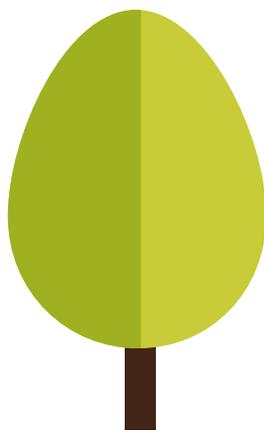The sea

Adriatic Ionian Region

The territory

ENHANCING SUSTAINABLE TOURISM IN ADRIATIC-IONIAN REGION THROUGH CO-CREATION

THE ROLE OF UNIVERSITIES AND PUBLIC-PRIVATE PARTNERSHIPS

edited by Francesco Adornato, Simone Betti, Andrea Caligiuri, Alessio Cavicchi, Mara Cerquetti, Francesca Coltrinari, Luigi Lacchè, Roberto Perna, Francesca Spigarelli

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Enhancing Sustainable Tourism in Adriatic-Ionian Region through co-creation: the role of Universities and Public-Private Partnerships

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Introduction

During the last years, in line with the EU Strategy for the Adriatic and Ionian Region (EUSAIR), the University of Macerata has promoted several initiatives focused on the enhancement of the European cultural heritage and the innovation of cultural offer for sustainable tourism development, also through the involvement of cultural and creative industries.

In October 2015 and in April 2016, the Italian Ministry of Cultural Heritage and Tourism opened a participatory approach, involving several stakeholders for the definition of a national strategy for sustainable tourism, by organising two meetings of the States-General of Tourism held at the National Museum of Pietrarsa. A new national organised system, based on a bottom-up approach involving all Italian tourism operators, public and private, universities and research institutions, as well as regional governments, contributed to the new Strategic Plan for Development of tourism.

The Plan acknowledges, among other, the importance of the EUSAIR framework, whose priority objectives include precisely the creation of an integrated tourism supply characterised by products and services with a high added value, and also an increase in accessibility, physical mobility and information within the Adriatic-Ionian Sea macro-region.

Thus, in the next years, Universities will be asked to move beyond the traditional missions of teaching, researching, and knowledge transfer. The role of Universities as co-creators of sustainability and the pursuing of long-lasting public-private partnerships (PPPs) will constitute building blocks of initiatives, projects and activities for social and economic development.

Under the aegis of EUSAIR policy, Sustainable Tourism is considered a pillar. Goals set for the pillar are a) the diversification of the macro-region's tourism products and services along with tackling seasonality of inland, coastal and maritime tourism demand and b) improving the quality and innovation of tourism offer and enhancing the sustainable and responsible tourism capacities of the tourism actors across the macroregion.

In light of this background context, the international workshop "Enhancing Sustainable Tourism in Adriatic-Ionian Region through co-creation: the role of Universities and Public-Private Partnerships", held in Macerata in September 2016, aimed at:

- sharing best practices and experiences among scholars, practitioners and public bodies of the Adriatic and Ionian Region,
- setting up guidelines to enhance sustainable tourism, cultural heritage and the development of a culture-driven economy in the Adriatic and Ionian Region,
- promoting networking among relevant actors, also by enhancing cooperation among private and public institutions,
- showing successful start-up companies in the field of sustainable tourism and creative industries.

Thus, a call for papers was released in spring 2016, addressing the following topics, in line with the actions proposed by the EUSAIR Action Plan:

- Fostering Adriatic-Ionian cultural heritage. Heeding the suggestions of Europe 2020 and of the Council of Europe's Framework Convention on the Value of Cultural Heritage for Society (the Faro Convention), particular attention had to be paid to the possibility of effectively enhancing cultural heritage as a key factor for social and economic development. In order to promote active social inclusion, sustainable development and job creation for youth, both the integration of cultural heritage with tourism services and local productions and cross-fertilization between scholars and professionals, cultural institutions and enterprises were required.
- Upgrading the Adriatic Ionian sustainable tourism products.

Through the integration of sustainability approaches, tourism stakeholders can increase business by protecting the competitive advantage (intrinsic diversity, variety of landscapes and cultures) that makes the Adriatic Ionian Region an attractive tourist destination. On one side, coastal tourism is a key component of coastal and marine economies and it depends on the quality and diversity of effective coastal management policies. On the other side, a significant opportunity for crafts, agriculture, tourism, retailing and the entire rural economy as a whole exists. National and local governments have to pursue creative strategies to promote the qualities of their territories in the broadest sense, trying to leverage: landscape, nature, maritime areas, cultural heritage, regional products, regional gastronomy and traditional quality products.

Around 30 proposals for papers were submitted to the Scientific Committee in the form of abstracts. Following a peer review process, 19 were selected and accepted for publication in the proceedings.

An impressive number of conceptual papers, projects and case studies demonstrating the collaboration between universities and local stakeholders in different fields and disciplines from different Adriatic-Ionian countries, were organised in 5 different conference sessions, namely: 1. Cultural and Tourism Destination - management and promotion, 2. Tourism Policy and ICT, 3. Coastal and maritime tourism, 4. Participatory processes in tourism and cultural management, 5. Archaeology and museums

We are delighted, as editors of these proceedings, to put together this collection of papers that clearly shows a growing number of opportunities to increase the impact of University-Business collaboration in the field of Sustainable Tourism.

For further information on this conference, its participants and parallel sessions, please, visit: <http://www.unimc.it/sustour-eusair>.

Scientific session 1

Cultural and Tourism Destination – management and promotion

Stefano Mugnoz*, Giacomo Aleffi*, Jesmond Xuereb*

Project HELAND: promoting Mediterranean heritage tourism. ICT for sustainable tourism: the virtual tour of Xaghra

1. *Project HELAND: a European project about tourism studies, regional development and innovative ICT solutions*

Innovation, together with the absorption of ICT applications is a key aspect of the support of sustainable tourism development as a strategic sector for local communities' growth. In particular for the sustainability of heritage sites and landscape, the most innovative and modern technologies can reinforce the practice of sustainable tourism by causing low impacts on the environment and local culture, while helping to generate income, employment, and the conservation of local ecosystems. It is therefore necessary to encourage involved organizations to strive for a rational exploitation of this sector.

HELAND is a European Commission co-funded project (2012-2015), through ENPI-CBCMed Programme, that has put together organizations from Malta, Spain, Cyprus, Palestine, Jordan and Lebanon dealing with tourism studies, regional development and innovative ICT solutions to promote socio-economic sustainable development through the exploitation of innovative technological actions.

More specifically, HELAND establishes a common approach for sustainable tourism through the application of cutting-edge technologies to some case studies, intended to define outlines for socio-economic development in the Mediterranean basin

that combine sustainable tourism with heritage and landscape protection. Other goals of the project were to identify better management and tourism sustainability indicators and to enhance quality and economic indicators of tourism in the partners' countries.

The HELAND specific objectives were:

1) Development and dissemination of common approach diagnosis;
2) procedures and multidisciplinary advanced systems for the integrated management, exploitation and diffusion of the cultural heritage;
3) landscapes protection from the quality and sustainable tourism view.

The achievement of these strategic objectives has been obtained by means of:

- Modernization of productive sectors such as tourism by means of implementing a new perspective based on sustainability criteria, international norms and the know-how of the local actors;
- enhancement of public, private and tourism services and products with the involvement of local stakeholders;
- promotion of socioeconomic considerations and research in the process of the local development of the Mediterranean Sea basin countries by promoting ICT applications for the tourism sector;
- diffusion of new procedures and innovative technologies through the setting up of a cross-border network at Mediterranean basin level involving Universities, research centres, professional societies, regional institutions, SME clusters, NGOs, etc.

1.1 *Common approach*

As a project of a Cross-Border Cooperation EU Programme, HELAND was successful by means of the shared elaboration of strategies and methodologies among the involved Mediterranean Partners. It addressed the adaptation to the Mediterranean of sustainability policies and technological modernization

through the transfer of knowledge from Universities, Experts' Societies and Research Centres to the agencies, organisations and institutions that manage the conservation and sustainability of heritage sites. The HELAND partnership offered great and balanced potential for cooperation in this field between European Union Mediterranean Countries and the other Mediterranean participating countries[1].

The project was intended as a measure to strengthen the quality of tourist activities of non-EU countries participating, thereby addressing the strong inequality in the generation of tourism. In fact, most of the tourist activity in the basin is generated in four countries of European Union members. At the same time it also faced the challenge of modernizing the sector by promoting sustainable tourism to preserve the high values of today's tourist offer by implementing new procedures and technologies in regions where these are not applied well or are still very unsophisticated. Technological innovation is scarce in a very traditional and mature industry where technology and new procedures' penetration generates resistance, although it is essential for regions to remain competitive as tourist destinations. Innovation is a key target for all Mediterranean countries, commonly shared through the EU Lisbon strategy[2].

1.2 *Indicator-based management tool*

In 2013, the European Commission's DG Enterprise approved the European Tourism Indicators System (ETIS) tool for Sustainability indicators for tourism destinations. Different experts are implementing this tool in several European countries. Starting from this milestone, the partnership elaborated an indicator-based management tool in support of the heritage site evaluation and exploitation. This tool is divided in 67 indicators grouped in 4 macro areas and 22 specific areas, directed to

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[1] Heland Project, promoting Mediterranean heritage tourism. Retrieved from: <http://www.helandproject.eu>.
[2] Fondazzjoni Temi Zammit (2014), Invitation to Tender, Provision of Services for the HELAND Project.

measure the pilot site management, the economic value, the social and cultural impact, and the environmental impact of tourism in each site.

Indicators tool macro areas

Macro Area	Specific Area
A. Pilot Site Management	A.1 Sustainable Tourism Public Policy A.2 Sustainable Tourism Management in Tourism Enterprises A.3 Customer Satisfaction A.4 Information and Communication
B. Economic Value	B.1 Tourism Flow (volume & value) at the Pilot Site B.2 Tourism Enterprise(s) Performance B.3 Quantity and Quality of Employee B.4 Safety and Health B.5 Tourism Supply Chain
C. Social and Cultural Impact	C.1 Community/Social Impact C.2 Gender Equality C.3 Equality/Accessibility C.4 Protecting and Enhancing Cultural Heritage, Local Identity and Assets
D. Environmental Impact	D.1 Reducing Transport Impact D. 2 Climate Change D.3 Solid Waste Management D.4 Sewage Treatment D.5 Water Management D.6 Energy Usage D.7 Landscape and Biodiversity Management D.8 Light and Noise Management D.9 Bathing Water Quality

The management tool was presented in public meetings to local stakeholders. The aim of these meetings was to introduce the HELAND Project and to integrate the local stakeholders, including restaurants, cultural centres, museums, hotel, souvenir shops and other tourism and culture related organizations. This first step was crucial to be in line with community development and participation principles, and to give the local, business and heritage community the opportunity to be notified of any possible developments through HELAND. It also offered members of these communities the chance to express their feelings and

concerns, if any, regarding any changes within their area and how these could affect them, both positively and negatively.

The tool with an improvement in the competitiveness and sustainability indicators can drive the tourism management institutions and stakeholders to set up actions that in turn translate into improvements in the income and employment conditions in the participating regions.

The Maltese partners have chosen the walled historic town of Mdina and the Xaghra municipality as their pilot sites. The Institute for Tourism, Travel and Culture of the University of Malta carried out the study of the pilot site of Mdina while Temi Zammit Foundation (FTZ) was involved in the Xaghra analysis in Gozo.

The primary data were collected through different questionnaires designed according to the target audience being interviewed. More specifically, the collection of the primary data has been performed through: in-depth interviews with the representative of the Local Council and of the Police Station, surveys with visitors, surveys with residents, in-depth interviews with the business community (Museums, Heritage Sites, Restaurants, Bar/Catering Establishments, Hotels, Souvenir/Gift Shops, Petrol Stations).

The indications gained through this data collection also guided the research team to the identification of the most suitable ICT solutions for the promotion of the two pilot sites.

1.3 *The ICT Challenge*

Realistic and objective analysis leads us to say that tourism in the world has changed in a radical and dynamic way both for tour operators and tourists. New pillars of this market are dynamism, technology and communication tools.

For this reason, tourist sites and operators need to first become aware of these changes, to remain competitive and to avoid the crisis. Subsequently, they have to quickly implement new ideas in a way to allow the organization and territorial fabric to absorb the changes.

At this time it would be a mistake to just sell a "simple bed" because it is crucial to expand the tourist offer and the catchment area to new potential tourists, offering various services in all the areas near a tourist site.

Mediterranean areas are among the most visited and attractive areas in the world, even in conditions of growing competition. The challenges related to tourism activities in MED areas are mainly related to two pressure factors:
- increased competition and the need to maintain a worldwide leadership;
- tourism impacts on natural and historical heritage.

The goals of competitiveness and mitigation of the impacts are strictly related to the development of sustainable approaches in tourism activities and their integration into local communities. The European Union elaborated the "Agenda for sustainable and competitive European tourism", in order to promote the development of innovative, quality tourism products and services and make European destinations even more attractive and competitive[3]. In terms of sustainability, MED areas are still affected by high seasonality of the demand and a very peculiar and fragile environment.

In this scenario new technologies can be helpful and allow implementing the regional marketing and sales service. The ICT applications could also enable the monitoring of the habits and preferences of the 'tourist' and thus make possible the dynamic marketing services and the promotion of territories from a sustainable point of view.

Also, multimedia communication systems over the Web are a great channel to be considered; even the advertising platforms via smartphone are a very effective way to disseminate tourist information and to increase sites' attractiveness.

Geographic Information Systems (GIS) and automated welcome tourist points (info-desk, information point, information kiosks, etc.) are excellent tools which assist the work of the tourist office, or replace it when closed (or when

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[3] Agenda for sustainable and competitive European tourism. Retrieved from: <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=URISERV%3Al10132>.

it is not present) and during peak periods, lowering the cost of staff and management, besides introducing tourism innovation.

In particular, the potential of ICT tools can be developed if:

- decision-makers have a deep and updated knowledge of the local context, in terms of criticalities, strengths and trends;
- tourist operators and local agencies are trained and supported through specific training activities;
- low-budget and user-friendly ICT tools for the management of tourist activities are available and updated;
- the public and private sectors invest in technologies for the reduction of tourism impacts on highly valuable sites.

Thus the strategy is based on a multidisciplinary approach for enlargement of the visibility and attractiveness of tourist heritage sites with innovative technological solutions based on a sustainable *approach* and methodology. Dedicated apps for tourist destinations (application for Smartphone or Tablet) are the new frontier to capture this huge target made of users of modern ICT (information and communication technologies) users. Over time, these tools are proving to be the most customizable and easy to integrate with each other. Furthermore, through the creation of a data collection system, a tourist integrated observatory can be developed for accurate monitoring and dynamic evaluation of tourism flows to all principal destinations. With the support of ICT solutions, it becomes much easier to develop highly customized reports that are routed to the same undertakings and to administrators.

2. *ICT for sustainable tourism on the island of Gozo: the virtual tour of the tourist district of Xagħra*

2.1 *Historical background and tourism framework of Xagħra*

Xagħra is a village located in Gozo. Gozo is the second largest island of the Maltese Archipelago, having a population of approximately 29,000. With its rural landscape, Gozo always looks greener than the mainland for most of the year

and provides many wonderful experiences for country walks, to ramble along cliff-tops with amazing panoramic views.

Tourism is one of the strongest sectors in the economy of Gozo as it provides a major stream of revenue, which positively impacts on the social and economic well being of the Gozitan population. In the past, Gozo together with Malta had been promoted as the traditional 'sea and sun' resort. Efforts have been made in recent years to create other niche markets to enhance tourism sustainability, for Gozo to mitigate the problem of seasonality.

Tourism in Gozo is mainly characterised by two segments, namely domestic and international. Day trips account for the majority of international visits. Gozo commands a higher share of repeat business than Malta, with 40% of tourists returning to Gozo as opposed to the 30% returning to Malta[4].

Xagħra, set on a plateau, is the third largest locality in Gozo, after Victoria and Nadur, with a population of around 4,876 inhabitants (Malta Government Gazette, May 2013). It is one of the main tourist destinations in Malta and Gozo due to the impressive archeological heritage and natural attractions. It's one of the areas of Gozo that has seen human habitation since extremely early times. Today the village is most famous as the location of the Neolithic Ġgantija Temples, which are dated at 5,600 years ago and are acknowledged to be among the oldest freestanding structures in the world, classified in 1980 as World Heritage of Humanity by UNESCO. Other prehistoric sites found within the village limits include the Gozo Stone Circle, an underground cemetery used by the civilization known as the temple builders.

The village as we know it today has a more recent history. The parish itself was established in 1688, but the present-day main church was only built during the mid 19th century. It is considered as one of the most beautiful of Gozo's churches, with its richly decorated interiors, gilt sculptures, Italian marbles and paintings (Visit Malta, 2014).

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[4] Ministry for Gozo (EcoGozo Regional Development Directorate) (August 2012). A vision for an eco-island. Retrieved from: <http://ecogozo.com>.

Among Gozo's many villages, Xagħra may be considered as the one with the most tourism potential within its limits with plenty to offer the visitor (Visit Gozo, 2014). This is because several factors combine to offer a unique combination of leisure, history and culture.

The village contains a number of tourist spots, such as the Neolithic temples, various limestone caves, and Ta' Kola Windmill, one of the few surviving windmills on the Maltese Islands, among others.

The village is surrounded by a number of natural formations, namely the bays of Ramla, Għajn Barrani and Marsalforn. The beach of Ramla l-Ħamra (Natura 2000 site) with its ochre sand is among the 50 best beaches in the world for The Guardian's readers[5].

The valleys of Ramla, Ta' l-Għejjun and Marsalforn are natural water courses of extraordinary beauty, as well as home to some of the most notable and fertile agricultural land on the islands.

The village is on the main bus route, and is also easily accessible by car or taxi. It is served by a number of tourism enterprises including a hotel and agri-tourism.

Xaghra, developed just enough but not too much, is reasonably well equipped to receive tourists and a number of tourism facilities and services are available: one four-star hotel, one bed & breakfast (family run), eight holiday houses and farmhouses, two agri-tourism establishments, eight restaurants, four bars and coffee shops, and one souvenir shop.

The tourism product of Xaghra comprises fourteen heritage attractions: Church of Jesus of Nazareth – In Nazzarenu, Church of Saint Anthony the Abbot, Collegiate Basilica of the Nativity of our Lady Maria Bambina, Ta' Kola Windmill, Toy Museum, Plague Hospital, Santa Verna Temple, Ġgantija Temples, Calypso Cave, Ninu's Cave, Xerri's Grotto, Ta' Għejzu Cave, Il-Ħagra ta' Sansuna – Sansuna's Rock, Xaghra Stone Circle.

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[5] The Guardian, *Best beaches in the world*. Retrieved from: <https://www.the guardian.com/travel/2016/feb/16/50-best-beaches-in-the-world?CMP=Share_An droidApp_WhatsApp>.

The Xaghra district has all the requirements for FTZ to carry out its case study, on which to implement the HELAND methodology and develop innovative ICT solutions.

2.2 HELAND project in Xaghra

The Temi Zammit Foundation's contribution to the development of sustainable tourism in the Xaghra district is related to a deep analysis of the local situation, to the application of the indicator-based management tool, to the realization of ICT applications for the case study and to the implementation of dissemination and communication activities for local stakeholders. The Foundation received technical support by Urban Lab ltd and U-space srl, experts in territorial planning and ICT solutions for territorial management, for the exploitation of these activities[6].

2.2.1 *Technology transfer for the heritage case-study in Malta*

At first, the team applied the management tool to the tourist district and realized a detailed report about the local situation affecting sustainability in touristic heritage sites and the innovation and technologies' penetration in Malta. The report provided the general and specific information about trends and actions for the sustainable development of touristic heritage sites and on existing web tools and technologies, analyzed in order to highlight limits and potentialities. A specific section of the report underlined the connections between the HELAND project and other projects and tools for sustainable tourist management, such as the websites <www.visitmalta.com>, <www.visitgozo.com> or <www.islandofgozo.org>.

The report also focuses on the most recent smart applications and tools for smartphones and tablets with new features to help heritage sites to improve their appeal and competitiveness,

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[6] *About Gozo*. Retrieved from: <http://islandofgozo.org/about>.

and tourists to get the most out of their visits and tours (real and virtual)[7]. In particular, it focused on the use of augmented reality solutions and applications for tourism, and on how these may be connected to other relevant experiences, not only those available in Malta. Specific attention was devoted to analyzing the potentialities for apps oriented to accessibility for tourists with special needs and/or people with disabilities.

2.2.2 *Dissemination to local stakeholders*

In collaboration with the University of Malta, the partner responsible for the training, FTZ and Urban Lab staff provided training activities and dissemination materials for regional organizations and local users. The materials included the analysis of best practices in Europe and how to integrate apps and other ICT tools in tourist activities in Malta.

A specific set of documents was prepared to analyze the new possibilities of the spread of information through social networks or smart phone applications. These documents analyzed best case studies of dissemination of tourist information on social media such as Facebook, TripAdvisor, Pinterest, Flickr and smart phone applications related to diffusion of local or regional tourist services. FTZ also produced a handbook with guidelines for best sustainability practices in order to introduce and spread a culture of sustainability among all stakeholders.

2.2.3 *Applications for the virtual exploitation of tourism sites*

Temi Zammit Foundation produced two applications for the virtual exploitation of the Xaghra case study: a Web GIS service in support of eco-tourism in Gozo and a Virtual Tour of the main tourist attractions of Xaghra.

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[7] Visit Gozo Interactive Map. Retrieved from: <http://www.visitgozo.com/en/interactive-map/>.

The Web GIS service was set up by organizing existing news from Maltese agencies working in the field of tourism, private and public statistical institutes, and also from the major European sites dealing with the matter. Its top element is the transfer to the GIS system of the Visit Gozo set of 10 tourist Country Walks, with downloadable guides[8]. The Web GIS allows the tourists to follow the Walk on a map on their mobile phone, having references to all the information described in the guide while they are actually on the walk.

A virtual tour of the main tourist attractions was provided, especially focusing on Heritage and Natura 2000 sites or those that are protected and therefore more fragile than others.

2.3 *The virtual tour of the tourist district of Xagħra*

Temi Zammit Foundation organized the virtual visit of the district of Xagħra on five distinct heritage attractions, to test and exploit the potential offered by the application. The selected sites were: the Ġgantija Megalithic Temples (Unesco World Heritage site) with the visiting centre, the prehistoric Stone Circle burial complex, Ta' Għejzu Cave with the main street of the village, the Collegiate Basilica of the Nativity of our Lady Maria Bambina with the main square of Xagħra, and Calypso Cave with the panoramic platform and the beautiful bays of Ramla (the island's best beach).

Particular attention was dedicated to Ġgantija Temples, which remain the most visited archaeological site administered by Heritage Malta, registering over 186,000 admissions per year, equivalent to over 500 visitors a day, and to Ramla Bay. Visitors to the Unesco World Heritage Site increased by 8,600 visitors in 2015, up five per cent over the previous year (source Heritage Malta). So, why develop a virtual tour of the site? The intention behind the publication of a virtual tour of these sites is to help in consolidating the trend by encouraging tourists to pay

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[8] Gozo Walks Publication. Retrieved from: <http://www.visitgozo.com/en/content/country-walks-rambling-169/>.

them a real visit, and at the same time to lighten the pressure on the site during the visit.

The Virtual Tour is to be considered not only as a digital instrument for promotion and dissemination. A virtual tour presents an entire online media experience, through which every type of information can be diffused.

The Xaghra Virtual Tour is a web based tool, accessible from anywhere on internet and adaptable to pc, tablet and smartphone, which allows the site's exploration from fixed viewpoints through panoramic 360-degree views and videos <http://ftz.org.mt/heland_virtualtour/>.

Visitors can interact with the virtual tour and move throughout the different scenes and sites. Within each scene or panoramic view, there is interactive access to other digital contents such as videos, music, speech, sound effects, interactive maps, plans, photo galleries, documents and explanatory texts to enrich the virtual tour experience. During the digital navigation, the visitors will always know where they are as the VT includes powerful localisation tools like maps, plans and compass. The visit is dynamic so as to encourage one to pass from the digital visit to a real one.

In particular, the virtual tour was created according to the following steps[9]:
- realizing the 360° panoramas and aerial footages with drone with a high definition camera;
- retrieving information about points of interest (cultural, historical, commercial) and elaboration of photo galleries, pamphlets, maps;
- publishing of the virtual tour: transform panoramas into virtual tours with positioning of multimedia contents; locate the virtual tours with GPS position; link other information, documents and photo galleries; graphic design definition, communication quality and realization of the web platform.

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[9] Virtual tour Heland Project in Gozo Island, Malta (2015). Retrieved from: <http://ftz.org.mt/heland_virtualtour/>.

The virtual tour platform can be extended over time and is connected to main social networks for the widest dissemination possible among the target groups.

The Heland partners expect that, through the direct involvement of representatives of all social stakeholders during the construction of the pilot projects, the results of the project will be used as a new tool to empower sustainable tourism and adopt the new methodologies and technologies to preserve their respective cultural and landscape heritage.

Local and regional authorities in Gozo, together with Temi Zammit Foundation, Xaghra Local Council and Urban Lab, are now proposing this methodology derived from the Heland project to the Ministry of Gozo, in order to extend the Virtual Tour to the entire island of Gozo. In this way, the local and regional authories can enhance the sustainability of tourism across all their heritage sites and landscape.

The Web GIS service shows tourist attractive points and country walks

Splash screen of the virtual tour website
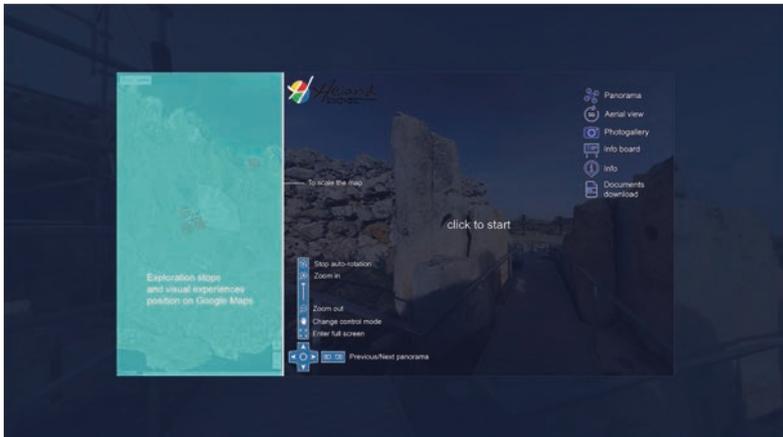
Internal panoramic view of Xaghra Parish Church
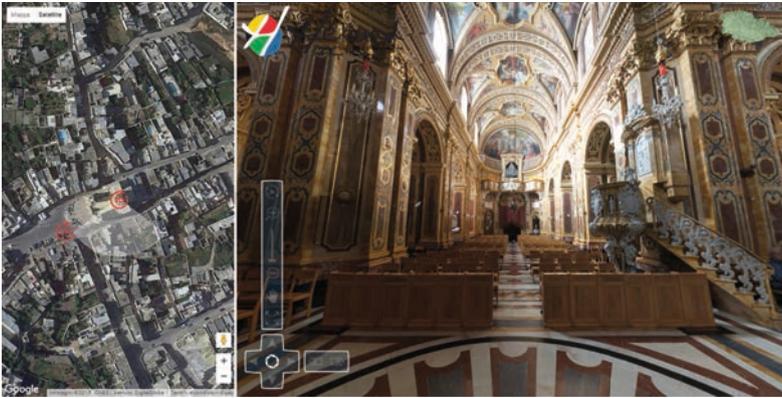
The virtual tour allows one to visit places not accessible to the public, in this case thanks to a video made by drone
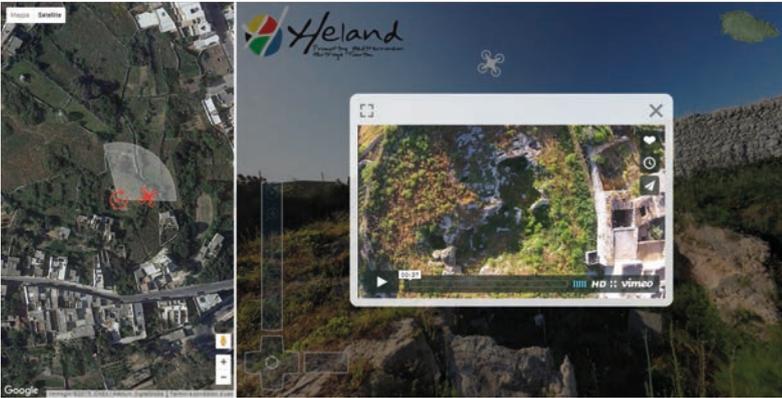
The virtual tour contains media such as the photo gallery
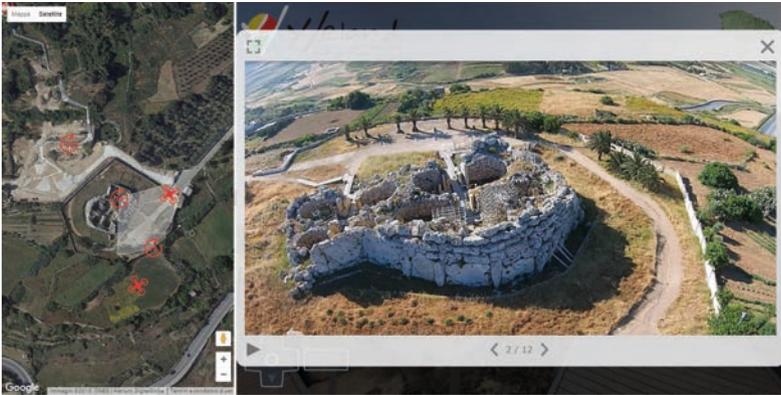
More content allows one to deepen the virtual visit

Chiara Francesconi*

Sustainability and governance on the Romagnola Adriatic Coast. The case of slow sport tourism

1. *Tourist practices beyond postmodernism*

Over the last two decades, a new tourism "mode" has been developing in Italy: an evolution reflecting a social change which was substantially due to the great changes occurring within the economic and cultural context, to the extremely rapid progress in the logics of globalization, and to new IT technologies. The shift to a new system of tourism, having typical features that go hand in hand with the contemporary society, has now become manifest and fully mature, as the multiplication of the possible types of holiday shows, together with the proliferation of services provided and the emergence of new locations, which are different from the typical destinations within the tourism industry. These trends have radically changed the structure of tourism supply and demand, as well as the organization of several places, even the ones where mass tourism still remains quantitatively important, such as in the seaside resorts that this article analyses.

