use this coastline as a nesting place, which, depending on season, will be addressed more specifically. **Zelenikovac is the perfect trail to understand the great mixture and complexity of cultures, historical periods and natural landscape formations on the islands.**



OPTIONAL



Lunch will be a picnic in the grassland near Zelenikovac.

If wanted, there is a possibility for visitors to have a full sightseeing tour through the archeological sites of Brijuni. During this tour, visitors will discover **some of the oldest relics of the islands!** The tour will include multiple **Historical and Paleontological Sites** such as the Byzantine Kastrum, St. Mary's Basilica, The Roman Village and Dinosaur Footprints, spread over multiple locations of Veliki Brijuni. These sights are unique and a must see for all the Brijuni's visitors!

Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 5

Day 5 - HISTORY, LANDSCAPES & HABITATS

According to season, during this day, visitors will also have the opportunity to participate in Beach Cleaning or Identification (and eventual removal) of Invasive Plant Species (such as *Xanthium spinosum* L.). This will be helpful and a positive management tool for Brijuni's conservation staff and will allow the active participation of eco tourists to protect the habitats and landscape status of the Park!

Given so, this day can also include one of these two activities:

1. Beach Cleaning

During winter time, a very strong wind called Bura blows multiple items towards Brijuni's shore. Some parts of Brijuni's coastline get filled with garbage that not only bring aesthetical issues but can also cause harm to the wildlife. During Spring time, some of the beaches and bays of Brijuni are cleaned by volunteers as a way to help the park clean and safeguard the biodiversity of the islands. It is possible, accordingly, that MEET package visitors can participate in this activity, and collaborate with the park in another conservation strategy.



2. Invasive Plant Species

Brijuni is still a very well protected piece of land, but, like many other mediterranean PAs, its biodiversity is threatened by a multitude of factors. Among those, invasive species sometimes pose a possible danger to the well being of endemic vegetation, for example. In this case, according to season, the visitors could eventually be taught about the importance of managing invasive species and, included in one of the visited locations of the day, visitors could participate in direct removal of these plants, helping the park monitor the situation.



Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 6

Day 6 - IMMERSION IN COSTUMES AND TRADITIONS

After spending a rich time in Brijuni Islands, which are not inhabited by local population, it is time to sail back to the mainland and soak in the locals' essence.

Boat transfer from Brijuni to Fazana & Van drive to Vodnjan - Istrian de Dignan Ecomuseum.

Visitors will arrive early in the morning and will begin by settling in the Vodnjan Accommodation, where a quick local breakfast will be provided (by Istrian de Dignan Ecomuseum). Afterwards, the morning will start with visitors putting their hands into work in the **Eco Farm**, where they will be able to collect some of the vegetables and aromatic herbs that will be used to cook the lunch, later this day. Visitors will help with **gardening and picking up fresh ingredients!** The eco tourists will also have the opportunity to meet the donkeys, dogs, chickens and *boškarin* of the farm! Boškarin is an original Croatian autochthonous breed of cattle, inhabiting the peninsula of Istria for many centuries. Having almost disappeared due to the use of new cattle breeds and new agricultural machineries, **Boškarin is now of higher importance in the Istrian region!**



While enjoying farm's essence, visitors can also feed the chickens and donkeys!



As the lunch time approaches, visitors will leave the farm to provide the fruits and vegetables they've collected to the marvelous chefs! Visitors will **meet the chefs in EcoLab**, where magic will happen to all of those freshly collected ingredients!

Brijuni National Park

MEET Itinerary

ISLANDS OF WONDERS - DAY 6

Day 6 - IMMERSION IN COSTUMES AND TRADITIONS

While waiting for the meal to be prepared in EcoLab, visitors will learn everything about **the old art of making fresh homemade bread** in some of the oldest walls in Vodnjan. The bread will be cooked in an **ancient woodfired oven** that fits more than 100 breads! The bread will be a delicious complement to the participants' meal!



When the meal is prepared, visitors will take their bread and combine it with the homemade food, executed with the fresh ingredients that they have previously collected!

The lunch will be held in the fresh air of the farm, or the coziness of the Ecomuseum (depending on weather conditions).

After lunch, there will be time to explore and **visit the Ecomuseum**. The expert guide will help the visitors **dive in traditions and costumes** of the Croatian folklore and Croatian families of the past. Visitors will be **submersed in the previous decades**, and **enjoy the true cultural values of Istrian people!**



After the tour is finished, there will be free time for the visitors to explore the municipality of Vodnjan and purchase some local products available in the Ecomuseum or other local stores!

The upcoming day will be Departure day. Visitors will be transferred to the airport in the morning, hopefully with a profound desire to come back!