Within this new framework, the tourist is the key figure: a customer and active consumer that can develop his/her travelling culture also thanks to new technologies, which provide an enormous quantity of easily and instantaneously accessible information. The tourist can build up his/her own tourism experiences, juggling seemingly inexhaustible offers

* University of Macerata.

which, in turn, make choice opportunities inexhaustible. Thus, a holiday becomes an experience, and, through this experience, tourists carry out their own individuation processes and meet their need for representation and identification. In this light, tourism appears to be a vehicle expressing a person's subjectivity, recalling the more general individualization process described by U. Beck (2008). This process seems to characterize the actions of the individual of our times, being less and less dependent on the forms of "collective destiny" and increasingly aiming at the creation of their life paths based on a more risk but independent and personal plan, as if it was a creative reconstruction of manifold options, experiences and abilities. As a consequence, the new tourist has engendered a radical change in the supply system: tourist destinations must respond to fewer and fewer predictable choices in addition to offering diversified and complex holiday options, where tourists have not only the opportunity to act and be the protagonists of their own experiences, but also to become acquainted with some social resources and places different from what the tourism market usually offers. This process has recently led to overcoming the primacy of areas devoted to tourism and "consecrated" to holiday: the boundaries between what lies inside the tourism system and what lies outside are becoming increasingly blurred, for a tourist devises the image of a place through his/her own capacity to acquire information, navigating the copious materials available in the various locations, and talking to peers in the conversations involving more and more people on social networks (Savelli, 2012: 358). On one hand, this change clearly allows for many more places to compete and aspire to have their own tourism development than in the past. On the other hand, the areas with an institutional tourism vocation are also brought into play. In this respect, the places that are finding it harder to bring about the above-mentioned changes in perspective, are the tourist resorts that intensely developed during the period of mass society, becoming, in most cases, crowded destinations with a marked tourist-supply single-segment characterization.

Some areas on the Adriatic coast of Romagna are currently making an effort in this sense, which is emblematic. As highlighted

hereafter, once the so-called saturation phase was achieved, these areas started to reposition themselves in the market through their regeneration and upgrading. The aims were manifold: first, to avoid an otherwise inevitable decline and, secondly but most importantly, to be perceived as places that are not just seaside resorts, but also offer unique environmental, structural, cultural and social features, which had often been disregarded and overlooked by mass tourism flows in the past. This process shall clearly aim at new connotation, individualization and branding that go hand in hand with the natural attractions of the resorts – here seaside resorts – and bring out their excellence, uniqueness and local qualities, so that increasingly aware and attentive tourists are more likely to choose such resorts as "attraction" places (Kotler, Gertner, 2002). In the following paragraphs, this idea is developed and some findings are presented: they come from recent ethno-sociological research analysing today's changes in tourist trends and choices, and focussing on nine kilometres of the Romagna coast lying within the Municipality of Cervia and, specifically, the seaside resorts of Milano Marittima, Pinarella and Cervia itself (Francesconi, 2011; Francesconi, 2015). The selection of those areas results from an in-depth structural analysis, both morphological and organizational, focussing especially on the material elements defining their environmental identity, but also some immaterial elements representing, altogether, the real potential which would be at the basis of a tourism promotion in line with the current demand. With regard to this, local entrepreneurs have often implemented innovative strategies aiming to differentiate the supply while launching some common organizational processes to achieve balanced relationship systems in tourism. Moreover, since the area is still managed essentially by native business people paying great attention to their local identity and traditions, modern tourists perceive this as positive, because they continuously search for an ideal tourism representing peculiar and distinctive features of a specific culture. The local entrepreneurial sense of initiative is consequently aiming at a refined product-service system and sometimes struggles to achieve it; a system on the same wavelength as two main components that characterise the

coast of Cervia and remain some of the main driving factors: the beach and the sea (Francesconi, 2011). As mentioned above, these opportunities are closely connected to local features and to natural and cultural heritage, thus involving a precise marketing action on one hand, and the creation of a direct relationship with tourists on the other. Thanks to this, tourists would be well-informed and also "accompanied" when visiting these areas, which they already know, but whose peculiarities and unique features are often unknown.

From a purely morphological and structural point of view, the examination and mapping that were carried out showed that these places are rich in green and natural areas, pine-woods, salt pans, natural parks that are crossed by canals running to the sea, which make these places unique for their natural resources. Nature goes hand in hand with a considerable number of nationally and internationally renowned sports facilities and complexes, which were mainly built during the major development period of mass tourism, and with an equally noticeable number of boarding houses and hotels, and it is no coincidence that they devote some of their facilities and services to sport tourism. Starting from such evidences, the study focussed mainly on the analysis of tourism businesses building a strong bond between seaside tourism and sports. Such analysis was also corroborated by the fact that sport tourism has recently become a very important sector in the area of Cervia: it has garnered consensus and praise, thus remarkably increasing its turnover[10]. Furthermore, the added value that is provided or can further be provided by sport tourism is that all the potentials and conditions needed for such type of tourism already exist in the area, without needing to change or radically transform anything, but just reinventing and upgrading what is already there, following some innovative

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[10] Another aspect that should not be underestimated is that this trend is in line with what is happening at a national level. Sport tourism has been increasing in Italy for over a decade and currently accounts for 16% of the holiday market: Italians represent 55.6% of the demand. See: Osservatorio Nazionale del Turismo (Italian Tourism Observatory), *Customer Care Turisti 2013*, ISNART, (reference sample: 28.000 visitors in the country); Osservatorio Nazionale del turismo, *Indagine quantitativa sui comportamenti turistici degli italiani – Primo semestre 2013*, ISNART.

development logics. *It is evident that this type of tourism requires a thorough organization among the various areas, so as to cooperate and create offers where tourism promotion and services such as transports, tourism infrastructures, gastronomy and sports facilities must go hand in hand.* Thus, establishing entrepreneurial networks and collaborations is crucial, but this should be mutually not individualistically advantageous, relying on some basic principles that are not only to share profits for fairness, but also to manage together a common good, being able to offer a type of tourism that is increasingly responsible, both in terms of resources and development.

2. *Tourism governance and local sustainability*

All the points outlined briefly in the introduction lead to a reflection about the chance to strengthen the bond between seaside tourism and sport tourism aiming at a new development and upgrading of Romagna's coast, which is analysed in this article. Furthermore, these points are completely in line with the European Union Strategy and Action Plan for the Adriatic and Ionian Macro-region. This plan has among its four main goals the enhancement of tourist attractiveness through a sustainable development of coastal and maritime tourism, thus limiting its environmental impact by efficiently using the existing resources and creating an "Adriatic Community" where several specific types of tourism compose a unique mosaic, encompassing historical and cultural roots, as well as an integrated tourism product of mutual interest for the creation of a potential European Cultural Itinerary[11]. This macroregional strategy, where Italy plays a fully-fledged role, follows a multi-level

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[11] The creation of the Adriatic and Ionian Macro-region, that the European Parliament officially declared in 2014, aims at promoting innovative methods and guidelines for local cooperation between different regions and countries (Albania, Bosnia Herzegovina, Croatia, Greece, Italy, Montenegro, Serbia and Slovenia). Their common goal is to achieve a balanced and sustainable development helping to protect the environment, create social security and stability, tackle the problem of pollution, organize transport networks and energy connectivity. *Stakeholder Conference on The EU Strategy for the Adriatic and Ionian Region*, 6-7 February 2014, Athens, Greece.

governance approach allowing for a well-balanced and rational management of powers, albeit with different stakeholders. Actually, these stakeholders cooperate, working in their own fields of expertise specifically, and such cooperation involves countries, regions, local areas and other organizations of the civil society[12].

On the basis of these observations and due to the manifest need to create relevant networks, thus repositioning Romagna's coastal resorts within the municipality of Cervia, a bond is needed between seaside tourism and sport tourism, with distinctive and unique traits. It is also clear that the opportunity to implement and institutionalise an active and inclusive tourism governance is not only crucial but also self-evident. Governance tourism indicates a series of stakeholders, procedures, regulatory frameworks and participatory processes making shared decisions in the area of leisure ('loisir') and tourism industry in a determined geographical area, as it was also defined by other studies (Turco, 2012: 140-141). In this perspective, tourism 'territoriality' would be built horizontally rather than authoritatively and would involve both private stakeholders – professionals, entrepreneurs and citizens, too – and public stakeholders operating in the area. Adopting such logic would inevitably lead to take the distance from the past time's "myth of growth", which only relied on an income-generating production system. Conversely, this would be closer to an idea of growth and "development" in a broader sense, encompassing local cultural, environmental and peculiar features of an area and improving the quality of tourists' holiday and experiences in the resorts (Calzati, 2011).

This is how a sustainable tourism would be created. In this system, the existing resources are used at their best and the concept of sustainability is not connected to a "niche product" but to any form of tourism, in any place, provided

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[12] It is clear that a complete homology among stakeholders would be a precondition for this type of governance: each stakeholder has some specific interests, which are legitimate and recognized by everyone, but negotiations should establish whether to pursue such interests or not. The negotiation process, however, is not a kind of zero-sum game (where one wins and the other loses) but it is a win-win process, where everyone can obtain something.

that there is a deeply-rooted local system managing and acting in its own context along with continuous efforts and long-term commitment by all stakeholders and local entities involved[13]. In our opinion, launching, fostering and promoting a sustainable development policy based on unique environmental, social and structural features of the area in the Municipality of Cervia may attract the attention of today's tourists, who are experienced, well-informed and have a number of needs, that can differ from one-another; but they are also very attentive and concerned about the massive exploitation of environmental and local resources that mass consumption has engendered. As a consequence, they are not inclined to contribute to an uncontrolled overcrowding and deterioration of destinations that, despite being traditional, can still be very attractive and would be further altered thereby (Nocifora, 2011: 19-46). In this perspective, the point of view expressed in this article distances itself from those who consider tourism industry and "conventional tourism" to be irretrievable, while supporting the idea that the adoption of good practices and of a universal idea of sustainability is applicable to no matter which tourism context. It is equally likely that another type of tourists arouses the greatest curiosity: tourists that nowadays, despite having thousands of possible choices, decide to "do less but better", responding to their desire to know thoroughly and genuinely the places where they stay or the cultures they meet, but respecting the environment and using responsibly the resources they can benefit from.

This conception of holiday and travelling has developed very recently and is generally called slow tourism: not quite a type of alternative tourism, but a different way of seeing and interpreting the "development of tourism". The idea of "slowness" applied to tourism, with its several possible facets (slow food, slow

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[13] In compliance with the original definition adopted in 1998 by the United Nations World Tourism Organization (UNWTO), sustainable tourism can be defined as all those activities that are developed in a tourist area for an unlimited time, in a way which does not alter the environment, whether natural, social or artistic, and does not prevent or inhibit the development of other social and economic activities.

sport, slow city, etc.), is undoubtedly one of the trends that better combines growth opportunity with greater well-being and quality of life for tourists and for the reception communities. In this perspective, and as some results summarized in the third paragraph highlight, the aim of the survey was to study some associations and organizations that are based on the coast of Cervia and are currently approaching and promoting suitable slow sports activities that everyone can do during the holiday or at the weekend. The tourism supply stemming from this intertwines nature, sport and local attractions through a series of mutually integrated services and activities that tend to offer "unique" experiences with a strong sense of identity, which may help reposition the tourist resorts (Tarfanelli, 2010).

In order to better understand what value and potential the development of sport tourism – slow sport tourism in particular – might have, the case of an association was analysed in the research that this article is presenting briefly. This association is called *Trail Romagna* and is still considered one of the cutting-edge resources in the area, organising sports events and other small or large initiatives almost all over the year. Events and initiatives mainly deal with outdoor sport tourism and are closely related to the post-materialistic demand of tourists, who want to experience the uniqueness of natural environment and cultural peculiarities of a place, while complying with the indisputable principles of sustainability and respect for local resources.

Before getting into the details of this case-study, it would be useful to explain the methodologies chosen according to the specific features of the scope of observation and the knowledge goals that were set. The research mainly focussed on the implementation of mixed methods for the subsequent data integration to be easier and more efficient. The methods were chiefly visual and qualitative, in order to analyse various situations from different points of view and acquire different types of knowledge (Bryman, 2006). Operationally, the details taken from the analysis of documents provided by the association Trail Romagna, namely the press review from 2008 to 2014, were compared with the researcher's participant observation,

who carried out in-depth interviews with the founders and organizers, starting from some archive photographs to obtain a real narrative reconstruction, a life story of the association from its inception until today.

It is to be specified that the observation was carried out between 2013 and 2014: in the first phase, it was just a matter of participation, as the researcher took part in activities offered by the association, whereas in the second part of 2014, the researcher was included in the organization of two events held in the area of Milano Marittima as a member of staff. This purely qualitative technique was completed by the study of the contents found in all the documents provided, even the web contents, from 2008 to the first two months of 2015. Thanks to this, the whole development process of the association was reconstructed, starting from its nascent state (or "statu nascenti" as defined by Alberoni, 1968) until today. This part of the survey encouraged further analysis, which was carried out through several in-depth interviews with the founding members who are currently on the board of the association. The interaction researcher/organizers proved to be very fruitful, allowing for the cross-check of information collected first hand within the participant observation that was carried out, and the details given by the creators and promoters of the association. This interaction has continued and become more intense all over the research period until the direct involvement of the researcher in the organizational process of events held in 2014 and 2015. As it often happens with qualitative research carried out through participant observation, the research focussed on the opportunity to use other operational procedures for data collection, according to the current situation and to what was happening in the field of survey. Thus, before moving to a brief presentation of the analysis, it would be useful to describe the methodological integration of visual data briefly. From this point of view, a concept of visual sociology was at the basis: namely, seeing and watching something can provide "exclusive" information; not only further information, in a very operational sense, but also something that is paradigmatically different within the context of sociological knowledge (Faccioli, Losacco, 2010). Operationally, the research was conducted starting from

archive pictures, which encouraged and initiated a discussion and interaction between the researcher and Trail Romagna's representatives. This procedure comes within the strand of the so-called "visual sociology" that employs images: starting from already existing images of all the sports events and activities organized and offered by the association, a sort of catalyst-draft was elaborated for a diachronic story of the association and its local area to be outlined. The images were observed during the in-depth interviews and selected from the archives according to spontaneous choices made by interviewees. Actually, interviewees started talking about some images naturally and spontaneously and their account was very self-referential, interpretative and speculative. The information collected through the images, which is being processed, was completed with the informational material selected during the document analysis, the participant observation and the informal interviews carried out on site. As a consequence, the images are an integral part of the sociological story, since they translate concepts and interpretations given by interviewees into visual displays.

3. *The growth of slow sport tourism*

The entire study is included in an ethnographic story, which we refer to for additional information, but here is a summary of the main aspects that emerged during the research and to be considered for the purposes of this article (Francesconi, 2015). Undoubtedly, the most interesting aspect is that the association was born in 2008 and has been operating in the Municipality of Cervia even if it was originally founded in another area. Since then, it has increasingly invested in activities aimed at this geographical area, which is currently considered to be one of the core destinations for natural sport tourism and can offer more and more opportunities. It is to be specified that Trail Romagna's objectives are numerous and combine sports, nature, culture and sustainability, which the association has always been supporting since its very beginning as a result of its original aim: namely, to offer opportunities for trail running on trails that are almost or completely unknown to tourists and even to the local

community. The association immediately realised the importance of its founding principle and of what it offered in terms of sport tourism, as it is also shown by the observation of the first events and activities that were organized. However, tourism promotion is not the only purpose of the association: protecting these areas is also core to the association, which adopts environment-friendly and sustainable practices such as organizing events and activities only for a limited number of participants, thus being more easily manageable and controllable; promoting the use of water flasks and other eco-friendly materials, and encouraging those who take part in the events to reach the venues by public transport or bicycle. The aim of this approach is not to obtain great numbers and flows of tourists, but rather to retain tourists and participants, making them loyal as well as promoters, in turn, of the natural and specific cultural beauties of the places they have visited. Furthermore, the association's operations are not limited to the promotion and respect of natural areas but they also aim at rediscovering these places and regenerating them. As a matter of fact, many of the sports initiatives are held in some natural areas, or just go through them and stop in some specific locations: therefore, these areas need to be cleaned, regenerated and their safety must be improved. Local bodies and institutions in charge of the areas are involved in these activities and spurred to consider not only that some resources can be employed in a different way, but also the potential tourism and economic incoming flows resulting from that. Another interesting element within the association's approach is that it was the first to use some very creative and innovative strategies in planning its activities, which encompass different types of integrated opportunities, such as sports, arts and culture: cultural and urban trekking, "trekking concerts" – organised in partnership with Ravenna Festival – orienteering for youngsters and families to discover the pine wood and, finally, the so-called "by-bike-food" ("*cibi in bici*" in Italian), where the visit to some unique natural places is combined with tasting of local products that are typical of that specific area. Thus, Trail Romagna has gradually become an exemplary association that is able to meet the requirements of sports lovers, for outdoor sports in particular, and of all the

people who enjoy staying active and moving around nature, as it can offer very captivating and fulfilling experiences that are also culturally exciting.

This way of conceiving slow sport tourism and investing in it, in an area that has always been characterized by seaside tourism and more traditional proposals, has recently attracted the attention of several local businesses and entities, which are very attentive to the quality of the association's proposals and well aware of how many tourists have been attracted to this area in the last six years by the small or large events that the association organized. Moreover, they are also convinced that these initiatives support the repositioning of local destinations, making them renowned for being unique places that hold numberless powerful experiences. The network that Trail Romagna has been promoting and supporting for long could get wider and involve the main local institutions as well as some important local and national companies that are starting to realize that slow sport tourism can be an opportunity and become a key market for innovative and sustainable development.

In this regard, the association, together with several entrepreneurs operating in the tourism industry in this part of the coast, founded a voluntary group of companies in 2013 – *Slowsports Milano Marittima* – promoting the area as the ideal place for slow sport tourism and outdoor sports in natural settings. Given the events that were organized jointly by these collaborating entities and the opportunities to do regular physical exercise, it is clear that the tradition of seaside tourism was combined with authenticity and innovation. According to the aggregation philosophy, the word "slow" defines sports, artistic, cultural or wine and food initiatives as chances to enjoy, experience and fully realize the environmental and cultural identity of those places: beaches, pine wood, salt pans as well as the town centres. In 2014, Trail Romagna was able to "move" about 10,000 people and an unspecified number of people accompanying them. Nonetheless, the Slowsports network launched some events in 2013, and the events more than doubled in 2014. Similarly, people and entities taking part in them increased considerably, thus engendering a sort of snowball

snowball sampling effect. The example of Trails Romagna and Slowsports shows that a series of "typicalities" and a strong local identity can act as drivers for the planning, creation and promotion of sport tourism opportunities focussing on their quality, on the contents they convey, on original initiatives for outdoor activities that can even change the way in which seaside tourists spend their time and that might attract affiliated and traditional tourists. It is clear that, for this type of tourism to become rooted and further develop, a long-term project for its enhancement is necessary, as well as an integrated approach involving not only local businesses and entrepreneurs who manage hotels, catering and beach facilities but also other sectors and supply chains, which are connected by the quintessential and cross-cutting sector of local economy: the tourism industry. According to an active tourism governance, all these industries and supply chains should open up to the world of sports associations, to the world of culture and commerce, but also to the world of intangible resources that, taken together, can attract a new generation of sport tourists and help reposition the area, in consideration of its distinctive features, thus making it very attractive again at the national and international level, in the medium and long term.

Although the above-described tourist supply has not been fully perceived and coordinated yet, with a view to repositioning effectively the area that is here considered, it is possible to start achieving this strategic goal by understanding what strengths the area has and could be maximized, and what are its weaknesses, which should be curtailed and limited, as well as evaluating external opportunities that can be taken advantage of, and finally considering the major threats. In order to visualize the aspects emerged in this study, we used the SWOT analysis (internal *Strengths*, internal *Weaknesses*, external *Opportunities*, external *Threats*). In this case, factors that can hinder the choice of repositioning the area through sport tourism or variables that can enhance it are quite clear and well summarized (Table 1).

Some elements emerged, in particular "detractors" that still persist in the considered areas and undermine their potential in this sense and curbe its full development. It was shown that also

Table 1. SWOT analysis

Internal strengths	Internal weaknesses
a high number of sports to do;	entrepreneurs who do not choose networking and participatory logics;
a considerable number of sports facilities;	services not sufficiently aware of slow sport tourism;
beaches equipped with facilities for several disciplines;	problems with internal mobility and related services;
very important and renowned sports events;	difficulties in having several types of tourism coexist as they differ too much from one-another, being all considered as essential but hardly compatible with sports tourism;
unique natural environments;	institutions have difficulties in making strong decisions, as they might bring about conflicts;
a significant number of existing sport tourism networks;	
strategic geographical position for the market;	
destinations which are renowned for local residents' friendliness and hospitality;	
important historical and cultural traditions complementing slow sports tourism.	
External / opportunities	**External / threats**
important sports events can act as a leverage for promotion;	social and economic crisis in the country;
increase in the demand for active outdoor sport tourism;	strong external competition during the summer;
chance to identify different targets according to different sports that can be done;	"generalist" image of destinations;
extension of the bathing season;	local resorts are seen as mass-tourism destinations;
locations can offer more specialized products but are not able to offer such a wide-ranging supply;	lack of knowledge and research on the phenomenon of sport tourism.
opportunities for the repositioning of the area.	

these elements depend on the social and structural milieu of the resorts. They can relate to the management, to the society, and generally depend on issues that should be solved, even if they are complicated: the difficulty in making too different types of tourism coexist in the same area and be integrated, besides the fact that social entrepreneurship cannot/does not want to do without; the bewilderment of those stakeholders that – according to logics of evolutionary inertia – keep on thinking that they can be competitive just by adding some services to the standard ones, typical of seaside mass tourism; the difficulty of institutions in making strong decisions which, on one hand, would prevent an area from being defined as "generalist tourist area" and, on the other, would potentially lead to conflicts between local tourist entities; finally, the reluctance of some stakeholders that run tourist and sports businesses and organizations to take part in participatory processes and renounce locally and individualistically oriented logics (Francesconi, 2015).

However, conditions are met for this challenge to be overcome: certainly, seaside tourism, that is still very popular with families and loyal guests, pairs well with sport tourism. As highlighted above, this is mainly due to environmental and local features, to structural features that have been created over time and, finally, to the cultural ones. It is clear that for a full implementation of such a strategic project, it is necessary to analyse, consider and match it to the innovative cooperation procedures and tourism guidelines advocated by the Adriatic & Ionian Macro-region, which emphasises that local cohesion, environmental protection, sustainable economic and social development and use of existing resources are of paramount importance[14]. Thus, this part of the coast of Romagna may stop being considered as an area of "generalist tourisms", confined to traditional tourist practices that have become obsolete, and may acquire the potentials needed to become a common resource for people of different countries and cultures, thanks to a new shared strategy aimed at the integrated enhancement of local areas.

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[14] Forum of the Adriatic and Ionian Chambers of Commerce, Declaration of intent AIC Forum, October 2014, <www.forumaic.org>.

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Measuring tourist attitudes and perceptions: a Comparative Behavioral Approach through Confirmatory Factor Analysis (CFA) and Multiple Correspondence Analysis (MCA)

1. *Introduction*

Tourism is considered an important source of economic growth around the world. For many countries it is a crucial economic sector to rely on, along with agriculture and industry. Mediterranean countries that have a unique environment, such as Greece, consider tourism as a primordial sector.

In order for this sector to succeed, the touristic destination should be promoted to attract as many tourists as possible. Earning tourists' loyalty is also very important in the tourism industry; in fact visitors who had a good stay experience in one destination would certainly have at least an intention to revisit it and would help in the destination-promoting process within their social environment through word of mouth. Thus, the success of the touristic sector depends closely on the touristic behaviour. For that reason, many studies have been conducted on tourists' behaviour, satisfaction and perception.

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Meanwhile, Mediterranean civilizations are considered to be among the oldest civilizations in the history of humanity. The food and cuisine in this area of the world is distinct and more or less specific to the Mediterranean region. Besides the good sunny weather, these touristic countries are relying on their long history and culture to promote tourism. Gastronomy, as a subset of cultural tourism, played a major role in the success of Mediterranean tourism generally, and in Greece especially. In fact, Cretan cuisine is a remarkable landmark of Greece as a destination. It is symbolizing the famous healthy and fresh Mediterranean cuisine from which is derived the Mediterranean diet that many nutritionists recommend for its organic and constructive characteristics.

Tourists, arriving to Crete to enjoy the sun, sea and landscape, are experiencing the local Cretan gastronomy at least once a day. It is indeed a remarkable experience in the tourist's stay. But how is it seen by the gastronomic tourist? Is it among the satisfying strong points of the stay, or is this not really the case? How does the tourist behave towards Cretan local food?

2. *Background*

2.1 *Tourism in Greece*

In Greece tourism is a key economic activity and it is considered one of the most important sectors. During the first 8 months of 2015 for instance, Greece hosted 26 million tourists, who contributed 18% to the Gross Domestic Product (GDP) (<www.topontiki.gr>, 2015).

2.1.1 *Gastronomic tourism in Crete*

Crete possesses a great cultural and gastronomic wealth as well combined with the high quality and genuineness of the local products. Specialists see a good opportunity to develop gastronomic tourism in the island, to make it a gastronomic destination. This can be done by developing gastronomic

tourism activities and services such as: seminars about Cretan cuisine, gourmets' and wine connoisseurs' events, organized visits where traditional products are produced, cooking events, etc. (<http://www.incrediblecrete.gr>).

Food tourism in Crete is an important aspect of its cultural tourism. What about the tourist who is after all a consumer of the tourism service? How is he behaving towards goods and services of a gastronomic nature? How is the mechanism of perception working? How is the taste preference built?

2.2 *Consumer behavior*

This is defined as the study of individuals and groups and the process they activate to select, secure, use and dispose of products and services in order to satisfy needs. It also includes the impact of these processes on the consumer and the society (Kuester *et al.*, 2012).

Consumer behavior attempts to understand the decision making process of buyers, individuals and groups. It studies the characteristics of individuals, such as demographics and behavioral variables, in order to understand the people's wants (Lynn *et al.*, 2011).

To better represent consumer behavior and consumer responses to a product/service marketing stimuli, an adequate model is designed to present the interaction between the stimuli, consumer characteristics, the decision process and the consumer's response. The Black Box Model (Figure 1) is related to the Black Box theory where the focus is on the buyer's response to stimuli (Sandhusen, 2000).

Consumer behaviour and attitude could be better understood after the purchasing act. Is s/he satisfied? Will s/he consume this good/service again? How can we use tourists' satisfaction to learn about their perceptions and predict their behaviour?

Figure 1. The Black Box Model

Environmental Influences		The Buyer's Black Box		Buyer's response
Marketing Factors	Environmental Factors	Buyer Characteristics	The Decision Process	
Product Price Place Promotion	Economic Technological Political Cultural Demographic Natural	Attitudes Motivation Perceptions Personality Lifestyle Knowledge	Problem recognition Information search Alternative evaluation Purchase decision Post-purchase behaviour	Product choice Brand choice Dealer choice Purchase timing Purchase amount

Source: <http://www.gesaky.com/retailer-area>

2.3 *Customer satisfaction*

a. *Customer satisfaction*

Customer satisfaction is the key to companies' competitiveness (Bitner, Hubbert, 1994). In fact it is a main factor to retain customers, build loyalty and as a consequence create more profit (Reichheld, 1996). Customer satisfaction is often defined as the post-purchase comparison between the pre-purchase expectation and the received performance (Oliver, 1980), or it is simply the global evaluation that the customer makes after the purchase (Campo, Yagüe, 2009), but still "an evaluation of an emotion" in its simplest definition (Hunt, 1977).

b. *Tourist satisfaction in the tourism industry*

Applying customer satisfaction on the tourism industry, which is considered as a grouped number of different industries such as travel, hospitality, food, entertainment, etc has been the concern of many empirical studies. Tourist satisfaction is a vital issue to provide managerial guidance to the tourism industry (Dmitrovic *et al.*, 2009). For almost all the destinations, tourist satisfaction

is considered as an important source of comparative advantage (Fuchs, Weiermair, 2004; Buhalis, 2000). Therefore, monitoring this satisfaction is helpful to managers to identify strategic objectives, prepare tactical and operational plans to increase the competitiveness and make more profit (Dmitrovic *et al.*, 2009; Lee *et al.*, 2008; LeHew, Wesley, 2007; Turner, Reisinger, 2001; Heung, Cheng, 2000; Soderlund, 1998; Lee *et al.*, 2008; Hui *et al.*, 2007; Pawitra, Tan, 2003; Huang, Xiao, 2000; Heung, 2000; Pizam *et al.*, 1978).

2.4 *Perception*

To understand the consumer's behavior towards one good/service, it is necessary to analyze his perception about that good/service and know his preferences.

So the perception here is a key element in consumer behavior. It is defined as the organization, identification and interpretation of sensory information in order to represent and understand the environment (Schacter, Daniel, 2010). It must be clear that perception is not a passive receipt of these signals but shaped by learning, memory, expectation and attention (Bernstein, Douglas, 2010).

a. *Perceived value*

In market research, it is recognized as a main factor for gaining a competitive edge for business success (Parasuraman, 1997). It is a measure to examine customers' purchasing intentions although it is not easy to identify the concept or to measure the value in numbers (Parasuraman, Grewal, 2000). It is defined by Zeithaml (1988) as the customer's judgment of a product based on his/her perception for what was given and what was received.

Patterson and Spreng (1997) described perceived value as a cognitive-based construct. This cognitive response leads to satisfaction which is an affective/emotional response (Cronin, Brady, Hult, 2000; Tam, 2000) which will predict behavior

intention easily. Woodruf (1997) has emphasized that the measurement of customer satisfaction should be accompanied by the measurement of perceived value to better understand the consumer's perception. As he stated: "When triggered to make an evaluation, a customer constructs some notions, learned from past and present experiences, about what value they desire".

3. *Methodology*

3.1 *Theoretical overview for the proposed model*

The attitude as a concept has been very important in the tourism industry as well as in sociology. In fact many researchers believe that attitude is the most important factor in understanding consumer behavior (Walters, 1978; Wilkie, 1994). By summarizing the consumer's attitude toward a product, marketers can have valuable information on their product, so they can be better prepared for the marketing process (Mowen, Minor, 1998). Attitudes can be useful in segmenting markets, evaluating marketing actions, and choosing target segments. Indeed according to many studies, marketing success is strongly related to the understanding of how human attitude is developed and how it influences consumer behavior. Attitude is a momentaneous and multi-dimensional concept as opposed to the uni-dimensional construct accepted in earlier studies (Loudon, Della Bitta, 1988).

Wilkie (1994) assumed that human behavior is a combination of mental, emotional and physical dimensions. Later these dimensions were clearly divided into: cognitive, affective and conative.

According to Fishbein and Ajzen (1975), the "Theory of Reasoned Action (TRA)" can be a good tool to depict consumer's intention-behaviour. Also, TRA can represent the schematic process of the three components: cognitive, affective and behavioral (conative). TRA is a classic persuasive model psychology. It is also used to understand persuasive messages. It was developed in 1967 by Martin Fishbein and Icek Ajzen, derived from the theory of attitude. TRA aims to explain the

relationship between attitudes and behaviour within human action. This theory is used to predict individual behaviour based on pre-existing attitude and behaviour intentions (Rogers Gillmore, Archibald, Morrison, Wilsdon, Wells, Hoppe, Nahom, Murowchick, 2002).

In this regard, the purpose of this study is to identify and to analyze the relationship between these three components: Perceived Value, Satisfaction and Intention to Revisit. The chosen approach is based on the theory of reasoned action (TRA) which was used in previous studies and researches such as Kim, Goh, & Yuan, 2010 and Kim, Kim, Ruetzler, Taylor, 2010.

Figure 2. Three-component views of attitudes (Wilkie, 1994)

cognitive ➡ affective ➡ conative
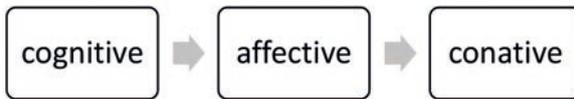
Figure 3. Hypotheses on the proposed model
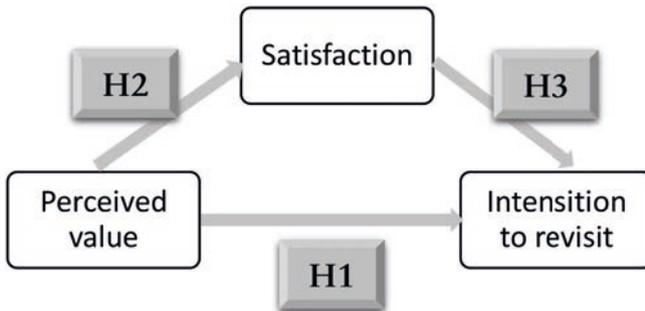
3.2 *Chosen Hypothesis:*

- H1: Food tourists' intention to revisit can be predicted by the perceived value.
- H2: Food tourists' satisfaction can be predicted by the perceived value.
- H3: Food tourists' intention to revisit can be predicted by their satisfaction

3.3 *Instrument development*

The Mediterranean Agronomic Institute of Chania, in cooperation with the Technical University of Crete and the Chania Hoteliers Association, conducted research regarding the profile, satisfaction of services, consumption habits and budget spent of the visitors to the Prefecture of Chania. For this purpose a survey was prepared to be completed by tourists at the airport of Chania in the 2015 touristic season. The survey, entitled "Survey of touristic attitude and consumer behaviour", consists of two main parts: demographic questions, and diverse questions about the destination, such as the way holidays were spent, satisfaction, accommodation, food, prices, priorities during the stay, rating the destination and finally the intention to revisit.

The 10-scaled variable "Q19" was recoded as a nominal variable (yes or no) following the concept of the Net Promoter Score theory.

3.4 *Sample and data collection*

The sample was collected at Chania International Airport. Questionnaires were given to tourists who were about to leave Chania at the end of their stay. Data collection was spread from the month of May till the month of October, during the five most crowded months of the touristic season.

4. *Results and discussion*

4.1 *Factor analysis results*

Most of the literature (Kim *et al.*, 2011; Brown, 2006; Kline 2005; Loehlin, 2004; etc.) has shown that the CFA process is going through the Explanatory Factor Analysis (EFA). EFA verifies the data, divides and differentiates the variables into factors with extraction and rotation methods. The reliability (Cronbach's Alpha) of factors is also determined, just like the EFA.

The CFA specifies a model indicating which variables load on which factors and the correlations between factors. A measure of model fit is also obtained.

The reliability test for this study is showing an acceptable Cronbach Alpha for the "satisfaction" factor (0.8), whereas there are less than desirable numbers for the other two factors (Perceived Value and Intention to Revisit) which showed values of 0.5 and 0.6 respectively.

4.2 *Confirmatory Factor Analysis (CFA)*

The CFA results were significant as shown below: Chi-square: 8,566; Degrees of freedom: 6; probability level: 0.199. The departure of the data from the model is significant at the 0.10 level.

The "normed fit index" (NFI) has a value of 0.998 – very close to 1 – so the model fit is very good. The CMIN/DF ratio is set to the minimum discrepancy so that if it is > 2.00, it represents an inadequate fit" (Byrne, 1989, p. 55). For this study, CMIN/DF= 1.428 which is considered acceptable. The "comparative fit index" (CFI) shows 0.999 which is an excellent value since CFI values close to 1 indicate a very good fit.

The Root Mean Square Error of Approximation (RMSEA) is 0.010. The value is considered very good since every RMSEA of about .05 or less would indicate a close fit of the model in relation to the degrees of freedom. The PCLOSE is a "p-value" for testing the null hypothesis (that RMSEA is not greater than

.05 in the population). Here PCLOSE=1, which shows a good fit since every PCLOSE> 0.5 means a good fit.

Table 1 shows the correlation and the covariance between the factors. All correlations and covariances are positive and the P-value is significant. In other words the covariance between all factors is significantly different from zero at the 0,001 level (two-tailed).

Figure 4 shows the correlation between factors and also the standardized regression weights estimations of the variables relating them to the factors. There is a positive correlation between all the factors.

4.3 *Multiple correspondence analyses (MCA)*

Table 2. Model Summary

Dimension	Cronbach's Alpha	Variance Accounted For	
		Total (Eigenvalue)	Inertia
1	,631	2,111	,352
2	,504	1,724	,287
Total		3,835	,639
Mean	,574[a]	1,917	,320

Two dimensions have been found with a total of 64%. This means that these two dimensions explain 64% of the total information given by the model.

It should be noted that Cronbach's α for the two dimensions is not that good but it is acceptable.

Figure 5 shows that all the positive responses are grouped in the same point (0;0) and that the negative responses are distributed in 3 distinct groups: one for the satisfaction, one for the perceived value and the last representing the intention to revisit. It can be concluded that the positive responses don't differentiate the variables while the differentiation is clear in the negative responses forming the same 3 factors of the factor

Table 1. Factor Covariance & Correlations (Group number 1 – Default model)

		Correlations	Covariance	S.E.	C.R.	P	Label
satisfaction	<-->	perceived	,445	,109	,009	12,325	***	
intention	<-->	satisfaction	,349	,049	,004	13,070	***	
intention	<-->	perceived	,194	,018	,003	6,896	***	

Figure 4. Structural equation modeling (SEM). Model fit statistics: χ^2= 8,566, df =6, p-value = 0.000, RMSEA = 0.01, CFI = 0.998
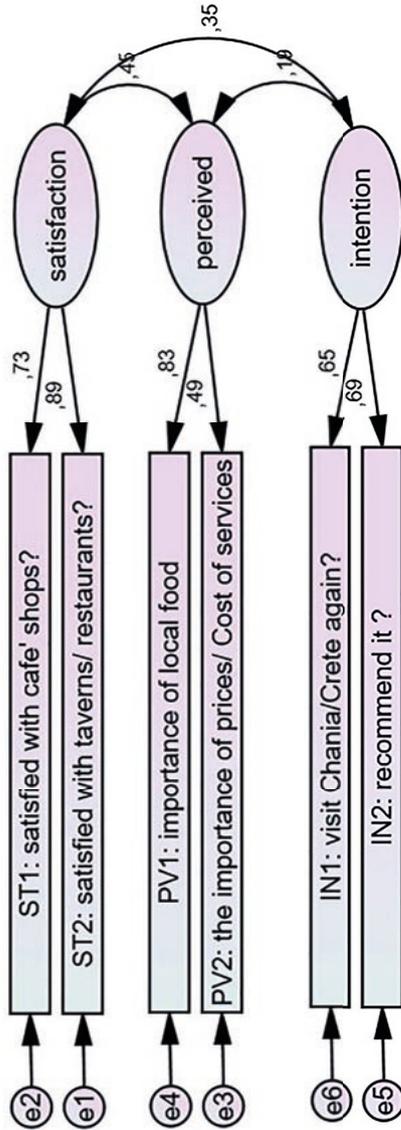
Figure 5. Joint plot of category points

Joint Plot of Category Points

Variable Principal Normalization.
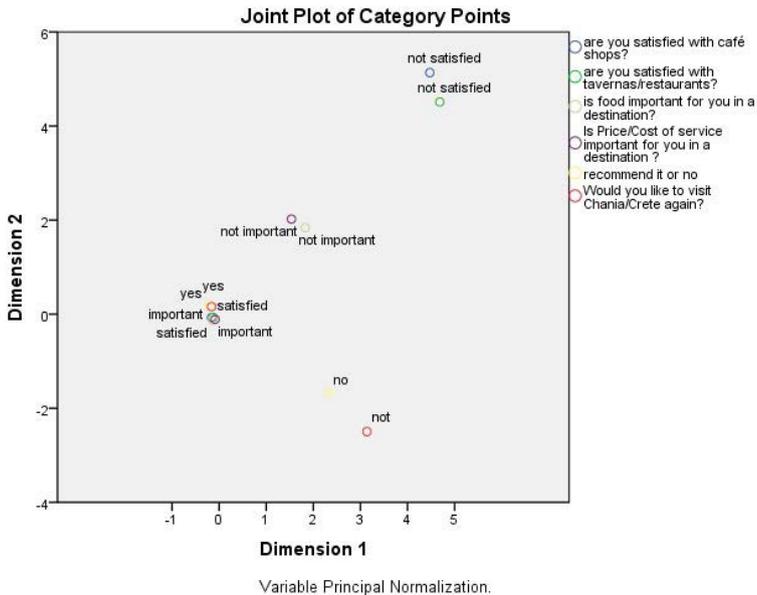
Figure 6. Discrimination measures

Discrimination Measures

Variable Principal Normalization.
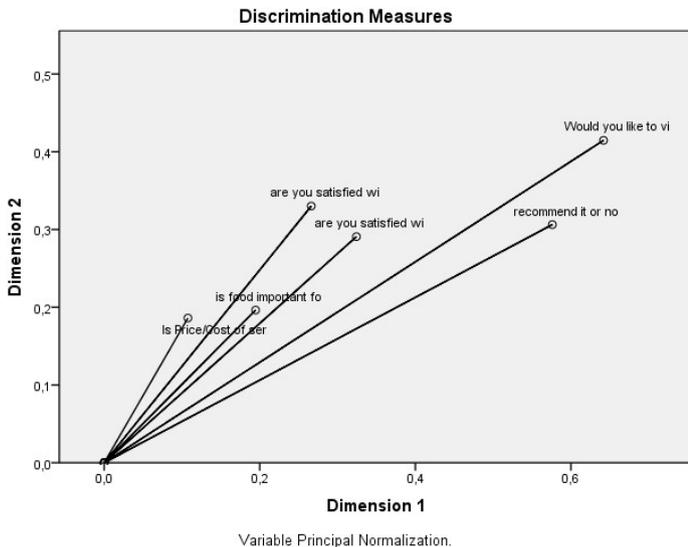
analysis. This means that the negative responses are actually more helpful for the analysis than the positive ones.

Figure 6 is showing the discrimination measures. Those with strong correlations would be regrouped in one area of the graph. It shows that there are 3 extreme groups of variables. The most extreme is the "intention to revisit", which is scaled around (0.6; 0.4), then the "satisfaction" sited around (0.3; 0.3) and finally the "perceived value" group (0.1-0.2; 0.2). Being farther away from the origin (0; 0) is considered the most extreme with higher discrimination measures.

5. Discussion

The data of the current study were collected with the purpose of discovering the profile of Crete's tourists and their behaviour in order to predict their attitude which will help promote tourism in Crete.

During the factor analysis, six variables were chosen and spread on 3 factors (Perceived Value, Satisfaction and Intention to Revisit), with two variables for each one.

The Exploratory Factor Analysis showed a good adequacy. It regrouped the six variables into three main groups as expected. The reliability of the factors (Cronbach's α) was not as great as it should be but medium to weak.

The Confirmatory Factor Analysis showed the expected results, as there is a positive correlation between the tourist/consumer's perception and satisfaction with local food and his willing to revisit the destination. The model fit was satisfactory, with reliable indicators. This study showed that local food consumption is very important in tourists' journeys. Generally, 75% of their budget will be spent on food. Tourism decision makers in Greece and in Crete especially should focus on developing strategies concerning tourists' gastronomy. The more tourists are satisfied and developing a good image about Cretan food (perception), the more likely they will revisit the destination. It is very important to improve the image that tourists have about local food and to build for it a solid reputation worldwide

because this will not only increase their chances to revisit but it will also increase word of mouth and push other tourists to discover what they discovered. Of course the more there is an intention to revisit the better it is for the tourism industry. This is how the local food can have an important effect on the success of tourism in one destination.

The MCA has some similarities with the CFA; indeed, it classified the same three factors of variables into three factors, just like the CFA: Perceived Value, Satisfaction and Intention to Revisit. On the other hand, MCA is presenting few differences with CFA and is showing new information that the CFA didn't show. In fact, the joint plot of category points is showing that the negative responses are the ones that can differentiate better the 3 main factors, since the positive responses are presenting the responses regrouped in the same localization. In other words, for the data analysis, the negative responses are the ones helping to differentiate the variables.

It can be concluded that the CFA and MCA methodologies are complementary. Indeed, the CFA is showing the differentiation of variables into factors and the correlation between these factors, while the MCA is showing which category of variables is having the biggest effect on this differentiation.

The previous results can provide ideas about improving Crete's potential as a tourist destination. Certainly, knowing the tourists' profile (category) and anticipating their behaviour will help decision makers and tourism managers to adjust their strategies in order to explore the full potential of this destination.

The results of this study can provide guidance for tourism strategists to improve tourist visitation rates:

Since prices may seem more or less cheap to tourists, who are qualifying the gastronomic experience as more important than prices, the level of prices can be raised to correspond to consumers' expectations, but it shouldn't be exceeded.

More gastronomic activities with a cultural orientation to spread and promote Cretan cuisine all over the world and can be organised, encouraging local food businesses. Activities like wine tasting, local cooking competitions, organized visits to local farms and traditional crafts will affect tourists' perception about

local Cretan gastronomy and make them more aware of Cretan traditions, but also promote local gastronomic businesses such as cafés and restaurants.

There should be a greater reliance on local gastronomy as a cultural form of tourism, since according to the numbers it is having a direct effect on increasing tourists' loyalty to the destination, by helping and encouraging local traditional gastronomic businesses.

It is important to promote Crete, its culture and especially gastronomy in those countries that showed a good attendance and responsiveness to Crete as a summer destination. Scandinavian countries for example are among the top nationalities arriving to Crete.

According to this study's model, tourists' satisfaction is a main factor that can be improved by Cretan authorities, which is having a direct effect on the loyalty of tourists and on their perceptions about Crete as a touristic-gastronomic destination.

6. *Conclusion*

The market place for tourism is very competitive. A constant improvement of potential and marketing strategies is required. The key factor to success would be to attract new visitors by promoting the destination while maintaining the loyalty of actual tourists, making them revisit the destination. In order to achieve that, a study and analysis of tourists' behaviour towards a destination should be made.

The destination's visitors are always confronted with a gastronomic experience, during which the tourist is discovering other cultures through the cuisine and local food. Gastronomic tourism has been an important subject of studies lately, due to its critical role in touristic activities.

A few limitations may affect this study's results. First of all, the data were collected during the summer of 2015. Although the touristic seasons seem similar with several previous years, this study may be accurate and specific only for the 2015 season which may have some differences with the previous and next seasons. For a more general study a longer time series is required; for

example, 10 years' worth of data would be more representative for a more general overview. Secondly, the questionnaires were executed at Chania airport only, which is the second biggest airport in Crete, after Heraklion. So a bigger data spread between the two airports would be more significant if we want to speak about Crete in general. Finally, the questionnaires were about the general touristic profile and behaviour, and not about food specifically, from which the questions about food were collected. A more specific questionnaire only about gastronomic tourists' behaviour would be more helpful and would provide more data on food tourists especially.

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Scientific session 2

Tourism Policy and ICT

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Sustainable tourism development in Albania in times of
liquid modernity

1. *Tourism and liquid modernity*

Fluids travel easily. They 'flow', 'spill', 'run out', 'splash', 'pour over',
'leak', 'flood', 'spray', 'drip', 'seep', 'ooze'; unlike solids, they are not easily
stopped – they pass around some obstacles, dissolve some others and bore
or soak their way through others still (Baumann, 2000: 2).

Sociologist Zygmunt Baumann (2000) introduced the concept
of liquid modernity, referring to the development of human
relationships and love[15]. Liquid modernity is the condition of
constant mobility and change in relationships, identities, and
global economics within contemporary society. Instead of
referring to modernity and postmodernity, Bauman writes of a
transition from solid modernity to a more liquid form of social
life. Liquidity means that the known stability disintegrates; it
refers to the overall proliferation of flexibility in society and its
concurrent uncertainties. In liquid modernity, everything has
become unstable, precarious and uncertain.

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 [15] Baumann wrote other books to further elaborate the concept of liquid mo-
dernity. See Bordoni (2016) for a recent critique of the concept of liquid modernity.

Baumann's thinking can be applied to tourism – and other social and economic sectors too. A new tourist generation has developed during the last twenty years, with new demands and different ways to organize trips. Contemporary tourists explore autonomously the market. With all information online, the individual can follow-up his or her own demand and have more control because '(s)he knows / determines what (s)he wants'.

Tourism trends and the emergence of liquid tourism, poses new challenges. Predicting tourism development is much more difficult than it was before. Questions emerge like:
- how can the tourism organizers understand tourist preferences and develop offerings? Demand is more liquid and conventional methods of reacting to longer term trends are not good enough anymore;
- how can potential visitors be reached in the current conditions of unlimited options and unlimited amounts of information on internet? The conventional tourism industry is not appealing any more to segments of the market. Since there are many tourism products available on the market and tourism behaviour is more liquid and therefore less predictable, it is difficult to forecast choices (cf. Gnasso, Iabichino, 2005).

Tourism has evolved enormously. Between the two World Wars, tourism became accessible to more people. With increased welfare, new railways and highways improving mobility, and paid holidays for employees, possibilities to go on vacation were created and gradually a tourism industry emerged. Mass tourism emerged. In the 1970's South European countries became favourite tourism destinations. The development of tourism destinations was often a rapid and poorly controlled development process. Countries created new tourism cities, such as Port Grimaud and the Mission Racine in France, Benidorm and Binibeca in Spain, the Costa Smeralda and Riviera Romagnola in Italy. However, since about two decades, tourism demand for the *sun, sand and sea* model has stagnated. The sun, sand and sea model is not over, but many alternatives have emerged. Two critical factors have influenced the market enormously: lower costs of transportation, especially through low fare airlines, and the development of internet. These factors need no further

explanation. According to Piè (2013) there are two other bases for changing tourism demands. The first is the increase of the number of older people in the countries with higher purchasing power per capita, stressing the potential of tourism for seniors. The second cause lies in the changes in the development of tourism preferences, to more personal experiences and inspiring destinations. This has led to a diversity of tourism offerings, ranging from ecotourism to cultural and language tourism. The contemporary tourist wants to explore and be in touch with local cultures and people. People are looking for authentic experiences and many niche markets arise: ecological, underwater, sports, language, adventure, backpacking, and gastronomic tourism are just few examples. These types differ, but experiencing something different and authentic is common. Indeed, there is much more diversity in tourism destinations and higher quality of tourism offerings is demanded.

According to Dell'Ara (2010), the contemporary tourist represents the fourth generation. The *first tourist generation* was easy to satisfy, since the priority was to simply escape the everyday life. But after the 1960's, tourists became more demanding, looking for more comfort (the second tourist generation). Mass tourism developed. At the beginning of 1990's, tourist profiles changed considerably. Canestrini (2010) defines this *third generation* as the *permeable tourist*. From simply taking pictures, tourists want to know the society and "permeate" it, for example talking with locals, understanding places. Nowadays, due to internet, the *fourth generation* transforms permeable tourism into liquid tourism. Liquid tourists look for more authentic experiences. The liquid feature is related to adaptability, from the selected destinations to holiday behaviour. Tourists and travelers have access to all information about touristic destinations, services and travel. They have become autonomous in booking and organizing trips themselves. Tour operators close their shops in the street and change sales channels to internet (Jimenez, 2013). Big tour operators still sell many 'conventional' products, but they also see that small specialized travel organizers appear who sell sports tourism, wildlife tourism, special destination tourism, etc.

New networks in tourism have emerged. Travelers can directly and with ease rent a room from home owners abroad and establish social relations. Tourism service providers join hands and create new flexible offers. In the travel chain, integrated offers from door to door have been developed. According to the preferences in travelling, accommodation, time and activities, many different categories of tourists exist. It is worthy to refer to the specific case of backpackers who have functioned as scouts for new destinations (Richards, Wilson, 2004), and are found in every corner of the globe, from remote villages in the Hindu Kush to the centres of New York and Paris. Backpackers are the first group of completely independent tourists. But also other factors transformed the way of travelling, such as the transportation network evolution. As Shackley (2006) suggests, budget airlines have brought a wide range of destinations online (including smaller cities) and this contributed enormously to the development of tourism in places which people had hardly heart of but were prepared to visit if low cost flights were available. Low cost carriers such as Ryanair, Flybe and EasyJet have gained a big share of the European market. To conclude, since space and time are less of an obstacle and destinations not bound to tourism packages, tourism has become 'liquid', with autonomous behaviour of travellers and tourists.

2. *Tools and information*

The indispensable tool for modern tourism is obviously the internet for gathering information, for buying and selling, for sharing experiences and meeting new people and co-travellers. Tourists may be independent from tourism agents, but now they themselves have to find their way in the huge amount of information available, information that is scattered and not always trustworthy. The so-called internet democracy (rights to privacy and freedom of opinion and association online) will be tested in the current era of internet commercialization. Independent tourists can be defined as do-it-yourself travellers: digitally confident, independent individuals who use a range

of devices and tools to plan, manage and book travel online (Fitzpatrick, 2015).

According to a Google travel study (2015), many 'leisure tourists' do research online before deciding where to go. Social networks and video/photos sites are the top online resource for inspiration. The following step is planning. Both in case of leisure and business travel, internet is the main travel planning resource with 78% and 80%, against 13% and 30% for travel agents. Leisure tourists compare offers on-line and this affects travel brand loyalty. Figure 1 gives pertinent data.

Data emerging from user analysis shows the three most visited travel website in different categories. For general tourism, Tripadvisor.com is the most used search engine. Second rank for the Indian railways, followed by Expeditia.com. The most clicked airlines website is Ryanair.com, followed by Southwest. com and Aa.com, as Figure 2 shows. The first two companies are the largest low-fare airlines.

Interesting data emerge from the accommodation category, where Booking.com is in the lead on internet. This platform was established in 1996 and now it is the world largest booking website, counting 967.418 active proprieties in 224 countries and territories. The second place is for Airbnb, followed by Hotels.com – the oldest booking platform. These data are critical to understand how the tourism market is evolving.

Until 10-15 years ago, the first booking platforms allowed only tourism services providers to comment and present their products to the market. This was a one sided way to manage tourism (destination) marketing. With the introduction of feedback options and sharing platforms, clients now leave comments on the services used and this influences the choices of next travellers, and puts pressure on the providers. Due to the enormous use of digital platforms of the sharing economy with easy entry, ordinary citizens have opened their doors to tourists with the help of Airbnb.com, and earn money. In this case the feedback is two-sided: tourists give feedback on the accommodation and services, while the host provide remarks on the behaviour of the visitors. One step further goes coachsurfing. com, where tourists do not pay for their accommodation but aim

Figure 1. Travelers and information sources. Source: Google (2015)
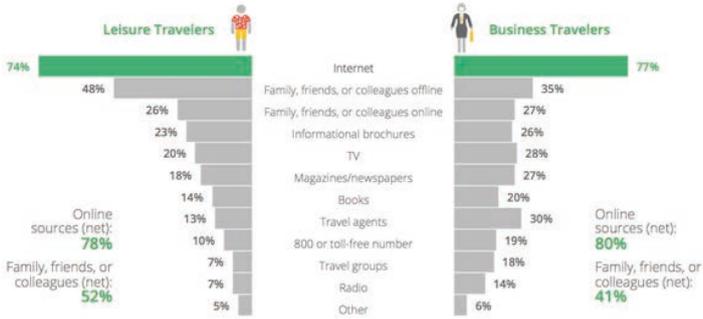
Figure 2. Travel websites users data (millions of visits), from January to May 2016. Source: similarweb.com, elaborated by the authors
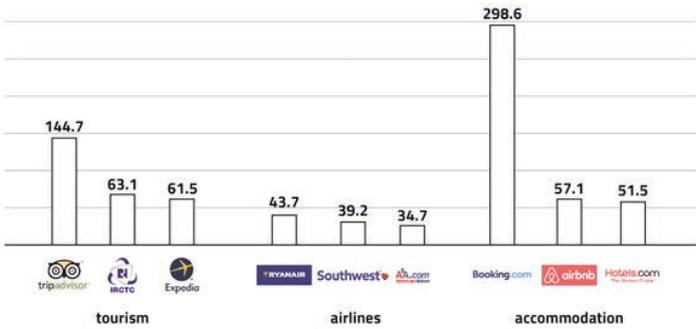
Figure 3. Feedback system in travel platform (source: authors)

at making friends. Established in 2004, it is still a small network (around 4 million surfers) and can be seen as a new expression of a liquid tourism trend based on authentic experiences and human contact.

In Albania, independent travelers and tourists arrive. Air fares to Albania have gone down substantially over the last years. Accommodation solutions like Airbnb.com are already present and growing; also in small towns like Berat and Gjirokaster – that have UNESCO heritage – locals offer cheap rooms in their apartment to tourists. This means that receiving tourists is part of the local practice. The first specialized offers by small tour organizers are offered. Liquid modernity has worldwide relevance, and is relevant for Albania too.

3. *Sustainable tourism*

There are many examples of the negative repercussions of 'unsustainable' tourism in the Mediterranean area. Mass tourism industries in Mediterranean countries have become more aware of the needs to act in an environmentally and socially responsible way (Miras-Rodríguez *et al.*, 2015). Indeed, many of the established tourism regions reconsider earlier tourism policies; they appreciate that tourism has to be sustainable and that they have to adapt to new demands and new ways in which tourists organize their trips.

Sustainable tourism has been defined in many ways, including elements of planning, environment, man-made heritage, ecology, social equity and participation, economic sustainability and longer term future. Buckley (2012) reviewed over 5.000 publications on social and environmental impacts, responses and indicators. He concluded that there is a considerable gap between what researchers show, and what the tourism industry does. Aall (2014) reviewed the concept of sustainable tourism and distinguished environment-sensitive tourism (reducing environmental impacts) and environment-dependent tourism, utilizing the environment as a resource basis for tourism and presented the following typology.

Table 1. A typology of concepts applied to the relationship between environment and tourism (source: Aall, 2014: 2565)

Level of environmental awareness	Environment-sensitive tourism (reducing environmental impacts of tourism)	Environment-dependent tourism (utilizing the environment as a resource basis for tourism)
Narrow	Green tourism	
	Environmentally friendly tourism	Nature based tourism
Deep	Eco-tourism	
	Sustainable tourism	Slow tourism
Broad	Geo-tourism	
	Alternative tourism	Rural tourism

Liu (2003) states that the concept of sustainability has its origins in the environmentalism that grew to prominence in the 1970s'. In his critique of the concept, he claims that six issues are often overlooked in research: the role of tourism demand, the nature of tourism resources, the imperative of intra-generational equity, the role of tourism in promoting sociocultural progress, the measurement of sustainability, and forms of sustainable development. Sustainable tourism can also be understood from a business perspective, as Brokaj (2015) does in his Albanian case study. Gössling *et al.* (2016) discuss an economic perspective under the title 'optimizing or maximizing growth?', and call that the challenge for sustainable tourism.

Tourism has, almost by definition, implications for sustainable development. "Even with a more aware tourism industry or more environmentally friendly types of tourism activity there will be thresholds beyond which the negative impacts will easily outweigh the net economic benefits" (Fletcher *et al.*, 2013: 230). And Bramwell (2004: 16) suggests that 'alternative' tourism can be just as problematic as mass tourism, as sometimes it generates intense environmental and social pressures. Tourism development may also have positive sustainability impacts; investments in cultural heritage for example, can increase the *carrying capacity* (absorption capacity) of a destination – how much tourism an area van handle in a sustainable manner. The

carrying capacity is influenced by various factors, among which the following.

- Society; international cities have a high carrying capacity, a mountain village a low one;
- environment; more fragile and unique environments have a low carrying capacity, cities and destinations with more tourism infrastructure have a higher capacity;
- cultural; risk of over-commercialisation of an authentic culture;
- economic structure, for example risks of resort based destinations resulting in mono-cultures;
- tourists; how tolerant and respectful tourists are with regards to the ecological and socio-cultural systems.

Carrying capacity is not an objective figure or indicator; it is a dynamic concept. The assessment of the carrying capacity of a destination is also determined by one's viewpoint: an environmentalist may have a very protective attitude while a hotel owner or government may have more developmental notions.

The discussion of the concept and practice of sustainable tourism is multifaceted. We have mentioned only a few aspects and studies by way of illustration. In the current stage of tourism development in Albania, discussing in-depth the concept of sustainable (or green / responsible) tourism is not a first priority – raising awareness and developing practices is – and then the sustainability definition discussion will follow. For this paper, we use the UN World Tourism Organization Network definition: "Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities" (cf. EU, 2006; European Parliament, 2015). A lack of precise definition, and sustainability standards, does not have to hamper the development of responsible practices. Sustainable tourism is growing: "There is a consensus among specialists that we are currently experiencing a *New Tourism*. These new tourists have a higher level of environmental and cultural awareness, which means that, as a result of the generalization of ICTs and social networks, they are more

demanding, more able to influence, and have their say on the products that they consume" (CREST, 2016: 3).

4. *Tourism – the Albanian case*

The importance of travel and tourism in Albania is growing. In 2016, the sector contributed 6% to the total GDP (almost 80% leisure, and more than 20% business spending). The sector of travel and tourism is forecasted to grow with more than 5% per annum (WTTC, 2016). Albania received positive recommendations as a tourist destination from various international media. Traditionally, many tourists (40% in 2015 out of an estimated total of 4.1 million visitors) come from Kosovo, but during the last years the map of European tourist arrivals diversifies. Various international agencies help Albania to develop tourism.

The Albanian government recognizes the importance of tourism as an economic growth sector. It wants to develop tourism in its broadest sense and to extend the tourism season to span across all four seasons by introducing alternative forms of tourism, such as: sightseeing, cultural, culinary, sportive, historical, religious, adventurous, etc. This would lift the development pressure off the coastal area, and shift the focus towards more inland destinations (cf. Risi, n.d.; Vladi, 2014). Apart from the Government's overall development strategy documents and the General National Territorial Plan for Albania, 2015-2030, tourism ambitions are articulated in a few in the National Draft-Strategy for Tourism 2014-2020. Relevant for sustainable tourism is also the Law no. 107/2014 "On Planning and Territorial Development", that deals with sustainable territorial development through the rational use of land and natural resources. and current and future potentials for development of the territory in the national and local level, based on the balance of natural, economic and human needs and public and private interests.

Despite the provisions and references to sustainable tourism in the above-mentioned documents, and a small number of initiatives undertaken by the government to initiate a discussion

on sustainable tourism development in Albania, the Albanian government and the tourism sector have limited notions of sustainable tourism development. Tourism in policy and research has so far focused on the virtues of the tourism product in general (cf. Vangeli, 2011). There are a few best practices on small scale sustainable tourism, but there is no step undertaken to move from best practice to sustainable tourism policy. The experience of tourism in Durres region, does gives reasons for concern with sustainable development. Tourism development along the Durres coast is a typical example of unsustainable tourism. In Summer, a – for Albanian conditions – massive tourist flow (mainly from Kosovo) gravitates towards Durres and the region is congested. The number of tourist goes down. In Durres the private sector has been in the lead, and local government did not take much responsibility of serving the public interests.

There is a serious lack of knowledge and experience in Albania regarding alternative ways to develop tourism. Questions about the drawbacks of larger scale tourism, monoculture, and negative impacts on sustainable development, and hardly posed. Tourism research is at an early stage of development. Indeed, Albania is at the very beginning of sustainable tourism development. The term 'sustainable tourism' is used in Albania – it sounds good – but is not defined in practical terms. A risk is that local governments (and national government too) are eager to get investors and can easily 'forget' about sustainability when investors come with a tourism project proposal. It requires a committed government to say 'no' to certain development proposals. A recent signal was reported by Balkaninsight (2016) in the article 'Albania goes to Russia' for acquisition of tourism investments. It is a question to what extent sustainable development would figure on the agenda in such cases. One of the core drivers of sustainable tourism development is recognizing the contribution that people and communities, customs and lifestyles make to the tourist experience, and accepting that they must have an equitable share in the economic benefits of tourism, both of which capture the local aspect to sustainable (tourism) development (Shaw, Williams, 2009). This thinking is next to absent in Albania.

To conclude, current conditions for sustainable tourism in Albania are rather unfavourable (cf. Risi, n.d.). The current tourism policy of the government is inconclusive with regards to sustainable tourism development, the priorities for short term economic development are high, much higher than the concern for environment and communities, local governments are weak in applying regulations. In terms of management and coordination, the culture of working together in partnerships in destinations is weak.

From a perspective of sustainable tourism, it is – perhaps ironically – positive that tourism development has been rather slow. It means that there is more time available for raising awareness about sustainability. There is a pressing need for more initiatives regarding sustainable tourism development, before (big Russian or other) investors come in who do not pay adequate attention to the negative externalities on the environment and socio-cultural conditions and who are allowed to do so by local government. Big investments in tourism have to be carefully guided (or halted) and this is perhaps the most difficult task for government. Various local level regulations are needed, local and regional collaboration is necessary and destination management has to be developed. Various regions have resources for sustainable tourism, but lack the dynamic management capabilities (cf. Porfido *et al.*, 2016).

In solid modernity thinking, it is believed that conditions like infrastructure in Albania hamper tourism. This viewpoint is based on conditions of easy travel and modern resorts. But it is an error to assume that only adventurers and backpackers can cope with imperfect infrastructure and facilities. Tourism in many countries flourishes in conditions of imperfections. In solid modernity thinking, tourism policies are based on forecasting tourism trends that quantify and qualify expected tourism demand, and management of the supply points (the destinations). But, in current days of liquid modernity, such forecasts have limited significance; many factors affect tourism demand and behaviour is liquid. Regarding tourism development, much depends on the actions that Albania itself will take.

5. *Developing sustainable tourism in times of liquid modernity*

Current times of liquid modernity offer opportunities for sustainable (responsible) tourism in Albania, and SW Balkan at large. Sustainable tourism is growing, faster than 'non sustainable' tourism. Our thesis is along the following lines. The starting point is that sustainability and authentic new experience of visiting Albania should be key elements of tourism offerings, as the basic selling point of Albanian tourism products. Above, we mentioned some unfavourable conditions for (sustainable) tourism development. Yet, current times also provide openings for Albania, as summarized in table 2.

In the SW Balkan context, we can easily imagine a variety of sustainable tourism products that can be developed, such as - hiking and biking; - agritourism; - underwater tourism; - photo tourism; - nature tourism (bird spotting etc.); - cultural heritage tours, etc. This signifies a series of smaller scale and specialized tourism options tailored towards specified segments of the market, based on genuine resources, to be developed in partnerships of providers of accommodation, services, digital service companies and the like. Thinking in terms of smaller and sustainable offers is also needed in local tourism policies,

Table 2. Assessment of sustainable tourism Albania

Issue	Factors
Sustainable tourism	Undeveloped = unspoiled: authentic experience and natural environments are available
Liquid modernity	SW Balkan suppliers have easier access to market / tourists, international e-platforms available Suppliers' networks abroad (diaspora) can help in marketing
Market	Proven and increasing demand in the international market Alternative for competition with Greece and Turkey Segment of vital seniors unexplored

to give priority to such initiatives. For small countries like the SW Balkan countries, the international market for sustainable tourism is huge. But the actors lack awareness of the potential. Some of the steps that need to be taken include the following.

The most important actions for *governments* are the development of a vision of sustainable tourism, including defensive regulation to avoid market lead, seasonal, environmentally damaging tourism, and work on the region's reputation as a novel destination for sustainable tourism. SW Balkan countries' governments have shown that its executing capacities in tourism are limited and not very much can be expected from most local governments in the development of sustainable tourism. Given the limited capacities of the government sector, the key to promoting sustainable development is with the private sectors and with supporting donor organizations. Small private initiatives have important advantages compared to 10 years ago: the new tourist operates in liquid modernity. This means that anyone with a tourism product can enter the market, put a room on Airbnb.com so to speak. But much more is needed of course. IT development (for example, a platform for Albanian sustainable experiences and 'green' accommodation) and marketing for the small scale tourism sector is important. Donors undertake projects such as the mountain tourism project and private sector development. They support practices that picture a future for sustainable tourism. Donors may further promote their expertise.

Internet offers opportunities for smaller suppliers with adequate internet skills, if tourism offers are well articulated and well connected to attract the target groups. It is important to keep in mind that the current generation of tourists and travellers consist not of only young people, but includes the attractive tourism segment of baby boomers and vital seniors – who have time and money. *Intermediaries*, like green tourism companies (organizers, platforms, etc.) in Albania and outside Albania, and niche marketers on internet, are required to support suppliers of accommodation and tourism services.

The most important role for *universities* is twofold. First, to develop much more practical knowledge about the market, the

tourism segments, appropriate marketing, and practical tourism partnership models. Secondly, to develop and deliver training on sustainable tourism and partnerships for various actors such as the (local) government, the suppliers and intermediaries.

Small scale specialized tourism offers will demand proper product development for identified segments of the market. The role of the creative sectors in sustainable tourism development will gain importance. The creative sector consists of (small) firms that have their origin in individual creativity, skill and talent and which have a potential for wealth and job creation. Activities that constitute the creative industries include advertising, architecture, arts and crafts, broadcasting, design and fashion, film, games, music, performing arts, publishing and printing, and software and computer services (Nientied, Karafili, 2016). In Albania the creative sectors are still linked too much to the realm of arts and not to business and tourism. The potential contribution of the creative sector to enhance tourism value is underestimated. The creative sectors are especially important in the following manner.

Concluding remarks

Tourism has changed a lot during the last decades; it has grown enormously, has taken different shapes, with travellers much more in the lead than before. Internet has been a tech push factor, lower costs of flights play an important role. Current tourists have new request.

The market for sustainable or responsible tourism products worldwide increases. South Western Balkan countries like Albania however do not have a reply as yet to these developments. Awareness of the trends, conventional policies, and limited organizational capacity hampers the development of sustainable tourism. Yet, current times with fluid tourism also provide opportunities, as was outlined in this paper.

One of the first actions to be taken now is bringing key actors together who are expected to work on sustainable tourism: public authorities, tourism industries, tourism representatives, local partnerships and groups, knowledge and creative sectors,

donor organizations, opinion groups. A jointly developed understanding of the meaning of sustainable tourism in Albania and how this fits in current times has to be a starting point.

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Melsi Labi

Some possible alternatives of public-private partnership (and) through the concept of culture as a resource sustainable economic

The documentary sources and data obtained from archaeological investigations have repeatedly highlighted the cultural, historical and economic relations of the albanian territory with the mediterranean countries. The favorable geographical position of Albania, at the crossroads between East and West and along the Adriatic – Ionian coast, has generated conflict but, at the same time, has promoted the exchange of objects and ideas. Consequently today we we have inherited archaeological sites, monuments and material culture from different historical periods. Such evidences reflect these complex relations that make Albania a special place both from the cultural point of view and as a tourist attraction.

In this regard, the management of these cultural resources, the preservation, promotion and dissemination of their value, are a permanent challenge, both for cultural institutions and for the local government, as part of its administrative territory.

This article deals with the role of culture as an economic sustainable source, the attitude of the Universities and Albanian institutions of culture and their contribution to awareness-raising measures in the political orientation and in the conservation of monuments, for a more efficient management to put these instruments for the purpose of economic development of the country, through the absorption of national and foreign tourists and the awakening of interest for private investors and the capacity to enrich the tourist routes in general.

Simultaneously through this short contribute we will try to make an analysis of the existing models of public-private partnership and to suggest ideas and examples to illustrate the role of the State in the preservation and enhancement of monuments and the creation of an environment in order to a viable alternative to the public-private partnership in the field of culture and to the concept of culture as a sustainable economic resource.

Alessandra Baldelli*, Francesca Bartolacci*, Roberto Lambertini*

FraRe: a net between the two sides of the Adriatic sea

1. *Problem statement*

Settlements of the Order of the Friars Minor are a major phenomenon in the history of the Marche in the Late Middle Ages and in the Early modern (Talamonti, 1939-1962; Pellegrini, 1994; Parisciani, 1982; Benoffi, 2013).Their copious number, that is even higher that in Umbria, where the Order originated, contributed to framing not only the 'religious geography' of the Region, but also the urban shape of many centers of the Region, from the more important ones to the relatively small towns. Hermitages and sanctuaries, however, played a role also in shaping the landscape outside the urban walls. Their net, which still covers the entire territory of the region, belongs without doubt to the cultural heritage of the Marche. Investigating times and modes of its constitution is essential for a better understanding of the history, but also for the enhancement of local cultural heritage. The use of digital technologies would be extremely helpful for improving the level of the available knowledge and to disseminate the results of research. The density of the Franciscan settlements net is so highly concentrated in the Marche that to render it on a paper map could be difficult, whereas a digital map is a much easier way to deal with this rich amount of data. Therefore, by a suggestion of Francesca Bartolacci, and under the scientific supervision of Roberto Lambertini, the website *FraRe Francescani nella Rete* was built

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with the purpose of creating a key locus of connecting the two puzzle pieces together, such as the research information about the settlements (as individual places and as an entire net) and the possibility of representation, in order to achieve an easier access to them from both scholars and a broader public. For such purpose, in the website *FraRe* the digital map of Franciscan settlements distribution in the territory is joined and digitally linked in a hypertext with written information about each settlement.

2. *Objectives*

The aim of the project that we built is threefold.

The first objective of the project *FraRe* is to make available existing information concerning these settlements either to specialists and to non specialists. This is the reason why the written records are deliberately and carefully planned for being updated on last research results, and in the meanwhile for being interesting and worth having to a larger audience, such as religious and artistic tourists or amateurs. One aim of the project is to reach the greatest number of people possible; therefore the site is designed in order to be accessible by different devices, and the map has been developed using MyMaps, an api of Google Maps so there is no need for a specific software to interact with the map. We choose to avoid a specific geographical information system and to use a user-friendly digital software; perhaps we lose something in complexity but surely a Google Map is accessible by everyone and more stable.

The second objective is to create a repository of future research results, open to contribution of history scholars from different countries and provenance. The research group of the project (that was born in the Dipartimento di Studi Umanistici dell'Università degli Studi di Macerata) formed by the scientific director Roberto Lambertini and the scientific codirectors Francesca Bartolacci and Alessandra Baldelli receives the support of an international editorial board of scholars. The editorial board of the site consists of historians from various universities and research fields: Pierluigi Feliciati, Università

degli Studi di Macerata; Otto Gecser, Eötvös Loránd University, Budapest; Letizia Pellegrini, Università degli Studi di Macerata; Bert Roest, Radboud Universiteit; and Beatrix F. Romhányi, Károli Gáspár University, Budapest.

The third objective is to facilitate the connection between written materials and a graphic representation of the space; links and reminds from the different layers of the map to the record files regarding each settlement are thought with studied attention at the complexity of the mutual relationships. There is even the possibility to link each settlement with the digital reproduction of the more interesting documents, sources and study related.

3. *Methodology*

Ever since the pilot study encouraged by Jacques Le Goff at the end of the Seventies, Mendicant Orders settlements studies concerning the Late Middle Ages and the Early Modern period were considered relevant not only in a historiographical perspective inside the religious institutional history, but were even important in demographic and more extensive social researches about large and small urban situations. For the Marche the most notable Mendicant Order on these academic subjects is the Franciscan Order.

4. *The project* FraRe

Numerous studies did originate from this consciousness, on the base of which was built the project that is here introduced: a web-site, named *FraRe – Francescani nella Rete*, that allows to localize the settlements (or their remains) of the Friars on a contemporary digital and interactive map of the region, linked to records containing the most important historical and artistic information about them available in scholarly literature. Such records about the Franciscan settlements in the Marche from the XIII and the XVI century can be updated regularly, acting in the meanwhile as a multimedia repository of the results of scholarly researching at the present time, and as a tool for

scholars involved in further studies. In addition to the above, the choice of geometronics is due to the settling peculiarities of the Marche's Region, which has in its territory a so large number of Franciscan's *loca* that they are nearly impossible to display on a traditional map in adequate detail and in accordance with the various branches of the Franciscan Family. A digital map offers the advantage of adjusting the visualization window interactively depending on the desired magnification scale/detail and consenting the superimposition of temporal layers for the same loci, thus allowing at the same time a comprehensive panoramic and detailed analysis. It is also possible to follow and search for the modification of a single settlement in the same place in time over the centuries, and the different spatial settlements of a same Franciscan community in different places over time.

The above mentioned map is composed of a digital part, showing the whole ensemble of the Franciscan's settlements, and of an explanatory file for each site. The main aims and objectives to achieve are, on one side, to make information immediately and directly accessible, and on the other side to create a new and original consciousness of the past, through texts, pictures, interactions tools, audio and video contents. Those contents could be constantly and regularly updated. From the data referred to settlements and to the most ancient documentary sources, different layers will be created to be querying and mining by the map.

5. *Sources and instruments*

With the purpose of rendering the settling dynamics of the Franciscan Order in the Marche, from the first *loca* of the XIII century to the Observant convents of the XV century, carrying out the digital map of the project *FraRe*, the reference was to those sources that could better describe the Franciscan process of settlement at a certain time (D'Arquata, 1893; Bartolacci, Lambertini, 2012). Therefore some layers display the situation as recorded in documents listing the settlements distribution at a particular date, some are built from indirect documentary sources, and some others report more recent studies in this

field. Online accessibility has been one of the most important aims and so, to make the web surfing easier for the users of the website, many internet hyperlinks to different parts of the written material and of the map layers were set up.

Since for the whole first century of Franciscan life experience no official list of convents survives, we thought it could be interesting to build an artificial one: for this purpose we've been collecting data from the Franciscan convents in the Marche that have been addressed of papal letters written by Niccolò IV, between 1288 and 1292. In the map created from the bullae issued from that pope, we divided the convents beneficiary of these epistles in male and female, and, in a different layer, we represented the papal letters flow in time spans. In order to assemble the convents list, data have been captured from the *Bullarium Franciscanum* (Sbaraglia, 1759-1804), available also on line (Sbaraglia, Bullarium Franciscanum, n.d.). The same source could be in future used to detect the Schiavonia area: we can already notice that ever since the 1288 we can find a papal letter addressed to Helena, Queen of Servia (Sbaraglia, n.d.: 28).

The second layer has been obtained from fra Paolino da Venezia's list. Paolino made a census of Franciscan *loca* census, around 1318-1334, which he inserted in the *Chronologia Magna*, sec. XIV, named *Provinciale secundum ordinem fratrum minorum*. We decided to use the manuscript *Codice Vaticano Latino* 1960, f. 24v., which is housed in the Biblioteca Apostolica Vaticana, even because it is available on line (Biblioteca Apostolica Vaticana, s.d.). The *Provinciale* can be found in another manuscript, *Bambergense* E III 11, collated by Konrad Eubel (Eubel, 1892). The following *Custodia* in the same *folium* is *Sclavonia*, and, even though the number of settlements is not so high as in the Marche, the connection is so strong that even Francesco himself travelled between the two sides of the Adriatic Sea according to his biographers, such as Tommaso da Celano in the *Vita prima, Caput XX* (Menestò, Brufani, 1995: 328-330).

The layer that depicts the settlements which adhered to the Observant movement, and the new observant establishments, was built from the study of Francesca Bartolacci and Roberto

Lambertini, *Qui sit de observantia regule: sondaggi sugli insediamenti dell'Osservanza francescana nelle Marche tra XIV e XV secolo*, in *Fratres de familia. Gli insediamenti dell'Osservanza minoritica nella penisola italiana (sec. XIV-XV)*, edited by Letizia Pellegrini and Gian Maria Varanini, (Bartolacci, Lambertini, 2012); that was based on documents about every single convent. We didn't develop it by now, but it seems interesting, for the research among Observant libraries and Observant Friars contribution to the early modern cultural discourse, to investigate about the role of the sea course. Following Giacomo della Marca it seems that the net between the two coasts arrives in Unghery, as shows one recent contribution of Lorenzo Turchi and Francesco Nocco about Giacomo della Marca and the East Europe that investigates the relationships between convents of the two sides of the sea underlining the development of a tradition of *codices* (Turchi, Nocco, 2014).

We have in view to create further layers (e.g. including Capuchin's settlements) to enlarge the project (Talamonti, 1939-1962; Urbanelli, 1978-1984).

6. *Description*

Franciscan settlements data mapping and collection in the Marche's Region was created using a Google Maps application. For the purpose of obtaining a convincing depiction of the very complex reality of the Franciscan settlements it has been imperative to organize several different layers in order to allow a multilevel approach, by using layers that correspond to an equal number of digital maps.

As it is a Google's Map, its use is very simple. To gain access at those informative layers is necessary to scroll the menu located on the left side of the map and select or deselect the layer witch is intended to display or not. After having selected the layer that is meant to be seen, it is possible, by a simple click on each point showed in the map that represents any single convent, to open the corresponding pop-up window. In such window appears to this point the link at the matching record (visible even from the entry "Schede" of the menu of the site *FraRe*). The record file is

even made available in pdf printable format to consent an easy download, for reading as well as an updated bibliography about the convent in exam; and it revisits briefly but scientifically the whole history of the past events of that settlement.

As above mentioned, the first layer has been created building a list of all the Franciscan settlements that have received a papal letter, mostly privileges, from the *pontifex* Niccolò IV between 1288 and 1292. It is possible to find immediately on the digital map the convents that received the letters searching by the dates in which they were sent, and in the meanwhile to select the male's and female's settlements. Two more levels, but only in regard of the male's convents, list all the *loca* enumerated in Paolino da Venezia census written around 1318-1334, and in Bartolomeo da Pisa census written around the 1399. A further layer matches the Minor settlements with the observant reform, noticing all the settlements present beforehand in the territory, all the convents that passed to the Observant movement, and all the Observant convents established ex-novo. As can be seen, each settlement can be present in more than one layer. The website is even built with the possibility to be enhanced with new layers, like the one regarding the Capuchin's settlements, for instance.

The complexity of the female Franciscan element, cannot be reduced to a unique institutional frame, such as the *Ordo Sancte Clare*; its heterogeneity is in fact very difficult to be depicted in a cartographic representation (Parisciani, 1994; Marano, 1997). For this reason the peculiarity of each settlement belonging to the female Franciscan movement will be punctually reported in the written records.

7. *Results*

The web-site is already accessible on web; the user can localize the single settlements on a Google map and can make queries concerning the chronology and the various grouping of convents according to different categories (male/female, Observant/Conventual, and so forth). By connecting to the site *FraRe* from different kinds of devices, it's possible to both visualize and create historical, religious and artistic virtual tours between

convents and towns, and finally to organize a real journey. The data on the map could be uploaded in Google Earth and in Google Gallery and so the possibility to find the map and mine the information would be greater even for occasional users and tourists looking for more detailed notes about a geographical area, a convent, or a town.

FraRe the Map, with two layers selected from the website

After the recent earthquakes, we could be able to understand how strongly connected with the religious settlements, for the Marche particularly the Franciscan ones, to the cultural heritage development, the history of Western thought, the economic and political discourse, the growth of villages and towns. To study, to preserve, to remember the presence and the influence of the Franciscan Order means also, not only for the Marche, but for the all Europe, studying, preserving and remembering the soul herself of the European culture.

To visualize the map of *FraRe* helps to understand the links between the region and the Minor Friars and the repository would become an archive for future research. By now, the map has already started some investigations regarding single settlements and even papal policy of governance.

8. *Follow-up/Further steps*

The Marche are an important lap of some routes as the *Cammino di san Francesco* and the *Via Lauretana*; they are the *Terra dei Fioretti*, and the interest among these walks and traditional pilgrimages like the one for the *Santa Casa* of Loreto is deep from the middle age until now. The development between the late Middle Age and the Modern Era, on both sides of the Adriatic Sea coast, of a particular artistic current, the *Altro Rinascimento* or *Rinascimento Adriatico* of Giorgio da Sebenico and Matteo di Marco Cedrino, and the presence on the other side of an important contemporary Marian Sanctuary like Medjugorje, could represent other bounds between the sea, connecting religious and artistic tours.

Since the settlements of the Friars Minor cover many regions, on both sides of the Adriatic Sea, and had relationships between them, mapping the sites will allow to enlighten relationships between different areas, in Italy and in the Balkan territories, until the whole XVI century. The development of the site will therefore further expand its geographical scope.

FraRe the Map, with the site "Sirolo" selected and the popup window opened

What could come after for the *FraRe* project? The skeleton is done, but flesh, the records, is to put on the bones; nerves, the links and the layers, are to be built; and blood, the life of the project, must flow, thanks to users connections. The project now needs continuity, also increasing the richness of the repository, that is essential for its life. Further steps will be to draw new levels, to sign new points and records, and as for other experiences, such as *Franciscan Authors* (Roest, s.d.), the simplicity in itself and the ease of use will be the best *atouts* for the continuity of the project and for the dissemination of its results.

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Gian Luigi Corinto*, Fabio Curzi*

Analysis of Online Conversations for Giving Sense to Sustainable Tourism in the Adriatic-Ionian Region

1. *Problem Statement and Theory Framework*

1.2 *An Introduction on Discourse and Place Branding*

Tourism is strongly impacted by the use of the Internet and Travel 2.0 phenomenon is boosting. The new opportunities the web gives tourists consist of the easy accessibility to many online tools dedicated to travel and leisure (Conrady, 2007; Milano *et al.*, 2011). Tourists cannot only organize autonomously their travels, vacation and leisure time, but also share opinions on destinations and experiences texting online comments and reviews. These texts are 'online conversations' being also a large deposit of information on both the supply and demand sides of tourist products and destinations (Donath, 2002; Godes, Mayzlin, 2004).

The role of online conversation analysis on 'tourism and sustainability' and the emerging problems regarding text analysis are clearly underrated, especially in policymaking and in managing tourist destinations and their sustainability, image and reputation.

One emerging problem is that the locution 'sustainable tourism' is contemporarily a common language expression,

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a practical issue and a research topic largely studied by very diverse academic disciplines. Policymakers very often privilege the common sense instead of rigorous scientific analyses, so that popular superficial perception is seemingly able to condition any public choice. The risk is to have rhetorical declarations and high ethical statements before a poor practical implementation of effective sustainability policies (Corinto, 2016).

Environment is a 'common good' essential for tourism practices, and firms and users should understand the worth of co-creating a sustainable tourism management. Growth and value creation are becoming a 'company/client' shared goal also in the tourism sector, as the meaning of value and the process of value creation are increasingly shifting from a product-firm centric view to personalized consumer experiences (Prahalad, Ramaswamy, 2004; Prahalad, Ramaswamy, 2013).

In postmodern societies, informed, networked, empowered, and active consumers are increasingly co-creating value together with firms, and rapidly changing the business environment. In this regard, Information Communication Technologies (ICTs) can help the triangular interaction firm-consumer-policymakers in creating value and social wellbeing also using pieces of information retrievable from online conversations. Diffusion of ICTs helps the market in becoming a forum for conversations and feasible interactions between individual consumers, consumer communities, public institutions and firms (Levine *et al.*, 2001).

As conversations are shaped by spaces in which there are made and spaces are made by conversations, place is the result of the space/society relation (Smith, 2005; Tuan, 1977) and the perceived sustainability image of a singular place is the result also of online conversations, narratives and discourses that are inevitably made by words.

Words and languages are per se metonyms and metaphors of real things, as 'firstly stated by Nietzsche about language, in 1873.' (Lefebvre, 1991: 138). Yet the distance between real and symbol is originally a linguistic issue *a là* Saussure (Prampolini, 1994) still having also a geographic nature because: 'A society is a space and an architecture of concepts, forms and laws, whose abstract reality is imposed to reality of senses, bodies, aims and

desires.' (Lefebvre, 1991: 139). Then, the discourse approach, as a system of statements which construct an object, can clearly be attributed even to places and even more to place branding. Thus media in general, and within the focus of this paper the ICTs, are powerful means of abstraction in creating sense of place and identity, through the creation of specific media messages (Dell'Agnese, 2015), and dealing with communications and territorial marketing. Messages running on the web include necessarily the whole user-generated content, miming once again the nature of a conversation. And the sense of 'sustainable tourism' is originated within the narratives made by suppliers and consumers of the travel and tourism industry.

All this matters for policymakers and communities interested in designing and governancing a credible model of sustainable tourism. In general terms, governance is the process, institutions and ways the govern function is practiced aiming at being effective (Acemoglu *et al.*, 2008). Its main features are transparency, efficacy, legality, lack of corruption, respect of rights and social participation. These features are immersed in the story, traditions, and polity of a region (locality) and economics can give some feasible analytical means to lawmakers, even not yet having a holistic approach, and necessitating of critical policy analysis before any intervention.

The positivist paradigm, intending to implement quantitative methods also in social sciences, provides little help in determining public policy, as the complete acquisition of (perfect) knowledge and information is quite impossible due the complexity of real world, and not simply expensive (Bobrow and Dryzek, 1987). This has a double compliance at different levels of significance: in theory making and in marketing practice. Firstly complexity cannot be reduced in too simple quantitative models for their distance from political reality (*ibid.*) and secondly, if market is a conversation (Storr, 2008), and narratives construct objects and shared ideas, then the meaning of words (in marketing and communication) is worth only within the *social discourse*. Thus, the meaning and sense of words are strictly subjective and the narratives of places are unavoidably the storytelling of relations

and values that are not the reality, but something else, being a narrative construction (Bruner, 1991; Foucault, 1980).

According to Anholt (2005) the functional activity of place branding is the extraction of the intimate spirit, the essence, of a place, through a coherent set of truths. Place branding is clearly oriented to enhancing the advantage of the local community, reinforcing the place capability of tourist attraction or the export of goods and services, and locating some industry units and company headquarters. Lessons originating from philosophical work of Jacques Derrida (1997 [1967]) about concepts that are imagined as stable and homogenous (including the above *set of truths*) give some caveats against the factuality of concepts, because:

> As a means of challenging the operation of logocentrism, Derrida asserts the irreducible textuality of all concepts and terms. Terms and concepts do not mean anything in and of themselves. All concepts are produced within discursive networks of difference and are therefore dependent upon these networks of difference or infrastructures for their identity (Ó Tuathail, 1996: 50).

Thus, the place branding/truths relation has validity within a discourse, i.e. the *marketing discourse* (Skålén *et al.*, 2007) and must face the fatiguing job of contrasting (or using) ambiguity of words, especially when sentiment of socioeconomic agents matters as in online conversations analysis (Hillmann, Trier, 2012; Pang, Lee, 2008).

Conversation is usually considered a sociological topic, even though economists have treated it in theory at least by the Austrian economist Friedrich von Hayek, who suggested:

> We must look at the price system as such a mechanism for communicating information if we want to understand its real function – a function, which of course, it fulfills less perfectly as prices grow more rigid (1980 [1948]: 86).

Price changes communicate to consumers that the world is changed and they have to adapt their own behavior, being prices, as a matter of fact, social mediators and resembling language communication within the social discourse, i.e. within a conversation (Horwitz, 1995). In this line of significance,

prices and conversations are subjected to the power/knowledge relation *a là* Foucault (Hall, 2001), and then to asymmetry affecting relations between media companies and users. In real markets, as well as in online conversations, asymmetric power and asymmetric information produce speculations and adverse selection behavior (Akerlof, 1970).

Consequences for practices are many. Policy analysts and researchers must assist policymakers not in a technical way but in a political one, designing robust basic structure able to resist the constant shifting coming from political and social actors and lobbies, acting in the complexity of real life. Nevertheless, concepts used in formal models are useful criteria, beyond their mathematical rigor, for organizing the information found in case studies and for evaluating policy alternatives and design a specific governance in a specific place.

In this line, governance is worthy as an instrumental tool, because it provides the society (producers, consumers and policymakers) at least clear game regulations. In designing and managing practices of sustainable tourism, the ways the networks of governance do work at the local level are fundamental. Moreover, effective governance of a tourist destination can be self improving eventually fostering participation and people commitment, and their perception of being immersed in a democratic selection of satisfying decisions. Providing a place with some tools capable of spreading information, discussion and learning, can make social negotiations effective. The functioning local governance is the central point for a serious approach to a credible sustainable tourism (UNEP, 2003). Thus sustainable tourism is understandable as a procedure of regulations within the discourse of policy making and analysis, following the constructivist postmodern vision (Rickly-Boyd, 2012).

For all of this, meaning, misusing and misunderstanding of words matters a lot in co-creating the enhancement of sustainable tourism, especially in the still 'virtual' Adriatic-Ionian region, and the specific area of social media.

1.3 *Objective, Focus and Research Questions*

Objective of the paper is to illustrate the results of an explorative research of online conversations as retrieved from Twitter within a geographical area. The Twitter microblogging is one of the social media used in the tourist sector even its credibility should be contextualized (Castillo *et al.*, 2011). The paper reports findings from a case study treating four tourist destinations located in the Adriatic Ionian region, aiming at comparing the Eastern and Western coasts. The focus of the research was to analyze the meaning of the expression *sustainable tourism* as possibly emerging from the texts produced by social media users.

Thus, the research questions are as follows: (i) how do suppliers, customers and public agencies use Twitter for talking about sustainable tourism within the Adriatic Ionian region?; (ii) is there a difference in doing that between the two coasts of the Adriatic Sea?; (iii) are public institutions using the web for designing and promoting their policy of sustainable tourism?

2. *Approaches and Procedure for Data Achievement*

The approach of the research was explorative aiming at testing the possibility to use analysis of online conversation for delineating the meaning of *sustainable tourism* emerging from web users, including policymakers, within the Adriatic Ionian region. For this purpose, the definition of the region was borrowed from European official documents (European Council, n.d.). In the region four main tourist destinations of the similar tourist appeal and dimension have been chosen. Singular destinations were selected based on the criteria of past reputation, established notoriety, level of main tourist indicators, such as tourism intensity per residents and area (Dupeyras, MacCallum, 2013). Thus, Cesenatico and San Benedetto del Tronto in Italy, and Makarska and Split in Croatia have been named as the most eligible ones, even considering all of them are destinations awarded by the Blue Flag program.

For each of them, the mass of themed texts retrievable from Twitter was collected during the last seasonal peak period, namely from July 15th to August 31st, 2016. Text analysis (Holsti, 1969) of tweets can help to give the meaning of *sustainable tourism* as emerging from texting of actual actors. For the explorative intention of the present work, the definition of sustainable tourism given by a reputed eco-label tool was considered a useful proxy. For this, the Blue Flag program for beaches and marinas (Blue Flag n.d.), run by FEE (the Foundation for Environmental Education) has been chosen and some sketches are given here following.

The Blue Flag program was started in France in 1985 and it has been operating in Europe since 1987, and outside Europe, since 2001, when South Africa joined. Today, Blue Flag has become a truly global program with an ever-increasing number of countries participating:

'The Blue Flag program promotes sustainable development in freshwater and marine areas. It challenges local authorities and beach operators to achieve high standards in the four categories of: water quality, environmental management, environmental education and safety' (Blue Flag, n.d.).

For this, the choice is properly in line with the aim to consider the *sustainable tourism* within the *marketing discourse*, as put in the previous paragraph. It appears valid to consider the Blue Flag program as a credible indicator of communicated sustainable tourism, and the above four categories as benchmarks for selecting keywords to be detected in online conversations.

On the side of social media, the rationale for choosing Twitter is the following. This online medium is a huge deposit of pieces of information, being a website with 313 millions of users, 1 billion of accesses per month on websites embedding tweets, having 82% of mobile users, 3,860 employees and 35 offices worldwide, while having the 79% of accounts registered abroad the US, 40 languages used, and 40% of technicians on total employees (Twitter, n.d.). Even though, at the present time, Twitter is reputed in a declining phase, it still has the capability of gathering content produced on other websites, such as

Instagram, Facebook and Tumblr and allows, even with some limitations, to survey user-generated data.

In order to optimize the process of gathering data, the web-based free service IFTTT (<www.ifttt.com/wtf>) was used. It allows to connect different online services furnished by other web tools, by using such a conditional recipe as 'If This Then That' – the acronym of the service. Data have been downloaded in a spreadsheet stored on Google Drive adding a row whenever the designed 'recipe' matched a new web-generated content. For instance, if someone did tweet the word 'Cesenatico', the corresponding text was recorded, with date, hour and user reference, in a dedicated spreadsheet. Table 1 reports surveyed places and alternative location terms (tags) for selecting texts from Twitter. Alternative terms are related to common typing modes and languages of web users. Table 2 reports different languages and words used (keywords) for the text analysis.

Also a geo-referenced condition was given to IFTTT, namely if someone tweeted keywords within a 5 km radius area from the center place the text was registered in a separated spreadsheet. Thus, data relating to a radius area from all the center places have been collected.

Case sensitive and 'with and without' hashtag (#) have not been used, accepting the burden of collecting fuzzy data and clear them in the following phase of analysis, aiming at not excluding any typing mode in texting.

Text analysis aimed at individuating the words displayed in the above table if used in tweets and understanding the expressed sentiment. It seems important to remind that the searched terms are actually the Blue Flag criteria for defining sustainable tourism and the text mining was not robotized but manual.

3. *Data and Results*

A total mass of near 35 thousands tweets (short texts of maximum 140 characters each) has been retrieved from the Twitter web platform during the survey period and all of them have been subjected to text analysis for individuating the use of

Table 1. Places and Alternative Location Terms for Selecting Texts from Twitter

Place	Alternative Location Terms (tags)
Cesenatico	cesenatico
San Benedetto del Tronto	san benedetto del tronto
	rivieradellepalme
	sambenedetto
	sanbeach
	sanbenedetto
	sanbenedettodeltronto
Makarska (Macarsca)	makarska
	macarsca
	makarskariviera
	makarskarivijera
Split (Spalato)	Split
	spalato
	splitriva
	splitriviera
	spljet
	#split (*)

(*) The term #split was added in order to avoid confusion with the English 'to split'. However, a certain 'white noise' remained, due to the movie of M. Night Shyamalan, *Split*, featured just on July 27th, which produced lot of online conversations.

Table 2. Languages and Words Used (Keywords) for Text Analysis

English	Italian	Croatian
Accessible	Accessibile	Dostupni
Algae Vegetation	Alghe	Alge vegetacija
Bathing Water	Acqua Balneabile	kupanje
Beach	Spiaggia	plaža
Beach Management Committee	-	upravljanje odbor
Beach Operators	Operatori Balneari	Plaža operatori
Beach User	Bagnante	Plaža Korisnik
Bicycling	Bicicletta	Biciklizam
Blue Flag	Bandiera Blu	Plava zastava
Blue Flag Season	-	Plava zastava Sezona
Camping	Campeggio	Kamp
Clean	Pulito	Clean

Code Of Conduct	Codice di Condotta	kodeks ponašanja
Dogs	Cani	Psi
Driving	Guida	Vožnja
Dumping	Scarico dei rifiuti	odlaganje
Eco-Label	Eco-Label	Eko-oznaka
Eco-System	Ecosistema	Eko-sustav
Education	Educazione	obrazovanje
Enterococci	Enterococci	enterokoka
Environment	Ambiente	okoliš
Environmental Management	Gestione Ambientale	upravljanje okolišem
Escherichia Coli	Escherichia Coli	Escherichia coli
Facilities	Servizi	Ustanove
First Aid	Pronto Soccorso	Prva pomoć
Flag	Bandiera Blu	zastava
Freshwater	Acqua Dolce	slatkovodni
Habitats	Habitat	staništa
Health	Salute	zdravlje
Industrial	Industriale	industrijska
Information	Informazione	Informacije
Lifesaving	Salvamento	spašavanje
Local Authorities	Autorità Locali	lokalne vlasti
Local Eco-System	Ecosistema Locale	lokalni eko-sustav
Map	Mappa	Map
Marine Areas	Aree Marine	morskih područja
Oil	Petrolio	ulje
Physically Disabled	Disabile	tjelesnih invalida
Pollution	Inquinamento	Zagađenje
Recyclable	Riciclabile	reciklirati
Safety	Sicurezza	sigurnost
Sea	Mare	more
Sensitive Area	Area Sensibile	osjetljivom području
Sewage	Fognature	Kanalizacija
Sustainable Development	Sviluppo Sostenibile	održivi razvoj
Toilet	Bagno	WC
Waste Bins	Cestini della spazzatura	košarica za otpad
Waste Containers	Contenitori per la spazzatura	spremnici za otpad
Waste-Water	Acque Inquinate	otpadnih voda
Water	Acqua	voda
Water Quality	Qualità dell'acqua	kakvoće voda

Blue Flag program terms (keywords)[16]. Only recent data have been collected, because too past data might be partial, due to risk of random deletion, and thus being unfeasible. Table 3 reports their distribution in relation to place-destination and keywords as assumed in the above tables 1 and 2. Table 4 reports data relating to tweets emitted within a 5 km radius area from the center place.

Some quantitative evidences are clear and worthy of mention. The first finding to be stressed is that the most used keywords found in the collected texts are the 'names' of the singular destinations. The most cited destination is Cesenatico, followed by San Benedetto del Tronto, then Split and Makarska, the latter surprisingly mentioned in fewer than expected tweets, notwithstanding it is a very known and reputed Croatian sea destination. As already mentioned, the search term 'split' is affected by white noise due to contingencies, for the English meaning of the word and a homonymous movie aired in the period of the survey. Adding the #split search term the eventual white noise was put in evidence.

Within the Blue Flag criteria, used as keywords, the terms 'sea' and 'beach' are the most used ones in all the considered languages. When linked to singular destinations they produce the same ranking of the two Italian destinations before the Croatian ones.

Data exposed in table 4 show the number of tweets emitted from an area close to the center place and their distribution per keywords. These data cannot be compared to those in table 3. Anyway they show a similar feature about keywords related to sustainable tourism, or 'environmentally sensitive' hashtags. Evidence worthy of attention is that they are the very residual part of the total mass of texts 'talking' about the four destinations, even in tweets emitted from a close area around any singular place. The finding is remarkable because no substantial differences emerged between the two coasts, where the total amount of tweets referring to the Blue Flag criteria is minimal.

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[16] All recorded data are retrievable at the authors' digitalized archive.

Table 3. Tweets per Place and Keywords

| Place | Alternative Location Term (tag) | Number of Tweets | | | | | | | | | |
		Place name	Beach	Sea	Blue Flag	Flag	Marine Area	Water Quality	Toilet	Ecolabel	Other (1)
Cesenatico	cesenatico	3895	188	301	150	1	45	6	390	36	188
	san benedetto del tronto	2041	112	181	6	1	30	0	42	15	95
	rivieradellepalme (2)	100									0
-San Bene-	Sambenedetto	25									0
detto	sanbeach (3)	11									0
del Tronto	sanbenedetto (4)	294									0
	sanbenedettodeltronto (5)	371									0
Makarska	makarska	1471	142	83	12	0	8	0	25	10	40
Macarsca	macarsca	0									0
	makarskariviera (5)	242									0
	makarskarivijera (5)	27									0
Split	split										0
Spalato	spalato	470									0
	splitriva	0									0
	splitriviera	0									0
	spljet	1									0
	#split	14982	118	142	124	4	3	2	33	135	374

(1) To be compared with table 2; (2) Tag near exclusively used by Tourist Agencies in the Riviera Ligure; (3) Tag for only local users; (4) White noise related to Saint Benedict of Norcia; (5) Promotionally used by tourist operators.

Table 4. Tweets Emitted in a 5 km Radius Area from the Center Place per Keywords

Center Place	Total	Per Keywords								
	From 5 km Radius Area	Beach	Sea	Blue Flag	Flag	Marine Area	Water Quality	Toilet	Ecolabel	Other (1)
Cesenatico	3861	171	326	16	0	14	3	87	44	126
San Bendetto del Tronto	3252	98	239	33	5	11	3	40	40	84
Makarska	292	41	27	4	0	8	2	5	2	2
Split	3344	171	196	49	2	46	0	36	31	123

This evidence is even more empowered by the fact that the hastags referring directly to the eco-label Blue Flag are very few.

Another remarkable finding is that texts regarding the selected destinations are quite all oriented to narrate the leisure aspects of the singular destinations rather than their environmental and sustainability features. It is also remarkable that quite no institutional twittering was detected. No public body used this social medium for supporting their online existence or reputation in the topic of sustainability or sustainable tourism.

As an example screenshots from Twitter accounts are reported in table 5. The private user compares the beach of Cesenatico to those of some Brazilian resorts. Tweets from public bodies claim against abusive beach vendors.

4. *Discussion*

The survey on twittering about 'sustainable tourism' in the Adriatic Ionian region put in light some remarkable findings notwithstanding it was explorative and actually having limitations.

The use of Twitter as a source of credible information is confirmed as problematic (Castillo *et al.*, 2011). It was impossible to avoid disturbances and white noise affecting terms such as 'split' and 'Riviera delle Palme' or 'sanbendetto'. The first one caused the necessity to use the '#split' term in searching. The second ones' disturbance was limited for the small number of clues.

Information retrievable from this kind of new media to be useful should be compared with a solid knowledge of the geographical area and the specific social media topic.

Nevertheless, the research did confirm a substantial distance between 'scientific' or 'political' and 'popular' approach to the definition of sustainable tourism. This finding should not be underrated for any future research, ever beyond the strict area of web content analysis.

In responding to the posed research questions, from the case study it appears that users of tourist services and destinations do tweet for talking about any destination referring to some self-

Table 5. Screenshots from Twitter

evident qualifications such as to being 'on the sea' and 'having a sunny beach'. In fact, detected texts are quite all oriented to narrate the leisure aspects of the singular destinations rather than their environmental and sustainability features. The

environmental features seem to be tacit and given for good, as sustainability could be a per se evident issue. No differences emerged between the Italian and Croatian coasts.

Then, it is quite evident that public bodies, notwithstanding they have social media accounts, do not use Twitter neither to promote their policy activities nor for web listening. In this term, co-creation seems to be a far from reality item and sustainable tourism an expression indicating a per se evident feature, not necessitating a more committed attention.

Main limit of the research consists in having used only Twitter and not also Instagram or Facebook and other social media actually used by companies, tourists and public bodies for their different purposes.

5. *Follow up and Further steps*

Results of the present work should be useful both for research and economic or political purposes. The realms of private companies and public administrators and policymakers involved in tourism should benefit of easy procedures which are freely implementing for analyzing online conversations for sustaining policies and interventions. Researchers and destination managers would be also interested in the exiting divide between official documents and statements on sustainability and sustainable tourism and reality of popular perception of the issue.

The Adriatic Ionian region is very fit for analyzing the formation of a new socio-economic area in the Mediterranean basin and for testing the possibility to join very different cultures and traditions too long separated.

The continuing diffusion of social media users suggest deepening the topic in future, even though theoretical and practical problems are paramount, specifically in the topic of possible use of new media for connecting people to public institutions. Next steps in this topic will strictly necessitate the analysis of other web based social media.

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Scientific Session 3

Coastal and maritime tourism

Franco Migliorini*, Francesco Pedrini*

Sustainable tourism through a smart area on the Adriatic coast

Only thirty years have passed since the appearance of the internet, the technology that has revolutionized communication, the world's economy and, perhaps with most innovation, the tourism industry. Organization, booking, documentation and marketing of tourist destinations are all services that have evolved, grown and spread widely with the internet, and the tourism economy has moved from being an ancillary service to having a growing role in the relative and absolute importance to a nation's income. This is even more true for coastal nations like Italy and Croatia, two sides of the Adriatic which are both popular beach spots and high cultural destinations. If spread throughout the territory, internet and new ICT technologies can aid the tourism industry, offering the two nations a strong competitive advantage.

The current stage of internet development is the convergence of applications for mobile devices with other significant new ICT technologies. Of utmost importance is the availability of a high-speed internet network, on which may be conveyed messages, information and images.

The widespread dissemination of an urban wifi network ensures extensive communication and allows tourists to always remain connected and able to access custom detailed information. A wifi network spread throughout the area will act as a beacon for tactical communications in Bluetooth, allowing one to alert

* A4 SMART S.r.l.s - Ambiente Intelligence & Smart Environment.

activated users, reaching minimum scale both indoors and outdoors, in museums, in the streets and on the squares, offering a dynamic and personalized range of services and discounts and substantially transforming an ancient city center into an organized department store of vibrant opportunities.

The introduction of smart cameras and the availability of real-time "big data" allows for the measurement of traffic in topic commercial areas. These traffic measures are necessary for the evaluation and study of the actual capacity of such spaces for both passive and active safety, to simulate evacuations, to predict congestion, to model vehicular and pedestrian flows and to communicate such information to users in order to create a self-regulatory system which negates long queues as much as possible and allows for alternate escape routes.

This presentation analyzes the potential convergence of these technologies and mobile devices with respect to two criteria:
1) The advantages from the use of one of these applications to the Adriatic culture;
2) the contribution of the diffusion of these technologies in the creation of a smart environment useful to both citizens and tourists - governing flows through the interaction between the individual user and information available in real-time in the area.

After a brief analysis of individual technologies and their practical use in tourism and culture, we provide an illustrative set of applications that can be useful design ideas for future developments:
1) In the blue innovation, "Fish to size, for Ri-populate" (an didattic app for sustainable fish buying according to the season and size of adriatic fishes and their related gastonomy recepies by Michele Pellizzato an expert researcher);
2) in the resilience, weather monitoring at minimum scale;
3) in the environment and cultural assets, the use of big data and smart cameras in the analysis of tourist flows in historical centers;
4) in cultural heritage, the network of ancient glass museums, particularly of Roman glass;

5) in cultural heritage, the supervision and reporting of parking between the historic towns and decentralized archaeological sites;
6) in cultural heritage, the use of video games in the decentralization of tourist flows; and
7) in cultural heritage, the use of "beacon" (bluetooth device) in urban smart area and museums.

In the final paper we will provide to develop project ideas on the some way that the ancient glass proposal we are presenting here.

Mediterranean Glass: from archeological myth *to* modern industry *(an example to establish an historic continuity)*

This project is assumed as "evocative" of Mediterranean glass history, i.e. story of the genesis of this material, entirely developed within the Mediterranean among Middle-East, Egypt, Greece, Rome and their territories.

The hypothesized funding, will involve at least six museum sites, will be sought in part in Interreg European programs, partly in private funds belonging to national and international glass industries. Dimension of the request funding to 100% will be following: a two years work for 1,5-2 million funding.

1) The project's primary objective is to produce educational documents about the history of glass, already developed in Ancient Roman times, explaining it from its origin to the first industrial phase. A single database, available through the latest 3D technologies, will virtually unify the finds from the collections of ancient glass throughout the whole Mediterranean area. So each site will be able both to exhibit their own collection of finds and have a virtual access to the entire heritage of ancient glass shown (or selected) by other collections.

2) The second objective is to use interactive and highly innovative means of teaching communication, mostly using video analysis technologies and ICT.

3) The third objective is to ensure the flow of visitors, promoting the event and the collections and reaching the potential audience close to the involved museums-exhibitions sites.

Being the leading partner a public entity, the other important responsible role will concern the educational and cultural profile, always referring to the person in charge together with the involved cultural institutions.

The potential participants contributing to the cultural section will be the glass three Museums with the largest amount of finds.

The purpose is to produce N 4 different objects to be held together by one word GLASS:

a) A single and expandable international database with its cultural rigor together with archival and museum value;

b) the application of a 3D multimedia interactive that contextualizes the objects in an educational way;

c) a series of interactive simulation games for the visitors (i.e. the assembling for the mergers, glass blowing, processing with glass canes, murrine, handling, etc.) together with the realization, where possible, of 'real' manufacturing places, in order to show/publicize glass processing for educational and commercial;

d) an experiment in communication by the most modern WEB and MOBILE tools focused to participation and visit to the involved glass Museums.

As final outcome, in perspective, we wish a modern and competitive Museum net on the GLASS topic, that should be competitive with the world wide known monolithic, but well branched, Corning Center in N.Y. State and/or the Japanese Izu in Ito.

Luca Emanueli*, Gianni Lobosco*

Disclosing Maritime Landscapes

1. *Disclosing strategy*

Disclosing Maritime Landscapes (i.e. D-mLand) is an on-going research project developed by the Research Centre of the University of Ferrara *Sealine* (Architecture Department) in the main framework of the *EU Strategy for the Adriatic and Ionian Region* (i.e. EUSAIR). The topics developed by this proposal mostly deal with EUSAIR's specific objectives Pillars 3 and 4: "Environmental Quality" and "Sustainable Tourism". In particular, the work investigates a possible effective strategy capable of improving the *Marine Protected Areas* (i.e. MPAs) and their touristic attractiveness, while boosting the positive environmental impact on the Adriatic and Ionian basin ecosystems.

The project grounds on the main reference-tool of the SPAMI protocol, which aims at promoting and enforcing the *Specially Protected Areas of Mediterranean Importance*. Shaped and inspired by these guidelines, the D-mLand strategy focuses on achieving around each existing or forthcoming SPAMI a new touristic cluster made by different satellites and, afterwards, on implementing several macro-regional networks among these clusters, to enable specific physical and thematic itineraries.

In fact, as the touristic demand is changing and specific types of tourism are growing stronger and stronger – associated for example with recreational scuba-diving (van Treeck,

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Schuhmacher, 1999) –, proper systems able to arrange, control and manage new and increasing flows become necessary. The carrying capacity of each singular MPA is far from fulfil such requirements, and therefore needs to be somehow enhanced in a *landscape perspective*, in order to develop – without threatening the already fragile balances – more integrated and coordinated approaches to support both conservation and tourism agendas.

In this perspective, D-mLand identifies a set of ignored or unconventional sites which do not present yet all the features to become MPA themselves, but have the potential if clustered with the already existing SPAMI to act as satellites and positively influence from the outside the general exploitation of these areas. Following the framework of the *Protected Destination System* (i.e. PDS) elaborated by Miller *et al.* (2016), the research investigates an operative way to plan and design the relationships between its two, spatial and conceptual, components: the *Protected Area* and the *Gateway Region*.

According to this vision, the existing or potential new SPAMI area is expected to act as the core of a cluster made by numerous satellites. These satellites may have different features (such as geo-sites; cultural, archaeological and industrial spots; offshore platforms; industrial heritage; etc.) and locations (coastal, deltaic and offshore areas, sub-tidal and intertidal sites, etc.), but might contribute in fostering the touristic attractiveness by hosting those facilities and activities that would not be settled in a MPA, although they are essential for the whole area accessibility, usability and competitiveness. For this reason every cluster should be planned according some basic requirements: being recognizable, reachable, inviting and well-dimensioned in terms of services according to site-specific environmental assessments.

In order to face such objectives, the research has been organized in 3 different steps designed to tackle the main issues that commonly arise from debating with stakeholders.

The first one concerns the creation of a *Maritime Landscapes Atlas*: an instrument to build a network at Macro-regional level addressing the sustainable development and preservation of maritime natural and cultural heritage, through the showcase of new landscapes made by protected areas and their satellites.

The second step focuses on formulating possible *Strategies for Cluster-Districts' Touristic Upgrade*. A range of parameters, guide-lines and analysis will be taken into account for implementation in order to give a preliminary feedback to local stakeholders (public agencies, economic operators, etc.) about the utility and convenience for a territory to apply for the SPAMI label, according to the cluster scheme.

The third step deals with *Testing the Network Potentials*, and aims at evaluating the effectiveness of the theoretical model and its transnational operability within the context of real operative experiences; events organized over several days and locations (as, for example, international events based on scuba diving) will be specifically planned to measure the impact on local economy and environment.

The aforementioned propositions have also been submitted by *Sealine* (as lead partner) to the first call of the *EU Interreg-Adrion Programme*. Such funding would represent a chance to validate the thesis according to which such maritime protected areas, if gathered and managed in a more comprehensive network, could be able to better influence the whole Adriatic-Ionian ecosystem, not only in terms of environmental benefits (protection of maritime and coastal biomasses) and blue growth (restrictions for fisheries, monitoring of marine species, etc.), but also in terms of economic development (for instance through the development of sustainable tourism).

Such hypothesis grounds on a main desirable shift in the way the EU and its State Members' policies consider the *Maritime Spatial Planning* (i.e. MPS) purposes in relation to the established definitions given by the *European Landscape Convention* (2000).

As stated in its first Article at point a): "'*Landscape' means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*".

Such "double genesis" of Landscape gets further reiterated and highlighted in the same Article by defining the concepts of *Landscape protection*, *management* and *planning*.

In particular, as "'*Landscape planning' means strong forward-looking action to enhance, restore or create landscapes*" (*Article*

1, f) we believe that the principles guiding the MSP should take into account and even work towards such Landscape "*creation*".

In this direction, there are at least two crucial consecutive actions that have been the subtle subjects of the present research:

1) to disclose marginal and hidden landscapes, affecting what can be "*perceived by people*" in order to go beyond the zoning-oriented approach that is commonly used to describe the maritime space, while providing a more holistic and dynamic interpretation of the relationships among its components;

2) to conceive operative strategies intended to combine sustainable development and protection, promoting the view of future landscapes as the "*[…] result of the action and interaction of natural and/or human factors […]*".

2. *Maritime Landscapes Atlas*

Wrecks, pipelines, cable-ducts, extractive offshore platforms, LNG terminals, energy plants, docks, piers, artificial reefs against costal erosion and/or in favour of the ichthyic repopulation; sampling, measuring and monitoring networks as marker buoys of oceanographic instrumentation; breeding areas of mussels, oysters and clams; suitable areas for shellfish farming, discharge areas for rivers' dredging material, reported waterways and bathing areas; mooring sites for yachting, offshore sand mining sites, as well as archaeological and industrial heritage spots.

This is only a partial list collecting infrastructures and functional areas insisting on the maritime space.

A more exhaustive representation of how such items deeply characterise the sea has been, for example, developed by ARPA Emilia-Romagna agency, looking at a limited span of the Adriatic basin (Preti *et al.*, 2009). The map reported in Figure 1, giving an outstanding depiction of complexity, aims at providing both an overall and detailed view of the uses and the monitoring activities happening in the sea area in front of the Emilia-Romagna coast. Furthermore, it suggests the chance to question a certain picturesque and idyllic sight of the Sea as some sort of untouched natural realm.

In fact, the vast range of human artefacts, uses and regulations that here overlap suggests an intrinsic continuity of the sea with its hinterland built environment (Figure 2) and, as a consequence, allows to consider such environment under a *Landscape perspective*, beyond the inventory. This means disclosing the existing as well as planning the future interactions between Protected and Marginal ecosystems, their possible synergy towards new fruition scenarios, even changing their appearance.

Indeed, taking this argument to the extreme, also the MPAs, as a result of policies, prescriptions, tangible and intangible actions aimed at preserving ecologic features, should be considered in this continuum. That is the case, for example, of many deltaic areas in the Mediterranean whose habitats and morphologic features are preserved as they are, frozen by the human intervention against evolution phenomena (subsidence, sea level rise, coastal erosion, etc.) dealing both with anthropic and natural causes which have always affected such liminal, dynamic and fragile environments. Their current appearance is the simulacrum of an ideal status, deliberately chosen and fixed at a very specific moment of its evolution. So such kind of landscape could be considered as artificial as many of those marginal ones from which it is surrounded, and for this reason they should all be dealt with together and analysed in their mutual relationships.

The aforementioned neglected and marginal sites actually create a widespread maritime landscape crossing the sea and affecting its habitats' evolution, as some scientific literature has already demonstrated (ISPRA, 2012), often contributing in their biological differentiation and richness. Especially in the AI basin, they represent an underestimated biodiversity reserve which could be exploited to reach the main targets that EU policies on MPAs have fixed for the next years.

It should be noted that many diverse definitions of MPAs exist, and every country has its own regulation in this field. In general, MPAs are geographically well-defined areas in which human impact is kept to a minimum level (e.g. extraction is not permitted), often established with the main purpose to strike a

Figure 1. Simplified version of the "Sea uses' Chart of the Adriatic sea in front of the Emilia-Romagna Region coastline". (Source: ARPA Emilia-Romagna)
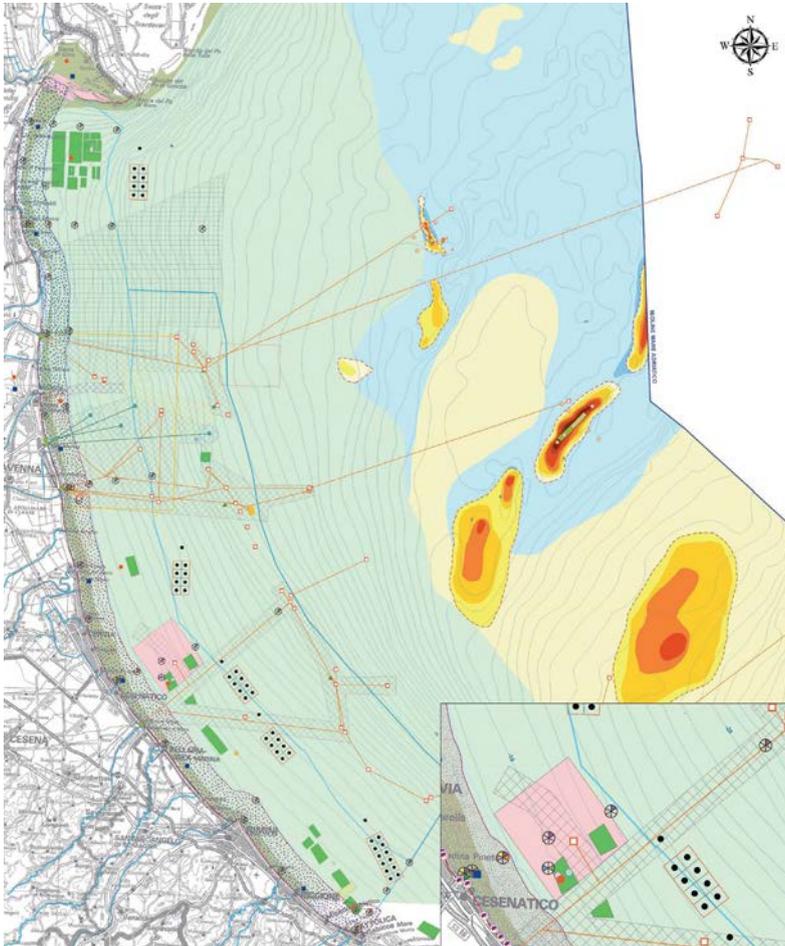
Figure 2. Composed chart of Riccione (Italy) showing the items which characterise the sea as an urbanised landscape (Source: Sealine)

balance between ecological constraints and economic activity (EEA, 2015a).

Both globally and across Europe, MPA designation is evolving towards the construction of more representative and ecologically coherent MPAs networks: from the protection of singular sites, presenting vulnerable and essential features (e.g. rare habitats or vulnerable species), to a more holistic assessment and design of entire MPAs networks, based on an ecosystem approach.

The *Marine Strategy Framework Directive* (i.e. MSFD), foreshadows that EU Member States will have to launch – possibly by the end of 2016 – programmes and specific measures that will contribute to achieve consistent and coherent MPAs networks, by firstly designating new single MPA areas and then grouping them together (EC, 2014). In fact, as Smith *et al.* (2009) remind us, the importance of constructing and officially recognizing MPAs networks lays in the potential environmental achievements that these could lead to by working synergistically, while covering different protection levels and targeting specific goals that – if considered singularly – MPAs couldn't achieve.

Referring to the MSFD's Article 13.4, the main future challenge in MPA design concerns the concepts of "network coherence and representativity" and their meaning for Europe's regional seas in practical, scientific, and legal terms (EEA, 2015b).

Until now, the marine *Natura2000* network, for instance, has played a key role in such direction for it includes over 23 countries and has brought to the improvement of the MPA coverage in the EU's seas. On the other hand, focusing on a specific, limited number of vulnerable marine species (seabirds, turtles and marine mammals) and habitats, such network seems to be inadequate for future developments in the integrated approach of marine ecosystem management and protection. This becomes even more evident if looking at the distribution of the Natura2000 network (Figure 3) where offshore habitats, e.g. sandbanks below 20 m or soft-bottom habitats, and the associated communities of fauna and flora have struggled to find a collocation.

Figure 3. Portion (%) of near shore waters, coastal waters and offshore covered by Natura2000 sites (Source: European Environment Agency)

Table 4.1   Proportion (%) of near shore waters, coastal waters and offshore covered by Natura 2000 sites

MPA assessment area regions	Near shore waters	Coastal waters	Offshore waters
Baltic Sea	30.9	15.3	3.9
North-east Atlantic Ocean	42.9	15.4	2.0
Celtic Sea	31.9	7.8	2.3
Greater North Sea incl. Kattegat and English Channel	59.0	31.5	11.2
Bay of Biscay and the Iberian Coast	47.7	15.6	1.7
Macaronesia	16.3	2.4	< 0.1
Mediterranean Sea	24.5	4.8	< 0.1
Western Mediterranean Sea	45.7	8.5	< 0.1
Ionian Sea and Central Mediterranean Sea	27.0	2.1	0.0
Adriatic Sea	10.1	1.0	0.0
Aegean-Levantine Sea	14.1	2.3	0.0
Black Sea	77.9	19.2	0.0
Total	33.3	11.3	1.7

Note: Near shore = 0–1 NM zone, coastal waters = 1–12 NM zone (for Greece, 1–6 NM), offshore = 12 NM – END, where END = equidistance to neighbouring state or 200 NM.

Source: EEA, 2015. See EEA, 2015 for the delineation of the assessment areas (regional seas). Zones within each assessment area have been chosen to help illustrate the current distribution of the Natura 2000 network and inform future discussions on completeness.

A more effective and comprehensive tool in this perspective might be represented by the *Protocol Concerning Specially Protected Areas of Mediterranean Interest* (RAC/SPA, 1995) set by the Barcelona Convention. In 2012, 32 SPAMIs were established in the basin: they were MPAs already organised by contracting parties according to the Protocol, following some general features whose main interest – from the present research point of view – lays in the concept of "regional value" as an area basic requirement for being included in the SPAMI List. Under this concept, some of the criteria used in evaluating potential SPAMIs recall a more inclusive and landscape-oriented approach: among others, the criteria of "Diversity" and "Cultural representativeness".

The Protocol seems to give a great role to existing and potential connections of SPAMIs, underling at the same time the importance of their protection, planning and management. Although some restrictions and prejudices concerning human activities, artefacts and industrial heritage appear in these guidelines, the Protocol represents the more effective and well-recognised tool from which to start in order to update and improve the existing EU directives dealing with Maritime Protected Areas.

From this assumption, D-mLand project firstly aims at providing a system of landscape indicators and a common methodology for the recognition of "usual and unusual valuable sites" that together could be identified as potential areas to include in the SPAMI list. That is the *Maritime Landscape Atlas* main goal, together with the chance of providing a network of suitable spots over which planning a sustainable touristic fruition of maritime areas.

The whole Adriatic-Ionian Macro-region is characterized by specific excellence spots in terms of marine environment, but only a few of these have all the SPAMI's requested features. Furthermore the coverage of Natura2000 network in the Adriatic regional seas is not sufficiently developed if compared to other contexts (Figure 4). This gap reflects a lack of underwater heritage protection and entrenchment that even affects the areas in which strategic and national parks insist.

Figure 4. Coverage of Natura2000 network in Europe's regional seas (Source: European Environment Agency)

Figure 4.1   Coverage of Natura 2000 network in Europe's regional seas
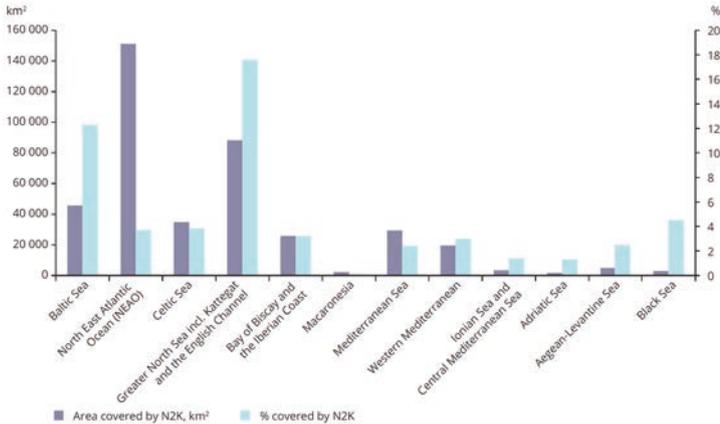
Note: N2K = Natura 2000. The category 'North-east Atlantic Ocean' represents the sum of Natura 2000 coverage for the Greater North Sea, the Celtic Sea, the Bay of Biscay and the Iberian Coast and Macaronesia. The category 'Mediterranean Sea' represents the sum of Natura 2000 coverage of the Western Mediterranean Sea, the Ionian and Central Mediterranean Sea, the Adriatic Sea and the Aegean-Levantine Sea.

Figure 5. Some maritime habitats considered for the Taxonomy (Source: Sealine)

As many studies have already highlighted – for example on the role of seagrass meadows in the mitigation of the erosive phenomena (Fonseca, Fisher, 1986) –, coastal protection can be attended effectively through the development of promotion policies for submerged areas, but they need a preliminary deep knowledge of such habitats, along with their natural and cultural maritime heritage.

The Atlas-related activities have then been structured to classify and map the potential SPAMI areas in the AI basin with the final goal to enhance the protection from natural and anthropogenic hazards. In fact, beside creating an ICT-GIS database of the AI maritime environment's assets in order to provide policy makers with the necessary tools to plan for future operations, it is important to identify risk factors and cross-border resilience strategies from which defining development priorities and guidelines for a proper distribution of SPAMIs' clusters over the sea.

One of the main tasks of the project is therefore represented by the "*SPAMIs' Satellites Taxonomy*", which targets a typologic classification of maritime coastal and/or submarine habitats not yet officially recognized nor protected, but interesting for their ecologic and landscaping value. In partnership with other research centres and Universities, *Sealine* is spotting and studying such landscapes (Figure 5) in terms of environmental impact, analysing their actual capacity to increase biodiversity as well as to potentially affect users behaviours and fruition dynamics of the sea.

Their effect on marine habitats has been analysed on the basis of a wide literature review dealing with the concept of "artificial reefs". According to Baine (2001), Artificial reefs (ARs) are manmade structures deployed on sea bottoms with the primary purpose of protecting coastal habitats and/or increasing biotic resources by aggregating marine species and preventing trawling. Traditionally, in the oligotrophic waters (e.g. western Mediterranean Sea), the ARs goals were to protect Posidonia oceanica meadows from illegal trawling, to increase habitat complexity and promote higher species diversity (Relini *et al.*, 1994; Riggio *et al.*, 2000; Gonzalez-Correa *et al.*, 2005).

Conversely, in the eutrophic waters (e.g. central and northern Adriatic Sea) the main purpose of ARs was to increase fishery yields (Bombace *et al.*, 1994; Ardizzone *et al.*, 1996; Bombace *et al.*, 1997).

Widening the artificial reefs definition to all those structures whose main aim don't fit this purpose (such as offshore platforms and energy plants, sub-tidal and intertidal structures for coastal defence, wrecks, harbours and similar works) it is possible to describe a broader census of items across the sea that interact with the environment supporting, for example, sessile filter feeders, providing nourishment and refuges for motile species, and attracting bentho-nectonic fishes (Bohnsack, Sutherland, 1985; Baine, 2001).

In fact, fish aggregating effects of artificial reefs and similar structures are well known, and the effectiveness of different structure typologies in this respect are well documented (Santos *et al.*, 1997); on the other hand, such interactions are not cause-effect, and happen according to complex ecological processes affected by external phenomena like seasonal larval supply, water circulation, turbidity and nutrients, depths, orientation and physical-chemical features of the substrata (Anderson, Underwood, 1994; Relini *et al.*, 1994; Riggio *et al.*, 2000; Turner, Todd, 1993). This explains why, besides the study of environmental conditions, structures' age and typology (i.e. the Taxonomy), it is necessary to develop a more holistic tool that enables to monitor and plan the interactions between different spots working as Fishing Aggregating Devices (FADs) by considering their mutual spatial and temporal relationship in the waterscape also in the light of fluctuation in environmental condition and variability of recruitment processes (Ponti *et al.*, 2015).

Therefore the Atlas, by mixing spatial, topological and typological data, aims at providing such dynamic representation of the maritime landscape, in order to support effective planning choices that should consider:
1) spatial arrangement of MPA and marginal spots;
2) changes in local species composition, interactions and food webs;

3) interactions between organism and substrata (encrusting, bio-erosion, etc.);
4) alteration in exploitation of biotic resources;
5) alteration of population connectivity and genetic diversity;
6) facilitation of the spread of non-indigenous species by creating suitable habitats with reduced competition with native species and migrating corridors (Sheehy and Vik, 2010).
   Finally, the Atlas major expected goals concern:
7) providing the project beneficiaries, stakeholders and target groups (public authorities and private investors) with a clear overview of the current situation (a sort of SPAMI and MPA state of the art), highlighting the network potentiality and multiplicity;
8) providing proper instruments to detect and discover attractive sites around potential SPAMI areas, showing their features in terms of landscape and environmental quality;
9) creating a platform to inform target groups with a first implementable representation of the AI Maritime Landscape conceived as a network of cluster-districts (made of MPAs and their satellites) that are about to apply to the SPAMI procedure;
10) facing the issues raising from national rules contradictions in order to define a shared protocol to recognise at local and cross-border level such cluster-based system.

Together with the efforts at EU level for MPA enhancement, a new work should be done to define actual and future sites where biodiversity could flourish around existing and new human activities on the sea. D-mLand has been focusing on this topic by developing a set of strategies and guidelines concerning the touristic upgrade of significant "cluster-districts" in the AI basin, in order to implement new ways of fruition designed for the purpose of job creation in the tourism sector through new creative industries dedicated to the enjoyment of maritime environments.

3. *Strategies for Cluster-Districts' Touristic Upgrade*

Following the SPAMI's Protocol's quality standards, the project general aim is to involve in such conservation and promotion process a higher possible number of territories. Developing a protection model based on cluster-districts, and able to boost the touristic flows could give additional reasons to public authorities and stakeholders to apply for the SPAMI label, making its convenience more evident.

In fact, as the Satellites do not have the SPAMIs' constraints, their ecological value might be easily combined with a touristic use of the marine environment, so that more proactive policies and planning activities could be developed both in medium and long term perspectives. Networking integrated services for the exploitation of natural and cultural maritime heritage gives, at the same time, the chance to reduce the operating costs for sustainably managing the habitats. The creation of cultural and creative industries, besides increasing touristic attractiveness and support the running costs of higher-level environmental protection, could also raise awareness among citizens on the value of maritime tangible and intangible heritage.

In such framework, where public and private actors are encouraged to collectively upgrade sustainable tourism products, the development of new MPAs and strong *gateway communities* (Eagles, McCool, 2000; Howe *et al.*, 1997) becomes an essential prerequisite to the success of the cluster-district model.

Referring to the image in Figure 6 proposed by Miller *et al.* (2016: 10), the cluster-district model can be interpreted as an operative application of the *Protected Destination System* (i.e. PDS), whose main aim is "*[…] highlight[s] the interdependency between tourism destinations and protected areas.*" introducing a conceptual framework "*[…] for the multidisciplinary study of the human, artifactual (e.g., the built environment, laws, policies, projects) and natural domains*".

According to this model, the principal PDS components are: a *Protected Area* devoted, at least in part, to recreational and touristic activities; a *Gateway Region* accommodating the human communities (i.e. residents and occasional users) which

Figure 6. Hypothetical protected destination system (PDS) and, in red, the operative field of the Cluster-district model (Source: Miller *et al.* (2016: 10), edited by Sealine)
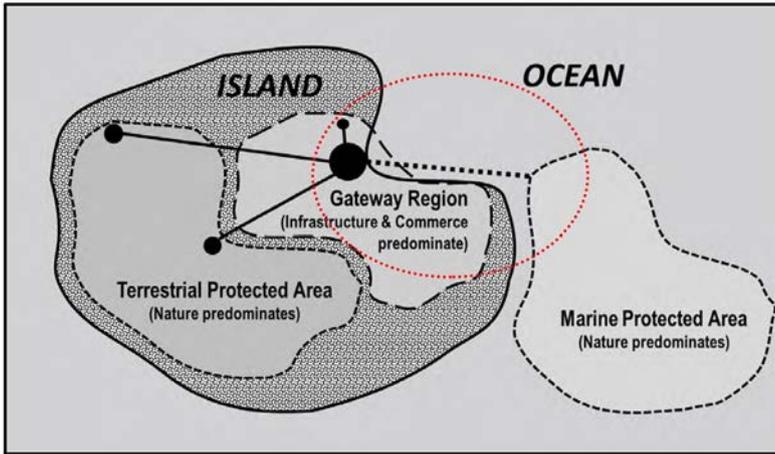
should somehow take advantage of the characteristics of the first one.

In particular, the cluster-district model we propose around SPAMIs is meant to foster the connection, as well as the landscape and the ecologic continuity between the two PDS components. In such perspective, the SPAMI's Satellites can be inside or just at the borders of the gateway region on the hinterland and the coastline, as well as adjacent to an offshore protected area (this is the case of the already mentioned marginal maritime landscapes). Satellites, depending on the context and according to site-specific strategies, are supposed to work in four different ways:

1) as *accessibility devices* (for example, a network of landing spots working as cluster's gates) they should enable a better management, control and regulation of visitor flows over the year, setting the cluster-district's carrying capacity on the basis of environmental assessments and touristic demands;

2) as *showcase devices* (for instance, a set of open diving areas and underwater parks) they might provide visitors with a preview of the SPAMI different habitats under controlled

and safe conditions, catalysing the interest of tourists and general public on specific itineraries and future experiences;

3) as *service providers* (for example, thematic and specialised hotels) they should supply visitors with a high-quality standard availability of accommodation, with catering and other facilities designed on the basis of different types of tourism specific needs;

4) as *monitoring devices* (for example, spots integrating remote sensing technologies) they would contribute to data gathering, analysis, and communication in support of planning actions aimed at establishing proper usage thresholds for the cluster-district, in orders to avoid conflicts between biological and anthropic processes.

Clearly, the actual function of Satellites in the cluster-district model depends on the context, but also on the type of tourism it mainly addresses. Since the ecotourism definition (Hetzer, 1965), a vast literature has insisted on the respect for nature and the importance of creating and supporting protected areas (De Los Monteros, 2002). This orientation can also be found at different scales in other similar tourism forms: nature tourism, geo-tourism, wildlife tourism, green tourism, conservation tourism, environmental tourism and endangered species tourism, among the variants.

But, beyond definitions, the present research focuses on the proactive role that maritime landscape may have in boosting and supporting a range of tourism forms through a strong engagement in disclosing the opportunities provided by neglected or underestimated sites; places where touristic formal and informal practices are often already performed, even though not officially recognised.

Around the Adriatic, the most valuable example is represented by the so called "Paguro experience": an unintended example of "rigs-to-reefs" procedure originated by the explosion and the consequent sinking – on 29 September 1965 – of the AGIP drilling platform "Paguro", placed 12 nm offshore Ravenna (Ponti *et al.*, 2002). The platform wreck became in a few years a major scuba-diving destination due to the fast proliferation of marine flora and fauna, and thanks to the active engagement

of several diving associations in promoting, protecting and maintaining the area. Such spontaneous, but well organised actions brought, since 1995, national and regional authorities to recognise the ecological value of the area, declaring its status of "biological reserve".

Nowadays, according to the estimation given by local diving associations and limited to summer flows, the "Paguro's spot" is visited by 4.000 divers every year; it creates job opportunities related to move tourists and divers around (at lest seven charter boats are involved in their transportation and supporting safe diving), and to train them in several Diving Centres based on the coast. Also, it increases profits because of the logistic required by scientific research and didactic activities. Other forms of business could involve the underwater park maintenance and improvement thanks to the installation of plug-in structures for different trails.

Looking at the touristic trends data, it is also important to highlight how, in only ten years, the "Paguro's spot" has been able to reach almost 40.000 scuba diving sessions, half of which have been performed by divers coming from outside the Emilia-Romagna region, and 12% by foreign divers mainly from Austria and Germany. Another important factor to be considered is that the divers' spending capacity is usually higher than the average-tourist one as their stay in touristic destinations (Stoll, Ditton, 2002).

4. *Alternative ways to decommissioning: an applicative case-study in the Adriatic*

All these data and considerations have been taken into account for formulating a project proposal dealing with alternative ways to the so-called issue of offshore platforms "decommissioning" in the Adriatic, concerning the chance to develop among them touristic cluster-districts related with recreational scuba-diving activities, which could apply to be recognised as SPAMIs. Such operative case-study has been developed as a Master thesis project in Landscape Design (Architecture Department of the University of Ferrara, academic year 2014/15) by students

Alessio Ghiselli and Virginia Melandri, guided and supported by *Sealine* and a multidisciplinary team of external advisors in the fields of underwater archeology, maritime engineering, marine biology, ecology and professional scuba-diving practitioners.

The project (titled "*Offshore Life. Alternative ways to decommissioning*") faces the issues raising from the decommissioning procedures required by law for exhausted offshore platforms in the Adriatic. At the end of their life-cycle, gas and petroleum companies are committed to remove all the extractive structures and proceed with a complete remediation of the site. In fact, while the "rig to reef" procedure (i.e. the practice of converting offshore, gas, oil and petroleum rigs into artificial reefs, diving spots, tourism attraction) has been already successfully adopted in the Gulf of Mexico (Scarborough Bull, Kendall, 1994) and is being considered for the North Sea (Aabel *et al.*, 1996; 1997), the complete removal of decommissioned platforms is still the main disposal strategy adopted by the EU.

After an accurate analysis of the extraction data concerning the Adriatic platforms (Figure 7), their actual productive period has been set on an average of 30 years. Nevertheless, due to the massive costs that decommissioning implies, companies usually prefer to keep the platforms in use at a low operational level-rate, well beyond the normal end of their productive and remunerable lives. Such information, together with the risk of loosing the marine habitats that meanwhile have colonized the underwater platform structures, led to the idea of a progressive reconversion of exhausted platforms into offshore underwater and scuba parks.

Evaluating the expected residual production period of each platform, the project establishes a step-by-step reuse scenario for the whole platforms' network, mixing different techniques and approaches to their decommissioning (as the total removal or "rigs-to-reefs" by "partial removal", "topple in place" or "tow and place",) and proposing for some of them more specific interventions aimed at hosting recreational, educational and research activities related to scuba-diving, fishing and industrial heritage discovery. Depending on the typology, the distance from the coast and the proximity to other spots, each platform

has been planned to contribute to the cluster-district operation, according to the above-mentioned criteria for the SPAMIs' satellites.

In this project, the PCW-B/C platforms (Figure 8) have been strategically identified as the best spot for developing the Diving Centre facilities: only 7Km from the Ravenna harbour, it is a two-rig composed structure connected by a 30m bridge with a footstep of 2.400m² and an overall surface of 4.800m².

After the capping of the gas wells and the complete removal of their pipes, the project plans to arrange on the main platform (the PCW-B) all those functions related with users accessibility (such as docks and mooring areas) and accommodation (reception, hosting and recreational rooms, relax areas, canteen, etc.), while on the second (the PCW-C) the Diving Centre facilities such as a offices, dressing and teaching rooms, workshops, tank storages, rental shop, and all the equipment and functional spaces. A good part of the proposal consists in the design of the underwater landscape (Figure 9) both at the bottom and between the steel framework of the PCW-C; the main challenge was to create an original and attractive diving experience, addressing both the beginners' needs and the professionals' expectations.

The landscape design concept (Figure 10) has been mainly inspired by three types of analysis. The first one, concerning the procedures of a standard 45-minutes scuba-diving session (with its pertinent waiting depths, periods and ascent timings), was used to define the location of several triangular wire-mesh platforms within the existing framework, specifically designed to signal the pauses to amateurs and to enrich the divers' experience with additional exploration areas. In fact, as outcome of the second analysis, the wire-mesh platforms were studied to promote the flora re-population depending on the incidence of solar radiation at different depths; these consist of modular metal cages that can be filled with inert materials, and easily fixed to the structure. Their filling density, orientation and position depend on the study of solar radiation in order to create a multiplicity of micro-habitats for the proliferation of coloured seaweeds (such as *chlorophyta*, *phaeophyta*, *rhodophyta*), and to house as much and various aquatic fauna as possible. The

Figure 7. Extraction platforms in the northern Adriatic and their actual production rate (Source: Master thesis "Offshore Life. Alternative ways to decommissioning")

Figure 8. The PCW-B/C platforms (Source: Master thesis "Offshore Life. Alternative ways to decommissioning")
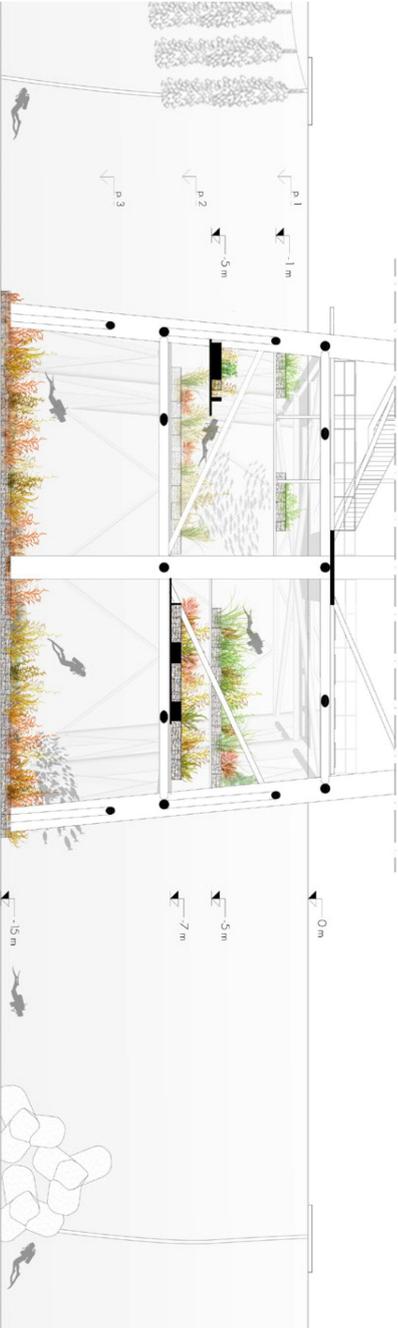
Figure 9. The underwater park project (Source: Master thesis "Offshore Life. Alternative ways to decommissioning")

Figure 10. The landscape design guidelines and a rendering of the project (Source: Master thesis "Offshore Life. Alternative ways to decommissioning")
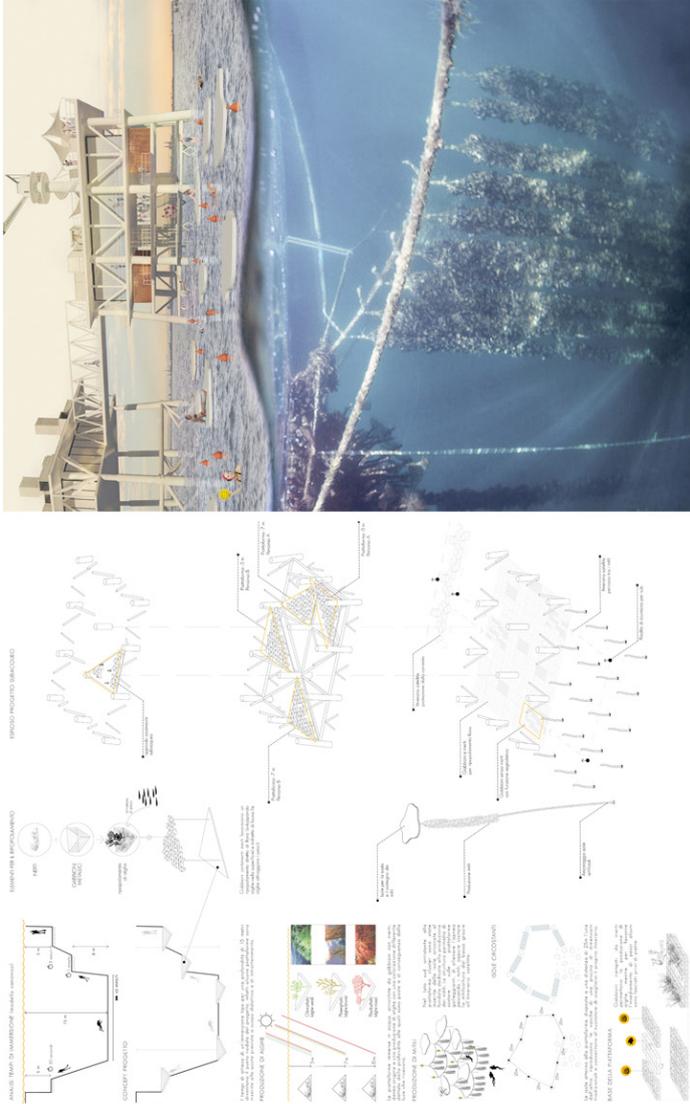
third and last analysis concerning the local wave climate was essential to address the seabed landscape design outside the platform footprint, where security conditions could be critical due to sea currents coming from north. A great attention was payed to mark fixed paths for divers using guide-wires, visible metal cage patterns, and artificial reef devices to mitigate sea currents.

The PCW-B/C reuse project represents only the first step of a wider programme that could further involve up to other 50 platforms in the area in the underwater park development (Figure 11). According to the estimates released by the *Bureau of Safety and Environmental Enforcement* (BSEE), that since 2011 has been the leading U.S. federal agency charged with improving safety and ensuring environmental protection related to the offshore energy industry, a typical four-leg structure provides about one hectare of habitat for hundreds of marine species (BSEE, 2015). A simple projection of such data to our context would signify at least a 50ha offshore area to be devoted to the creation of a maritime cluster-district in front of the Emilia-Romagna Riviera, one of the most attractive, well organized and tourism-oriented territories in Europe. Such territory represents a *Gateway region*, whose hosting capacity, facilities and infrastructural equipment, as well as its entrepreneurial structure could effectively take advantage of a SPAMI's cluster, develop its touristic potential with new products, and properly manage the environmental impacts.

5. *Conclusion and perspectives*

As shown by the present contribution, new approaches and attempts for coupling maritime habitats conservation to the development of sustainable touristic and recreational products are emerging. Presenting the D-mLand proposal, we have shown a possible integrated strategy to be applied in this perspective at the AI macro-regional scale.

We grounded this article on two main aims related to the project: the disclosure of maritime landscapes, which could be

Figure 11. An hypothesis of underwater regional park in front of the Emilia-Romagna coast (Source: Sealine)
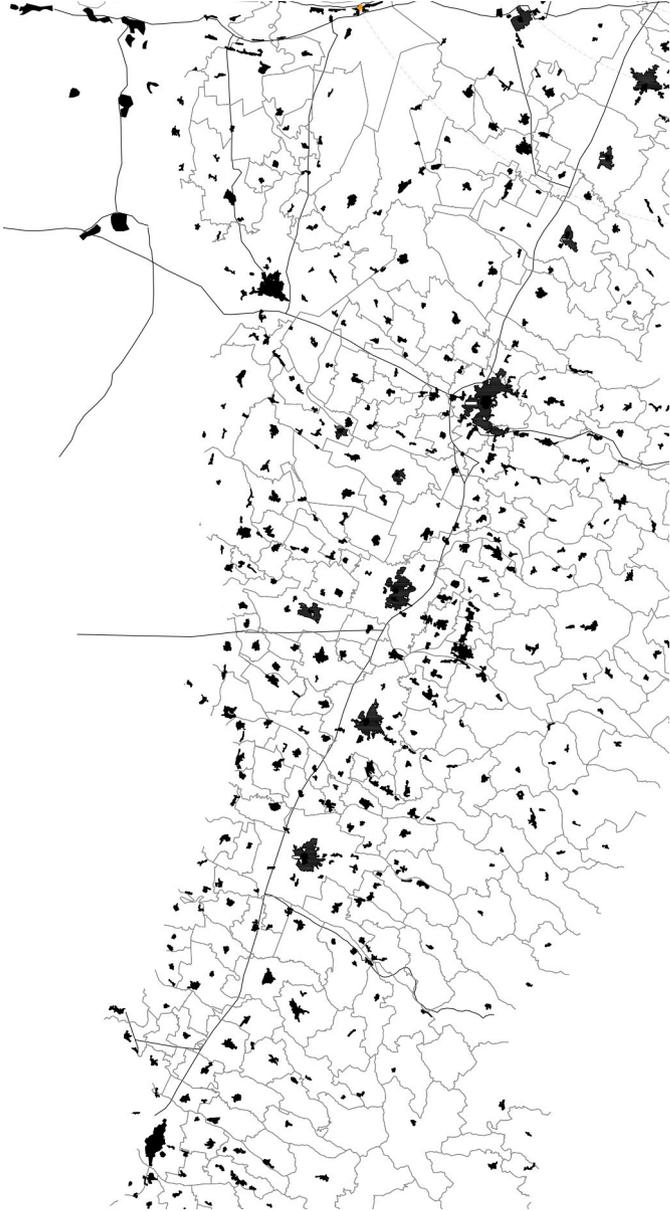
functional to the touristic enhancement of protected areas; and the ways such landscapes could be effectively clustered together to build a more sustainable and controlled systems supporting proactive polices and investments by both public and private actors.

From these assumptions, we have analysed the positive effects related to the development of a *Maritime Landscapes Atlas* as an instrument to read, represent and reveal the maritime environment potentials in terms of dynamic interactions between *natural* and *artificial*.

We considered the SPAMI protocol and its approach to the MPA management as the best regulatory framework in which to develop a strategy able to network among them coastal and offshore spots, building recognisable and performative landscapes.

Through the conception of *Cluster-district*, whose main components are the SPAMI and its Satellites, we aimed at providing an operative model able to balance touristic exploitation with the enhancement of marine biodiversity.

We stressed the importance to deepen the knowledge about the ecological impact and the functioning of the Satellites in this system, proposing a *SPAMIs' Satellites Taxonomy*. Then we better analysed such topics looking at the example coming from the so called "Paguro Experience" in the Adriatic.

We regarded the *Protected Destination System* (PDS) proposed by Miller *et al.* (2016) as a conceptual framework to develop the criteria according to which a SPAMI's Satellite can operate in favour of the cluster's accessibility, visibility, equipment of services and monitoring.

Finally, we have discussed how site-specific conditions and regulations can affect – but also inspire – the actual planning of the cluster-district model. In order to clarify such considerations, we briefly presented an operative case-study concerning alternative ways to extraction platforms decommissioning in front of the Emilia-Romagna coastline. The project concretely faces the challenge of creating new performative landscapes that should be able to boost specific types of maritime tourism, while promoting the constitution of a SPAMI. We highlighted

the benefits coming from such integrated approach for oil and gas companies, public authorities, tourism operators, and the environment.

Nevertheless, as stated in the first paragraphs, such kind of projects need to be supported by proper transnational policies and validated by real pilot-experiences. This is the reason why the research follow-up will focus on testing activities aimed at evaluating the effectiveness of the model and its operability. A feasible idea is to plan international scuba-diving-related events (as "Diving weeks" rich of contests, educative projects, divers lessons, etc.) in different spots of the Adriatic in order to measure and analyse their economic, environmental and social impacts.

Besides that, a more demanding cultural programme will be carried on concerning the *landscape perspective* according to which, we believe, the Maritime Spatial Planning procedures should be dealt with. Firstly, such perspective requires to abandon the zoning approach, and recognise the environmental and ecologic continuity between maritime habitats, whether protected or not.

Therefore, it is also important to find a new terminology to better describe those new landscapes. Our research in this field led to the definition of *"hyperNatural"* as an attempt to describe those landscapes generated by a high level of interaction between human and the environment, with the aim of explaining and asserting that no more borders between natural and artificial are possible, in the sea as well as on mainland.

The D-mLand research started from these assumptions to understand how the interplay of ecological and touristic factors may affect the evolution of the MPA concept, creating a stronger interdependence of spatial planning actions between protected areas and gateway regions.

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Floating strategies for Adriatic-Ionian tourism development: the Observatory of Mediterranean Basin as platform for joining academic research and private actors

1. *The Observatory of Mediterranean Basin*

The Observatory of Mediterranean Basin (OMB) is a research unit that belongs to the Applied Research Department of the IKZH, at POLIS University, in Tirana (Albania). The main objective of this unit is to observe and investigate on relevant issues concerning the preservation and development of Albania's land and water landscape within the Mediterranean environment. In the Architecture and Planning Applied Research field the topic of preservation as well as development of the coastal area is currently the main research focus, and the OMB is interested in joining public and private interest trough research activities and applied projects. Within this frame of interest one of the main objectives of the OMB is to include within the geographic limit of investigation – between land and water – not only the sea, but also river basins[17].

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[17] In Albania the topic of water as a resource is of crucial importance, especially in relation to hydroelectric power and energy production.

In the last two years the OMB started investing on the above mentioned topic, through the promotion of macro and micro investigations along the Albanian coast. Moreover, to better address the need for a direct connection between public and private interest, the research unit develops research and applied projects as a tool to answer specific problems and to preserve Albania's coastal landscape trough tourism development. These objectives are concretized through the international PhD POLIS University (Tirana) – IDAUP (Department of Architecture at Ferrara Unife), the Graduate Research Design Studio and the Professional Master in Landscape and Urban Design (LUD) at POLIS University.

After intensive design workshops and speculative research projects developed through architectural and planning competitions or commissioned projects[18], one of the main questions the OMB wishes to answer is: "Which could be the reaction of the Albanian coastline to a well posed problem like the one of tourism? And how can the OMB act as an intermediation platform between academic research and private actors?".

To better understand the theoretical framework of this research, it's important to clarify that the word tourism must be associated to the concept of migration, which in turn is understood also as *pacific invasion*[19], just like the famous author Fernand Braudel expressed:

È davvero una invasione pacifica, dunque, ma non innocente. Distrugge infatti siti e paesaggi, sfigurati dal lusso un pò falso degli alberghi, degli immobili – fronte mare – e delle seconde case: per l'archeologo di domani, la sua traccia avrà tutte le caratteristiche di una conquista (Braudel, 2014: 220).

Braudel's quotation underlines how the touristic phenomenon can be seen as a kind of invasion, even if gentle and pacific, that

[18] Within the concept of applied research, the OMB develops design projects in cooperation with Metropolis l.t.d. architecture office and the NGO Co-Plan.

[19] The concept of *gentle migration* becomes extremely relevant to our topic, especially if we associate it to all the migratory events that the Mediterranean basin has witnessed in the last years. This is without doubt a related field of interest for the OMB, which will be addressed in the near future.

calls for the need to define specific tool capable of preserving the beauty and the resources of the Mediterranean coastal landscape.

Following this logic, *"floating strategies" are micro interventions along the Albanian coastline that can be used as flexible devices able to respond to the new needs indicted by tourism, while preventing the impression of indissoluble signs on the coastal landscape*. For the first time the concept of coastline preservation is not seen only from a land prospective, but also considering the water landscape, a source of biodiversity and renewable energy. The floating strategies must be considered *ephemeral* because they are impermanent and flexible like the activities related to tourism that ought to inhabit them.

2. *Floating strategies / land and water archipelago*

To better understand why this research could be relevant in terms of applicative project and research, we have to highlight some aspects that lie behind the general concept of "floating structure".

In the last three years the Albanian government has launched several Architecture competitions focusing on the objective to collect ideas for the landscape valorization and the touristic redevelopment of the South Albanian coastline. The projects selected by the juries proposed numerous solutions: in most of the cases the Albania Riviera Road was used as a system to showcase alternative design experiments; in others instances the road was preserved and the existing slow itinerary connecting the different villages and beaches was improved with low impact interventions (Aliaj, Rossi, 2016).

The common thread of all the competing projects was to concentrate on finding strategies to build an operative network from a series of isolated points in the existing Albania Riviera. This strategy reminds us of a very relevant reference by Oswald Mathias Ungers and Rem Koolhaas in the famous 1977 book, "*The City in the City. Berlin: A Green Archipelago*": Archipelago city (Ungers, Koolhaas, Reimann, Kollhoff, Ovaska, 2013).

Figure 1. Peter Riemann with Oswald Mathias Ungers, "The City in the City" (1977) from "Pictures at an Exhibition" *The City in the City: Berlin: A Green Archipelago*. (Source: <http://plmosley. tumblr.com/post/115798107429/peter-riemann-with-oswald-mathias-ungers-the>)

In the book, talking about the future planning of Berlin, Ungers and Koolhaas propose a solution without compromising the entire layout of the city. The proposed strategy focalizes the intervention in a series of islands, or neighborhoods, connected by a "green glue", imagining a city of isolated flouting elements within a green ocean.

If we assume for a moment that the meaning of the "green glue" is equivalent to the meaning of the "green ocean" mentioned by Ungers and Koolhaas, our topic can be seen from a different perspective. The whole green strip facing the Adriatic/Ionian Sea along the south Albanian coastline is essentially like an archipelago, where all the villages spread in the landscape are connected by a hypothetical "green glue", shaped by slow paths and winding roads.

The metaphor of the "green archipelago" provides us with a new key to interpret the relationship between seascape and landscape: the domain of the mainland can establish a creative contradiction with the domain of the waterscape. In this contrasted relationship the coastline can be treated as flexible device, capable of recovering and reactivating tourism along the Albanian coast.

As a result, floating strategies can be considered as the continuation of an existing land/island network, which can respond dynamically to generate different configurations, in response to different needs that originate from tourism and migration.

If the domain of the mainland acquires the characteristics of a static archipelago, with its road and building systems, the floating elements can produce a renewed version of the floating archipelago in which, for the first time, the functions reach people and not vice versa. Just like on the mainland, the paradox of a static building can be turned upside down in the domain of water; functions and volumes can shift creating new configurations and hybrid systems on the waterscape.

Following this hypothesis, the line dividing the sea from the land can have different configurations: it can have a linear distribution, following the natural seascape until it reaches the condition of 'network archipelago, composed by several flouting points in combination with the existing land network.

From another prospective the new water devices constitute a perfect tool for recovering and monitoring the entire Albanian seascape, possibly stimulating new interest in sea navigation maps and in tracing new touristic itineraries. Just like the road infrastructures already present on the land, movement

Figure 2. Example of archipelago network in the South Albania coastline. (Source: Aliaj, Rossi, 2016)

VUNO-JALE

Key actions:
1. Bypass around Vuno village to limit nonresident traffic in the centre of the village
2. Parking system organization - with temporary and seasonal access control
3. Jale beach - pier for touristic and private boat docking, beach facilities and info point
4. Conversion of the old water basin into a theatre arena for concerts and plays and annex facilities
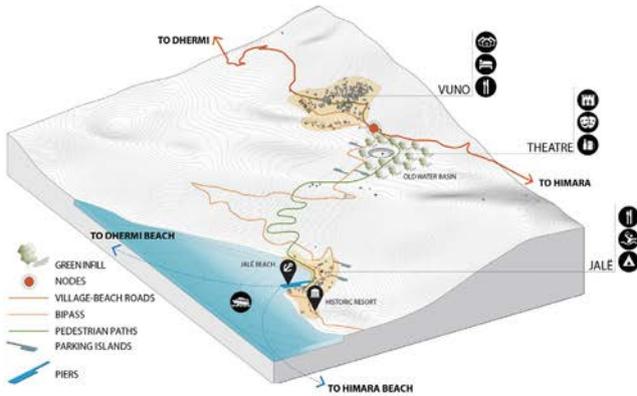
HIMARA

Key actions:
1. Renovation of waterfront promenade to connect all the beaches
2. Linear pine tree park along the promenade
3. Development of urban park and steps
4. Addition of a pier at the end of the main road
5. Reconstruction and extension of the harbour, new harbour terminal, lighthouse, mooring buoys
6. Introduction of new facilities around the stadium
7. Restoration of the pedestrian path to the historic castle of old Himara
8. Reconstruction of the historical square in the old city
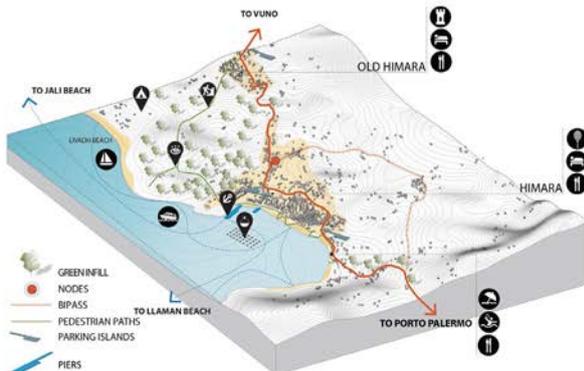
and transportation on water can establish a different point of observation, a new perspective to rediscover natural resources and water landscapes. Moreover, following this logic for new Adriatic and Ionian tourism development strategies, mapping the coastline with flexible and ephemeral waterborne devices can contribute to the discovery of a new way to experience the Albania green strip facing the sea.

In this frame of investigation the role of the OMB becomes even more relevant, not solely as an academic and research platform but, through applicative design projects, also as an answer to, and in combination with, the needs of private actors. Floating strategies are ephemeral and hybrid: ephemeral because they can adapt their shape in functions to the seascape and the mainland, and hybrid because they are capable of offering different solutions and services based on the needs of the public and the private actors.

3. *Floating strategies / Reterritorializing the sea*

In planning sea space as human habitat, unique terms and conditions may arise. First is the point that this is new space and so far we are inexperienced with it. Secondly, the conditions are three dimensional and it is necessary to understand that the space is not only on the water, at the same time it is in the water, and moreover, basically movement is immanent in the space, and due to buoyancy there are special characteristics of the built environment. The sea is horizontal planed space, it is continuous space, it is the largest space on Earth, larger in the southern hemisphere than in the northern hemisphere (Kikutake Kiyonori [1977], *Kaiyō wo ningenkyojū kūkan to shite toraeru hitsuyōsei* [The necessity of taking the sea as human habitat] Kenchiku Zasshi, Vol. 92, No. 1126, p. 35).

3.1 *Background*

The desire to colonize the *apparent tabula rasa* (Bhatia, Casper, 2016) – the sea – has been there for centuries. It is quite interesting to notice how the first achievement in colonizing the sea with manmade floating structures was motivated either by

military purposes[20] – which led to the construction of aircraft carriers – or by the need to harvest (nonrenewable[21]) energy – which resulted in the multiplication of oil tankers over the seas and oceans. Resource extraction led to the generation of logistical landscapes dedicated to oil and gas extraction which were never really designed using long-term, holistic planning, and are now object of studies[22] also in light of the acknowledgement that the resources which generated them are doomed to run out.

There are of course instances when the reclamation of land from the sea was motivated nor by resource extraction nor by war. In the Netherlands for example, Polders were a necessity dictated first by the need to prevent flooding, which then became a way to obtain arable land and later, due to the fast growth of cities, became an answer to the need for buildable land and new housing developments. Nothing to do of course with the phenomena taking place since 2005 in the UAE, where manmade islands are multiplying along the southern shores of the Persian Gulf coast[23]. The real motivation behind their construction is only apparently a need to get away from the harsh climatic conditions of the Rub al Khali (the Empty Quarter) desert, but rather a *disneyfication* (Relph, 1976) of the world. These new islands are visible from the sky and the satellites, they define a *new geography* that consecrates the *Anthropocene* era, "substituting the world with its image"[24] (Jakob, 2009: 118).

[20] Even Odaiba artificial island in Tokyo bay was initially built for defensive purposes in the 1850s.

[21] Non renewable energy sources are Fossil fuels (oil, natural gas, coal), which are causing depletion of natural resources and CO_2 emissions and pollution. Nuclear fission and fusion, which are renewable, are still not considered sustainable because of safely issues and the production of dangerous toxic waste.

[22] See: *The Petropolis of Tomorrow*, a multidisciplinary project undertaken in collaboration with The South American Project (SAP), Harvard's Graduate School of Design, California College of the Art's Urban Works Agency, Rice University's School of Architecture, Cornell University's Department of Architecture. Its aim is to provide new templates for architecture, urbanism and infrastructural design tied to resource extraction that privileges a systemic symbiosis between economic, political, environmental and social systems (Bhatia, Casper, 2013).

[23] The Palm Jumeirah, The Palm Jebel Ali, The Palm Deira, Marina City, The World, The Universe – Dubai, United Arab Emirates, 2001 – ongoing/suspended.

[24] Reference is made to the artificial archipelago *The World*, an artificial settlement in the UAE reserved for the rich: an island shaped like the world, which trans-

Figure 3a. Fossil Fuel Drilling Platform – Piattaforma Paguro, Ravenna, IT, construction 1962-3- sunk in 1965. EU protected site 1995 (Source: internet)

Figure 3b. Image form the Petropolis of Tomorrow design-research project website. (Source: <http://www.petropia.org/info/>)
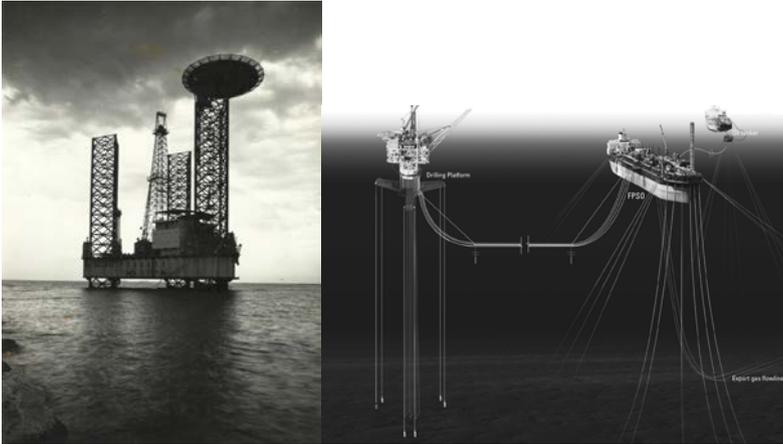
A very significant precedent where the possibility to artificially expand civilization on the water meets with the technological advancement which makes it possible can be found in Japan. Japan was a precursor in dealing with the possibility to "territorialize" the sea and build floating cities. The architect Kikutake Kiyonori[25] started working on the concept of floating city since the 1960's, when the government of Tokyo called for plans to cope with the city's growth and the "postwar dilemma of living space". In his designs for floating cities Kikutake "moved human habitat from land, striated space, to sea, smooth space, and in that movement *deterritorialized* human habitat and r*eterritorialized* the sea". The Architect was able to

forms the physical world into an inhabited image.

[25] Kikutake, was a Metabolist Architect, who found a creative space in the intersection of Metabolist architectural principles with marine cities and his vision was so visionary, his grasp of the engineering challenges so thorough, that along with Buckminster Fuller and Paul Maymont, he became a leading figure in what Peter Raisbeck calls "one of the more curious minor architectural traditions of the 1960's": floating cities (Blaxell, 2010, p. 13).

Figure 4a. Sketch for floating city, Kikutake Kiyonori 1960 (Source: internet)

Figure 4b. Aquapolis at Expo 75 (Source: internet)
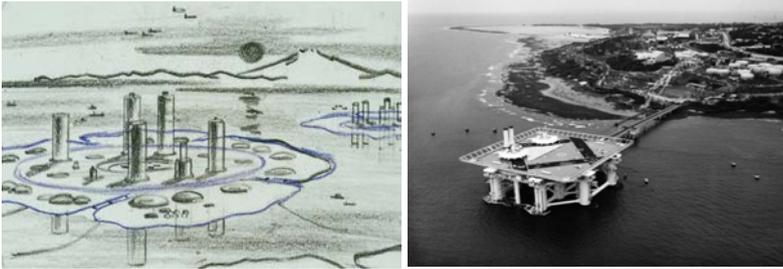
materialize his floating city concepts when he was contracted the Expo 75 centerpiece: a floating habitat, a city on the sea (kaijōtoshi) called *Aquapolis*. The floating city was designed to be self sufficient in terms of energy (one of the world's first waste water recycling processes was tested in *Aquapolis*), movable and, at the end of its useful life, it was supposed to be sunk to the ocean floor, "where it would be reterritorialized as a reef for marine life" (Blaxell, 2010: 13). After Expo 75 closed, in 1976, the floating structure was not sunken, but before being turned into scrap metal and sold off to China in 2000, it was active for 25 more years as a touristic destination, "metabolized" into the "Ocean Expo Park", and featuring attractions such as Arboretums, Beaches and Aquariums[26].

3.2 *Floating strategies as an answer to environmental challenges: social, cultural, ecological concerns*

If movable and adaptable, floating structures could indeed respond flexibly to unpredictable future events, be them ecological disasters or social and political phenomena that constitute a global challenge. For instance, a part from offering a strategy for territorial promotion through sustainable tourism

[26] The Architect Kikutake himself wanted it to be used as a research base for an offshore oilfield or as a Black Current research station.

development, floating hybrid systems on the sea could also simultaneously offer solution to the global phenomenon of mass migration that is growing in scope, complexity and impact, by serving as immigration reception platforms. These platforms could primarily be used as touristic facilities and, in emergency situations, become immigration check points equipped with first aid facilities, frontier police offices and general services for people before they reach the mainland.

But one of the most relevant characteristics of such structures would certainly be their capacity to answer to ecological concerns: floating platforms are naturally resilient to the rising sea levels. In fact, the floating strategies proposed could actually address an imminent issue related to our actual survival as a species on this planet. Climate change is actually happening; global warming and the consequent desertification and water withdrawal are already affecting our food productive capacity. The indelible sign of men on earth – pollution, waste, morphological and biological alterations – are activating a set of chain reactions which are leading toward natural disasters like flooding and increasing biodiversity loss. In such scenario, strategies of *mitigation* (such as the policies on energy consumption and CO_2 emissions adopted so far in the EU) are not enough to reverse the trend. The future events that concern the planet are in fact unknown to us, it's not possible to fully predict the complex and dynamic interactions between the causes that trigger global challenges, because of the feedback mechanisms that are activated by each single event. Therefore the answer might lie in systemic solutions and *adaptation* strategies, rather than mitigation ones. This means that to address such complex and intricate combination of causes and effects, we need to improve resilience of social and ecological infrastructure, and prevent disasters instead of simply offering a solution after they have occurred.

Last, but not least, from the perspective of Global Footprint[27], considering the earth's limited biocapacity[28] and the overwhelming predictions on population and growth[29], the possibilities offered by artificial floating structures, acting as appendixes of the mainland, could complement the productive land and offer an answer to the possible lack of food in the overpopulated future that awaits us.

3.3 *Energy, food, water and waste*

Arrays of wind turbines for hydro-mechanical storage of wind energy can already be spotted offshore in the outer Thames Estuary in the United Kingdom (20 km off the Kent coast), off the coast of southern Sweden (Lillgrund Wind Farm) and in the eastern North Sea (off the westernmost point of Denmark). Meanwhile new self-sustainable *energy landscapes* that include flora and fauna and support collective forms of human inhabitation are designed: *Green power islands*[30], artificial islands and lagoons with enormous floating photovoltaic disks surrounded by wind turbines could be soon spotted on the west coast of Florida, off the bay of Copenhagen, in the bay of Maninama (Bahrain), in the Palk strait in India and in the East China Sea, off shore Shanghai. Can such structures be sustainable from an energetic point of view without impacting the environment? Can they be completely autonomous and harvest energy, food and water without relying on the finite resources of the mainland? Can they do more than simply

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[27] Global Footprint: earth productive area/world population = global ha per capita (1.8 global ha is ideal).

[28] Earth's Biocapacity: carrying capacity of earth; supply of productive area.

[29] Projections on world total population estimate that the population will increase to almost 10 billion in 2050 and 11 billion in 2100. Source: "2015 Revision of World Population Prospects", Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat. Available at <https://esa.un.org/unpd/wpp/> (accessed 16-07-2016).

[30] Green Power Islands are located around the globe and they all adopt a common scheme deploying enclosed lagoons for hydro-mechanical storage of wind energy. For more information see: "Green power islands Project" (<http://www.green-poweisland.dk/>).

saving energy, but rather give something back, complementing the needs of the mainland?

Renewable energy sources that could be harvested on and around floating structures are Solar, Wind, Hydroelectric and Kinetic energy and the related renewable energy generation technologies that can be implemented independently or in combination are solar thermal, photovoltaic, offshore wind turbines, ocean tidal and ocean wave (Ferry, Monoian, 2012). Possible problems of introducing floating structure are the impact on marine life and, in some cases, the need to introduce infrastructures for power transmission, where distance becomes an important aspect in the evaluation of environmental impact. The available technologies and the possible negative impacts on the environment are listed in the table that follows.

Energy source	Energy generation tegnology	Negative impacts/ limitations
SUN	Solar Thermal (heat stored fluid or air)	-
	Solar Pond (heat stored by saltwater)	-
	Photovoltaics	-
WIND	Wind turbines offshore on pylons on shallow water (HAWT)	Possible impact on marine life
	Wind turbines offshore floating in deep water	Possible impact on marine life, distance (length of power transmission lines)
	Windbelt (aerostatic flutter effect)	-
WATER	Ocean Tidal[1] (Hydrokinetic) - Tidal Stream Generator (TSG): Axial, Vertical and horizontal cross flow, Flow augmented, Oscillating and Venturi	-
	Ocean Marine Current[2] (Hydrokinetic) – sea bed mounted systems, floating moored systems and hybrid combinations of the two.	Difficulties for engineering systems in deep ocean water
	Ocean wave (Hydrokinetic) – Wave Energy Converters (WEC) that harness the local surface energy of large bodies of water	-

Table 1. Information extracted from Ferry, Monoian, 2012

In order to operate independently from outside services, a part from harvesting energy, these floating structures should also be able to harvest food and water from their local environment, manage waist independently and offer sustainable means of transportation, both locally and to connect them to the mainland.

Water harvesting and conservation on such floating platforms along the coast is possible through water desalination processes that respond to the fresh water needs for drinking and for irrigation (there are already existing and proven environmental technologies, such as the evaporation of saltwater to create cooling and distilled fresh water-saltwater cooled greenhouse[31]). Food production can be guaranteed through traditional crops, fish farming, hydroponics and aquaponics, which also contribute to Biodiversity preservation, allowing for the thriving of flora and fauna. As an example, in the "Aquaculture seascape park" by Moira Wilson (Wilson, 2010), "a park between land and sea, that changes with the rise and fall of the tides", Aquaculture seascape becomes an extension of the terrestrial park along the coast of Vancouver Island (Canada). The hybrid floating system is organized in three levels that are progressively flooded according to seawater level. In the 'Deep water gardens', 'Intertidal gardens' and 'Tidepool gardens' different marine plant and animal species thrive and can become organic waste that, in turn, is used as fertilizer, defining a closed productive cycle. The park is at the same time a touristic attraction, a forum for education, information, research and training, where flexible mobile Modular add-ons are used to map and monitor the coastal oceanic territory.

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[31] Saltwater-cooled greenhouses are greenhouses that use saltwater to provide suitable growing conditions that enable year-round cultivation of high-value vegetable crops even in desert conditions. By using seawater to provide evaporative cooling and humidification, the crops' water requirements are minimized and yields maximized with a minimal carbon footprint. See also "Sahara Forest Project" where they experiment energy and water-efficient saltwater-cooled greenhouses for growing high value crops in the desert, produce freshwater for irrigation or drinking, safely manage brine and harvest useful compounds from the resulting salt, grow biomass for energy purposes without competing with food cultivation, whilst revegetating desert lands (http://saharaforestproject.com/).

In terms of transportation on and from the floating structures, interesting Sustainable Transportation strategies can originate if we rely on natural climatic phenomena. Sailing boats that take advantage of wind are certainly a good example, but also taking advantage of natural sea and ocean currents is a valid option. The transportation concept of the "Drift + Drive" research project is based on this principle: "the stationary *Agricultural Island* and the mobile *Drift Boat* develop a symbiotic relationship – The *Drift Boat* provides water for crop irrigation and labor while the harvest from the stationary island is loaded onto the vessel. Moreover the project foresees also a series of stationary *Energy Islands* along the route, which are reserved for solar energy, tidal and wind energy harvesting, which is then distributed to the other islands along the drift trip (Bhatia, Casper, 2016).

Moreover these hybrid floating systems could contribute to the regeneration of the natural environment through Restorative strategies, complementing the natural world as opposed to simply maintaining it. In the speculative project "Microcosmic Aquaculture" by Antonio Torres, Michael Loverich, giant spheres made of a permeable gelatinous wall section have a double function: they act as reef on the exterior, nourishing, sheltering and therefore attracting marine life; while the interior works as a low maintenance fish farm. These "Floating gelatinous reefs" follow currents and attract life, but as the gelatinous skin gradually dissolves and the embedded food is released, they disappear leaving behind a new ecology (Torres, Loverich, 2010).

4. *Floating strategies / tourism as opportunity for economic growth*

The touristic impact on a territory is not always positive, especially if uncontrolled and left to private speculators. The interaction public-private acquires a fundamental role in a territorial regeneration process. In a country like Albania, where tourism has an important development role, it is necessary to monitor this phenomena and to raise awareness among the locals to encourage respecting the territory. "Tourism for

Figure 5a-b. Images from the Drift + Drive Project proposal, The Petropolis of Tomorrow design-research project (Source: <http://www.petropia.org/projects/project-floating-frontiers/drift-drive-2/>)
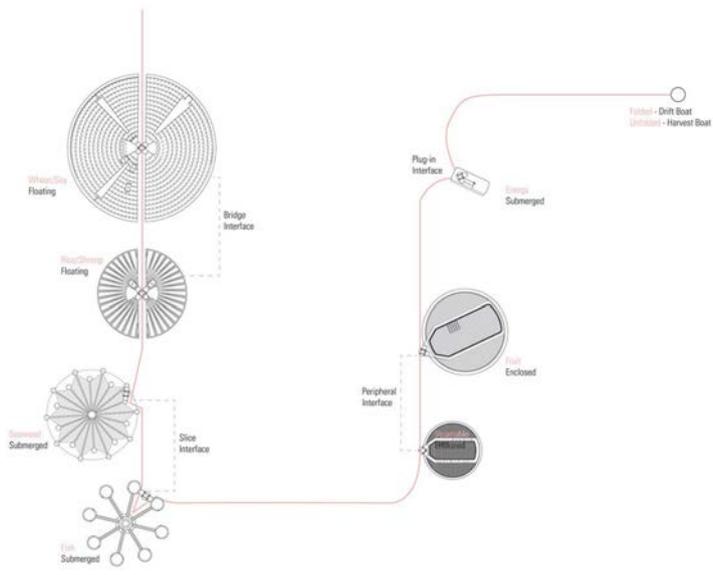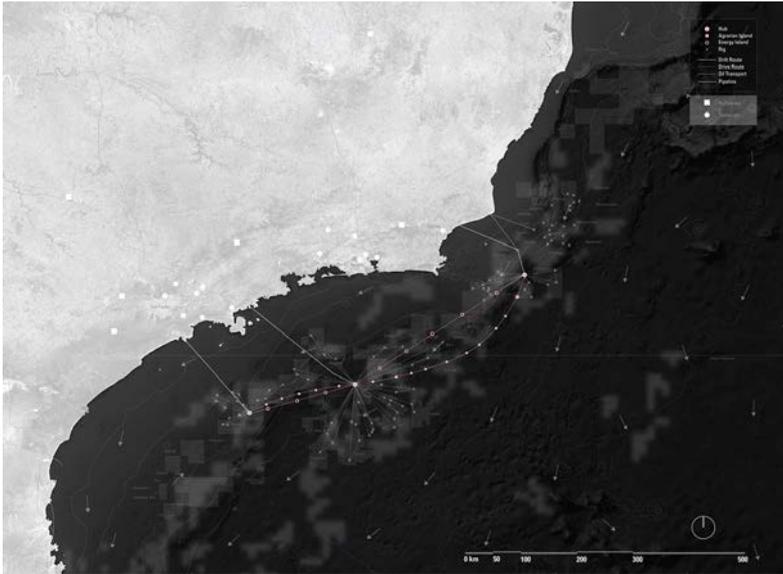
landscape" is a tool for activating transformation processes in which tourism is the main economic resource and the territory benefits from it in terms of heritage regeneration, protection and valorization.

The water-landscapes represent one of the main resources for territorial development and cross-bordering cooperation. The Adriatic countries face a common courtyard characterized by the water element. In terms of economic resources, the Adriatic-Ionian Sea is a mobility resource, a space for sharing identities and cultures.

The main goal of the floating strategies is to define thematic networks in the crossway of multiple activities and interests in which Adriatic-Ionian Cities can be observed as crossing points of different identities. The design of floating platforms is an opportunity for exploring the relationship between land and sea, considering nature as connecting tool. Such objects are structured and functional to the promotion strategies adopted. They can be platforms for thematic events, or waste storage facilities, technological hubs, etc., as long as they provide activities throughout the year.

According to the Brazilian urbanist Jaime Lerner (2003), the principle of recovering energy of a sick – or just tired – point with a simple pinch is related to the revitalization of the point itself and the immediately adjacent area. The idea of intervening with flexible and temporary platforms can affect the whole coast line with punctual, reduced size projects, disclosing the energy of the territory and re-distributing it in the surroundings. The floating structures are tools for revitalizing punctual areas that, in turn, can initiate territorial development processes and affect positively a wider region.

Similarly to the medical discipline, where it's not possible to ignore the doctor-patient relationship, in the planning process it's necessary to involve citizens in order to induce a reaction in the city. A possible strategy is giving a pinch to an area in order to induce positive reactions (Lerner, 2003). As a consequence we can deduce that each strategy/structure necessarily has to involve locals, who provide territorial knowledge and awareness.

4.1 *Tourism in Albania / Floating strategies as a possible answer*

According to the World Travel and Tourism Council, the number of foreigner tourist arrivals in Albania will increase from 3.8mn in 2015 to circa 5mn in 2025 (WTTC, 2015). Due to this consistent increase, touristic development strategies are an urgent need for the Albanian territory in terms of carrying capacity, service and infrastructure construction and management and business development.

In terms of touristic purpose, floating structures work as activity catalysts and provide the missing services, infrastructures and tools for coastal tourism development. Their flexibility in terms of structure and functions perfectly fits the needs of contemporary tourists and also creates new opportunities for the whole territory, from the coast to the mainland.

The idea of floating strategies, as mentioned before, generates from the necessity to act in the most reversible way possible, while reducing the use of land. The main goal is to answer to both the tourists' and the locals' needs with flexible and ephemeral structures.

Sustainability[32] and feasibility are guaranteed by four main features:
1) *functional combination*/complementary features for answering different needs are the basic requirement for each structure, which should not be focused only on tourism development. The choice of function is related to the specific territorial features that ought to be promoted;
2) *territorial branding and all-year long activities' calendar*/ segmentation of the touristic product to avoid limited seasonal use and to create a brand for the promotion of local territorial features;
3) structures which can be *assembled*/structures are designed in modules in order to facilitate their dismantling and re-assembly;

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[32] About sustainability, please refer above to paragraph 3.3.

4) *public-private partnership*/promotion of private sponsor-
    ship following public guidelines.

4.2 *Floating strategies and structures / examples*

The examples presented in the following paragraphs are the
results of the "Ephemeral Landscape" course, organized in the
frame of the Professional Master in Landscape and Urban Design
led by PhD Loris Rossi, Arch. Enrico Porfido and Arch. Caterina
Spadoni. The design concepts and descriptions developed by the
students Alba Zoto, Nelson Hasmema and Silvana Saqe, have
been re-elaborated by the author for this paper.

4.2.1 *Saranda Aqua Farm / Enhancing the blue growth and sea-culture*

Saranda is one of main touristic cities of the Albanian Riviera
and it has a long tradition of mussel cultivation which represents
one of the main economic resources of the area. The fish farming
platform works with the idea of *valorizing a territory through
local products' promotion.*
The core of the structure is the mussel cultivation, which also
gives shape to the circular shape platform. The complementary
activities include a market and a restaurant. The same spaces
can be used also for educational and leisure purposes, both for
students and tourists, with opportunities for diving and leisure
events.
This proposal could be interesting for both public and
private sponsors. From the 'Blue Growth guidelines' provided
in the EUSAIR[33] strategy, to specific tourism development
national programs, the fish culture thematic platform fosters
the interaction of many different actors.

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[33] European Strategy for Adriatic-Ionian Region.

Figure 6. Saranda Aqua Farm (source: Alba Zoto)

4.2.2 *Solar theater / Energy and culture for disclosing the hidden landscapes*

The Karaburun Peninsula, close to Vlora, in Albania, is a popular location in the history of piracy. The whole perimeter is rich of caves, which were used as secret hiding places by the pirates in the past. The Peninsula hosts the Haxhi Cave, the largest marine cave of the country, and Grama Cave, where many drawings and inscriptions made by sailors for celebrating Poseidon have been found. Other caves are spread all over the southern Riviera, such as the Cave of Omer in Himara, where, according to the legend, Odyssey faced the Cyclopes. The idea behind this platform is to *disclose hidden landscapes through thematic marine itineraries*, with complementary activities such as historical reenactment events. Those activities stimulate the industry of creative tourism, using cultural events to promote the territory.

This seasonal activity is complemented by an energy harvesting function. Due to the small distance from Saranda – which is the city with the highest average of sunny days in

Figure 7a-b. Historical reen-
actment in the Brijuni National
Park, Croatia (source: brijuni.hr)

Europe (over 270 days) – the platform is designed to host solar
panels and store enough energy to meet the energy needs of the
floating platform and to sell the excess energy to the mainland.

4.2.3 *Food market and Masterchef Albania headquarter / When taste meets the show business*

This last example is strongly related to the idea of territorial
branding, promoting local gastronomic products and the
territory. The concept of linking the worldwide famous
Masterchef brand to a platform *promotes the products on site
and the site itself* at the same time, highlighting the relationship
between territory and products. The floating structure includes
a food market that travels weekly along the main spots of the
Riviera and exchanges local products. The show business,
represented by the TV brand, works as an interest catalyst and
as a showcase for the touristic market.

4.3 *Between public and private touristic initiatives / the role OMB*

How can all these strategies be implemented with little public economic resources? The balance between public and private actors can guarantee a sustainable touristic development, where public actors work to preserve the territory and private actors make investments for both economic return and – only philanthropists – territorial development. According to Montanari (2015), *the natural heritage belongs to everyone and everyone should do everything they can to protect it and benefit from it.* The Observatory of Mediterranean Basin works as a filter between the public interest of heritage conservation and the private interests of touristic investments. Hence, its main goal is to combine scientific production – dissemination and research activities – and applied research projects. Albania presents a unique case in Europe because it is witnessing a rapid transformation process, and while tourism represents the main tool for development, it needs to be monitored to avoid compromising the existing heritage.

5. *Attributions*

The paragraphs entitled "The Observatory of Mediterranean Basin" and "Floating strategies / land and water archipelago" have been mainly edited by Loris Rossi. The paragraph entitled "Floating strategies / *Reterritorializing* the sea" has been edited by Laura Pedata, while the one entitled "Floating strategies / tourism as opportunity for economic growth" has been edited by Enrico Porfido.

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A sustainable strategy of redistribution of the tourist flows in Basilicata. Coastal tourism as a development factor for the natural parks

1. *Introduction*

One of the defining features of tourism is its seasonal nature. In the space of a year, periods of high tourist flows concentrated in certain areas alternate with times of slump and an almost total lack of demand. This phenomenon impacts on the economic sustainability of the sector, which, in many cases, is not profitable for the whole year, and this also creates serious impacts in the social and environmental sphere. Periods of few visits are followed by times when the destination is subject to tourist flows that significantly impact on the quality of life of the residents and the environment that has to sustain this burden. The flows of tourists to Basilicata are also highly sensitive to the seasons. Indeed, while the Basilicata continues to stand out in Italy for the decidedly high rates of growth in tourism due to the increasing renown of its main centres of attraction, primarily Matera, the seasonal effect overall on tourism, measured as the proportion of visitors in July and August against the total, still remains very high when compared to the national average (51% against 39%). However, in recent years, the seasonality has been mitigated, due to more marked flows of cultural, wine and food and environmental tourism. Seaside tourism has also been less seasonal, especially on the Ionian Coast, where the

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increase in tourists in June and September 2015 far exceeded those of July and August, a phenomenon restricted, however, to the summer period only. Indeed, busy periods still alternate with seasons when demand is very low, during which many facilities are closed and small coastal centres are deserted. In contrast with this area, packed with tourists in the summer with good positioning in terms of visibility and demand, both domestic and foreign, there is the mountainous hinterland, still in an exploratory phase of tourism with potential for greater value. The redistribution of the tourist flows over time and space is, therefore, the most important challenge facing a region that, from a position of weakness, is now building a brand and its reputation.

2. *The dynamics of tourism in Basilicata and opportunities for the sustainable redistribution of the flows through the main centres of attraction*

In 2015, tourism in Basilicata, the land of the Lucani people, displayed significant growth in terms of arrivals and stays, with a double-digit increase in the former (+16.5%) and 10% in the latter. In absolute numbers, an increase was recorded of around 205,000 visits, which led to an overall amount of overnight stays of more than 2.3 million. The increase in arrivals was even more marked and reached almost 675,000 units, a new all-time high and the sign of the growing, widespread appeal of the region on the tourist markets. The greater growth of guests compared to overnight stays can be ascribed to the development of less "stationary" types of tourism, such as those to cultural destinations, which involve shorter stays. From this point of view, it is no coincidence that almost 2/3 of the arrivals registered regionally are concentrated in the city of Matera, which acted as the driving force. Matera attained a 15% share of the total overnight stays in the region and 32% of the total number of guests.

Significant performances have also been seen in areas of seaside tourism. In Metepontino, in particular, visits exceeded 1,200,000 units for the first time, with an increase of 4%, the

highest in recent years. The growth in its power of attraction is confirmed by the data on arrivals, which increased by 13%.

Tourism in the hinterland, by contrast, displays a stationary trend, especially the protected areas of Basilicata, with the exception of the parks of Murgia Materana and Pollino where, despite the fact overnight stays received a boost of 19.5%, this growth only concerned the municipality of Viggianello, which, in a year, almost tripled the number of visits, while other tourist businesses slowed down significantly, and it is here that the greatest slowdown in enhancing the accommodation provision is seen with average rates of use lower than 12%.

These areas, as the graphic below shows, currently play a secondary role in the regional tourism dynamics.

It therefore seems clear that, from the point of view of sustainable development, a strategy is required to create balanced growth in all the local tourist areas. In this light, the positive balance of last season in Metapontino, and the extraordinary exploitation of the visits to Matera, could certainly give impetus to accelerating the development process, especially in

Tourism's weight in destinations (%)

■ Matera ■ Metapontino ■ Maratea ■ Pollino
■ Altre aree ■ Val D'Agri ■ Potenza ■ Vulture

4% 2% 2% 1%
6%
7%
53%
25%
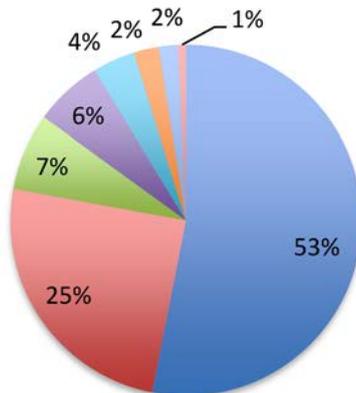
the inland areas. The nature parks, although they cover 25% of the territory, have seen less than impressive numbers remain static (with the exception of the Murgia Materana park), a consequence of the Basilicata's lack of competitiveness in terms of nature tourism, are certainly among the first destinations that require intervention. The issue of enhancing the region's natural resources is fundamental, not only because of the effect they have on the territory's geography and because they are capable of activating development processes that simultaneously embrace the economy and respect for the environment, but also because of the positive dynamics that generally characterise the sector, from which Basilicata could benefit in order to increase its market appeal. The 12th Ecotur Report shows that the number of visits to national and regional protected areas and other areas subject to constraints exceeded 102 million and the forecasts for the future are even better: 58% of national and European tour operators expect an increase in demand.

2.1 *Tourism in Basilicata's protected areas: characteristics and limits*

The system of Basilicata's protected areas, made up of 2 national parks (National Park of Pollino and the National Park of Appennino Lucano Val D'Agri Lagonegrese) and 2 regional parks (Gallipoli Cognato e Piccole Dolomite Lucane Park and Murge Materane Park), cover 23% of the region. Overall, they attract 41%19 of the arrivals registered in Basilicata but these are brief visits, as shown by the data on the average stay of 1.8 nights compared to 3.7 nights regionally. Murgia Park, which encompasses the city of Matera, draws 60% of all tourist visits to protected areas. These are significant numbers for the area, in continuous growth in recent years driven by the city's visibility as a European Capital of Culture. Second for tourism is the Parco dell'Appennino Lucano, which welcomes 23% of the total arrivals. The marked presence of business flows connected to mining and other extractive activities in the Val d'Agri and the dynamics of this phenomenon, creating a fluctuating demand for workers, have produced an oscillating trajectory in the tourist

flows. Next is the Parco Nationale del Pollino[34], which registered 15% of the total arrivals. Associated with significant demand for nature tourism, Pollino is the only protected area that, in the last five years, has displayed marked periods of decreases in the flows, with the exception of 2015. Finally, the Parco Regionale del Gallipoli Cognato commands an even more marginal share, since it sees only 2% of the arrivals; the emphasis in the Park is so firmly on hiking that it influences the performance of the accommodation sector, which, notwithstanding the attractive power of the locations, struggles to increase the provision of beds.

In general, the flows of the protected areas in recent years have remained decidedly seasonal with a low rate of stays. An analysis of the status quo reveals the strong and weak points of the individual destinations.

The *Murgia Materana park*, as already emphasised, has witnessed significant growth in recent years due, above all, to the visibility Matera has gained. While, on one hand, the attractive power of the Sassi gives the park good visibility in the guides and on the web, bringing an increasingly large catchment area, on the other there is the danger of basking in reflected glory. The analysis of the demand, in fact, reveals segmentation entirely to the advantage of cultural tourism and discovering the territory, to the point that these two segments overall attract 70% of visitors to the destination. Enjoyment of the environmental resources was cited by 20% of the sample as the reason for visiting (see demand graphic).

The *Parco dell'Appennino Lucano* is the most recent national area to be designated protected and, as such, still has poor visibility. This is due to lack of action on the brand, which has untapped tourist potential; the lack of connections and signs and the very limited recreational provision are real constraints on its development. The mining and extraction activities in the park and the business flows that derive from them could, if managed properly, present an opportunity to promote the territory, increase clients and convert the business flows to nature and

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[34] It is made clear that Parco Nazionale del Pollino is an interregional park but the analysis refers only to the Lucania side.

Swot analysis: The Murgia Materana park

Strong points	Weak points	Opportunities	Threats
UNESCO site	Signage and trails	Matera 2019	Basking in the reflected glory of Matera
Important cultural heritage	Secondary attraction of flora and fauna	Diversification of provision (not only cultural)	No independent provision
Good visibility in guides and on the web		Diversification of the tourist catchment areas	Good visibility in guides and on the web
Quality of the tourist services			
Good bed provision		Internationalisation	Good bed provision

Types of tourism demand: The Murgia Materana park

Sport e Divertimento 2%

Scoperta 13%

Natura 20%

Enogastronomia 9%
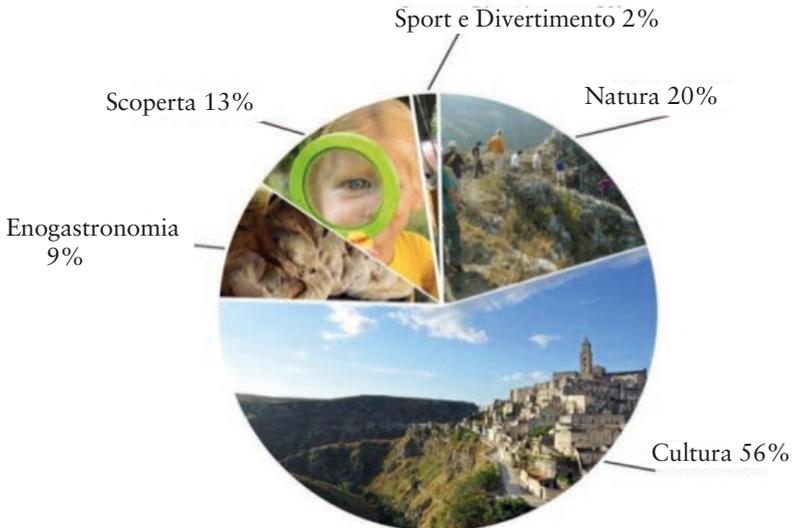
Cultura 56%

Swot analysis: The Parco dell'Appennino Lucano

Strong points	Weak points	Opportunities	Threats
Variety of the natural, wine and food and cultural resources	Poor visibility in guides and websites	The newest park in Italy	Extraction activities
Variety of traditional events	Local and seasonal tourism. Static nature of the flows.	Business tourism	Poorly structured tourist provision
	Limits on collective mobility	Increase in accommodation facilities	
	Poor recreational provision;	European Charter for Sustainable Tourism	
	Lack of signage and trails		

Types of tourism demand: The Parco dell'Appennino Lucano

Sport e Divertimento 13%

Scoperta 10%

Natura 39%

Enogastronomia 22%

Cultura 16%
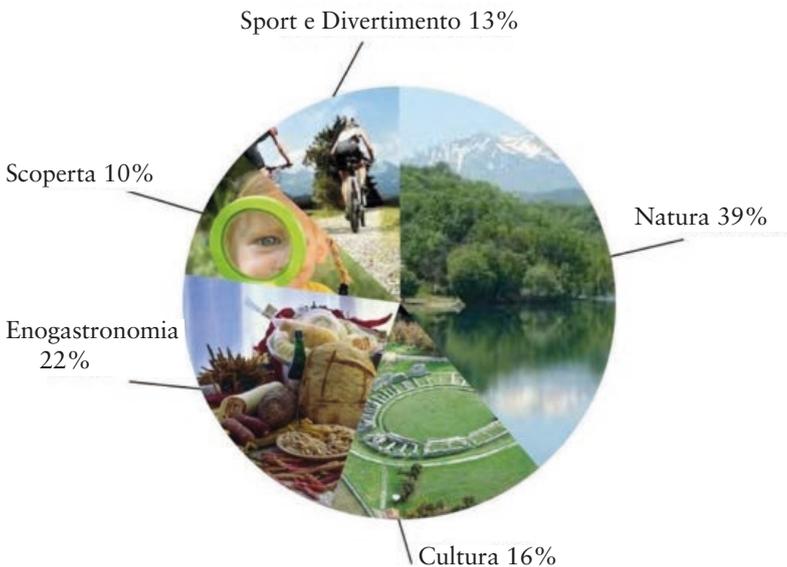
leisure tourism[35]. The encouraging figures of the increase in beds are tempered by a fluctuation in the flows, mostly linked to the requirements of the oil industry. However, the opportunity offered by the awarding of the European Charter for Sustainable Tourism is a real chance to promote tourism in the territory and the greater recognition and attraction of its values. Setting aside the business flows, the main demand is for nature (39% of clients) and tourism directed at the wine and food resources (22%). Less interest is found in the cultural heritage, sports and the discovery of the territory.

Parco del Pollino is one of the first protected areas established in Italy where the emphasis is on nature and the provision of tourist activities. Although it has a recognisable brand and good visibility in guides and on the web, it has seen a reduction in the tourist flows in recent years and, according to the local operators, it seems to be sliding into a phase of stagnation in which tourism is given only marginal consideration as a resource and opportunity for the territory. The demand is marked by tourism driven mainly by the enjoyment of the natural resources (57% of the sample) and sports (16%) and only marginally interested in the other resources.

Finally, the *Parco di Gallipoli Cognato* is a protected area covering a limited area and attracts marginal flows within the regional tourist economy, nevertheless aiming at future growth as the visibility and attractive force of Castelmezzano and Volo dell'Angelo increase. The risk, however, is that the nature provision continues to be a secondary product compared to tourism dedicated exclusively to visiting villages and sports activities, predominately hiking. Current demand is mainly from the nature and sports segments, which were the main reasons for visiting for 72% of tourists. Around a quarter are interested in the enjoyment of the cultural heritage (13%), wine and food (8%) and tradition (7%).

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[35] Chiarullo L. *et al.*, *Il turismo business legato al settore estrattivo: opportunità e minacce per un'area interna della Basilicata*, in Becheri E., Maggiore G., *19th Report on Italian tourism*, Mercury 2013.

Swot analysis: The Parco del Pollino

Strong points	Weak points	Opportunities	Threats
Good visibility on tourist guides and websites	Decreasing flows	European Charter for Sustainable Tourism	Tourism as secondary resource
Arberesh culture	Seasonal tourism and tours	New attraction: the flight of the eagle	
Strong emphasis on nature	Lack of signage and trails	Recognition for natural resources	
Rich provision of sports tourism/ activities	Difficulty in collective mobility		
	Lack of events		

Types of tourism demand: The Parco del Pollino

Sport e Divertimento 16%

Scoperta 6%

Enogastronomia 10%

Natura 57%

Cultura 11%
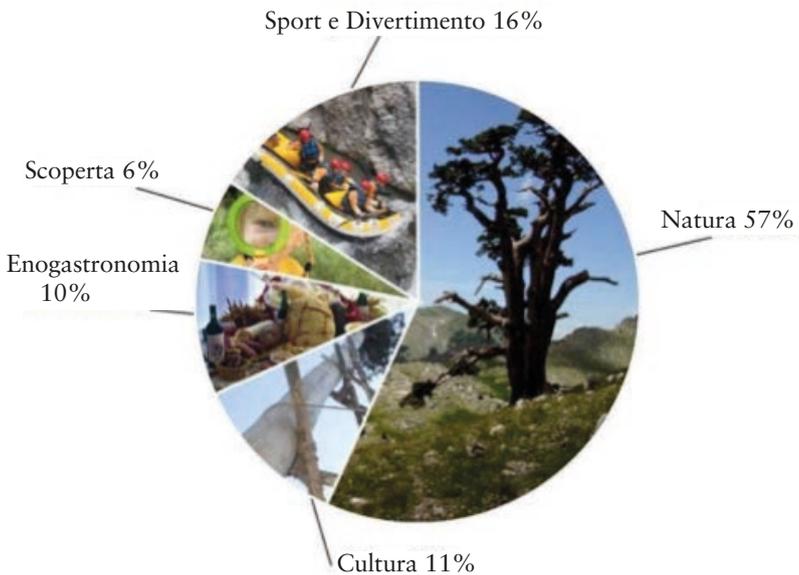
Swot analysis: The Parco di Gallipoli Cognato

Strong points	Weak points	Opportunities	Threats
Proximity to the provincial capital	Limited area	Flight of the angel	Overshadowed by Flight of the Angel and Castelmezzano
Rich natural heritage	Poor visibility in guides and on the web	Castelmezzano, the most beautiful town in Italy	Lack of capacity
Increase in beds	Difficulty in collective mobility	Integration of offer	Only suitable for sports tourism
Flight of the angel	Tourism chiefly involves touring		

Types of tourism demand: The Parco di Gallipoli Cognato

Sport e Divertimento 2%

Natura 41%

Scoperta 7%

Enogastronomia 8%

Cultura 13%
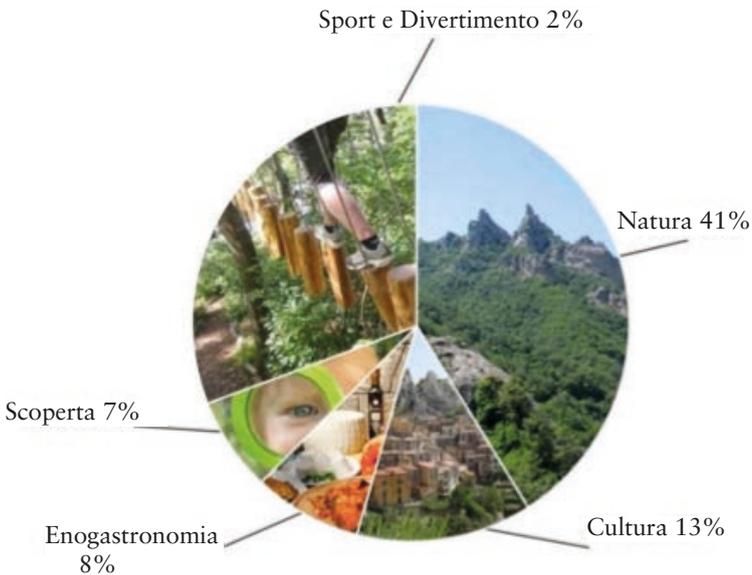
3. *The design of the research*

Given the foregoing, the study intends to identify strategic lines for planning development based on the combination of market forces and forms of social regulation (Garofoli, 2002) which aim to counter the seasonal nature of the coastal flows by means of a diversified provision integrating seasonal tourism with tourism in the hinterland, given the natural and direct access from the coast to the protected areas, and their redistribution for the purpose of obviating the tourist pressure from the perspective of sustainable development. At the same time, while incentivising the increase of visitors and monitoring

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Integration between the coast and the hinterland, in recent years, has been a recurring theme in the international literature, which presents it as a powerful tool of territorial "regeneration", able to implement alternative, sustainable development models.

Moreover, European policies are moving in this direction and, as part of the development plans for the Mediterranean area and, in particular, the Adriatic-Ionic region, at risk of gradual marginalisation, they identify the land-sea connectivity as a precious opportunity. Similar activities were also incentivised in the previous planning. Among these, the projects "Odyssea Fim" and "Adristorical Lands" are examples of excellence in the field of cross-border cooperation and shared integration between coast and hinterland. The first, which is being developed as part of the Italian-French "Maritime" Programme, is aimed at enhancing the lands around the tourist ports and the creation of tourist itineraries as a unique way to enable rural areas to benefit from substantial sports tourism. A similar project is "Adristorical Lands", which is based on the idea of the port as a "gateway" to the territory, that is, a favoured route from the coast to the hinterland. In this light, the itineraries designed to incentivise the interactions between coast and rural areas are a valid instrument for promoting multicentre development that respects the environment.

3.1 *Methodology*

In order to assess the level of interest of tourists in the coastal strip and their willingness to visit the hinterland, as well as the features the integration product must have to convince them to explore the hinterland, a territorial marketing analysis was undertaken using the instrument of the "choice experiment", which enables the level of satisfaction in certain existing kinds of tourism to be evaluated and new products to be created to meet the trends in demand by discovering preferences and needs. The analysis was carried out through the submission of a questionnaire to tourists on the coast, divided in two sections. The first aimed to identify the features of the holiday that visitors are enjoying at the time of the interview, the methods of selecting the destination and the means of transport they use most. Moreover, the habitual tourist conduct of the interviewees was surveyed and, specifically, the type of holiday they usually take and the attitude to travelling during the low season. The
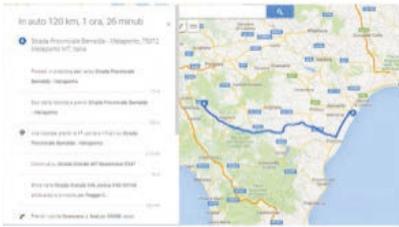
Metaponto – Parco Appenino Lucano
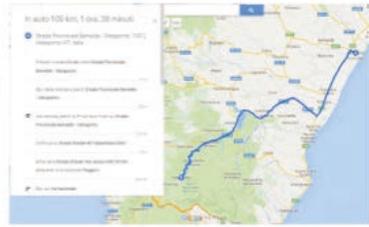
Metaponto – Parco Pollino
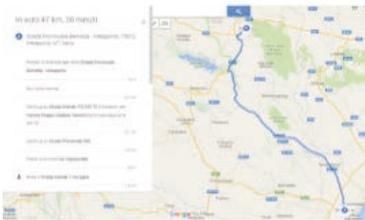
Metaponto – Parco Chiese rupestri
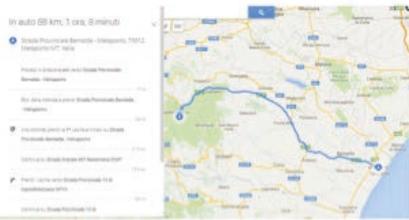
Metaponto – Parco Gallipoli Cognato

purpose of the second section was to sound out the degree of interest in visiting the hinterland, the reasons for travelling, travel times, what tourist products they would choose and the tourist services they would like them to contain. Finally, the interviewees were asked to express an opinion on a series of services in order to decide which need to be enhanced.

In summary, the results of the survey produced good feedback on a structured tourist product that presents a range of good quality services. Half the sample stated that the journey should last "between 50 minutes and a maximum of an hour", while 40% would be willing to travel for a maximum of 2 hours. Among the tourist products offered, chosen based on the features of the hinterland, more than half those interviewed chose the nature and cultural products.

At this point, due to the indications from the survey and taking account of the match between the requirements expressed by tourists in terms of type of provision and travel times (see graphic below) and what is available in the protected areas, a tourist analysis was carried out on the parks.

In particular, for the purpose of identifying factors for the enhancement of the tourist system and the repositioning of the green destinations on the market, the surveys were aimed at measuring the tourist competitiveness using the Dwyer and Kim model associated to the Balanced Scorecard method. The results of the two analyses were entered in a BCG (Boston Consulting Group) matrix, a tool that enables the strategic assessment of tourist products with greatest potential for growth in relation to the trends in demand and the provision of key factors, which determined the most competitive tourist products for coastal demand and on the market for green destinations.

The concept of competitiveness and its measurement is emerging as a necessity for the in-depth consideration of the main objectives of policies of tourism development and planning.

Among the evaluation models, one of the most commonly used is that of Dwyer and Kim (2003), which define competitiveness as "the ability of a destination to deliver goods and services that perform better than other destinations on those aspects of the tourism experience considering as being important by tourists" (Dwyer, Kim, 2003). The model is made up of 4 categories of factors: 1) resources, 2) destination management 3) influential factors, such as localisation and safety 4) the characteristics of the demand. One of the most recent adaptations, the analysis perspective of which is shared, considers, in addition to traditional competitive factors, the Web and ICT, seen as facilitators of the development of the demand and the processes of co-creation and sharing of the process of acquisition, consumption and post-consumption of the tourist services (Pilotti, 2013). Given the foregoing, a theoretical model is proposed in the study supplemented with 4 categories of factors – supply, demand, web and ICT and the destination's image – and a set of 63 indicators (see graphic below) selected on the basis of the availability, reliability and immediacy in collection. Finally, the integration was carried out of the model updated with the Balance Scorecard method (Kaplan, Norton, 1994), which takes on remarkable importance in the planning of a destination (Butler, 1980),

since it enables the swift identification of the success factors and major problems on which to build a strategy of relaunch and redefinition of the tourist structure.

4. *Results*

4.1 *Coastal tourists' preferences for an integrated product*

The interviews with seaside visitors produced reassuring data regarding the actual application of the integration strategy. Specifically, while 51% state they are on holiday in Ionian Coast tourist locations for the first time, 49% are regular visitors and, for this reason, represent a much more easily intercepted catchment area that can be directed to the hinterland. The main means of reaching the destination is the car, which is an important advantage for the immediate application of the integrated product in the light of the deficiencies encountered regarding public transport. Another favourable factor from the perspective of the seasonal balancing of the flows is the attitude to out-of-season visits: 55% of tourist stated they took other trips in addition to summer holidays, both in spring and winter.

While the main reason for current holidays is seaside activity, more than half those asked said the natural and cultural resources were factors that might persuade them to visit the hinterland. The remaining 45% might be interested in a wellness, sports or wine and food product. For 50% of respondents, the journey to reach the interior locations should last from fifty minutes to a maximum of an hour, while 40% would be willing to travel for a maximum of two hours.

Among the services requested was an efficient public transport system, improvements of which must be made. Accommodation facilities in typical villages, food and wine provision in line with local traditions and good, widespread signage and trails were also requested.

Set of indicators tourist provision

Tourist resources by segment	Accommodation provision by category	Economic sustainability of the accommodation provision	Marketing
Nature tourism supply/demand ratio	% Quality hotels	Local personnel employment%	Appearance in catalogues tourist offer sample
Cultural tourism ratio	% P.L. In most requested non-hotel Accommodation	% Use of local articles	
Wine and food tourism ratio	Increase in beds in five years	% Use of foodstuffs km0	
Discovery tourism ratio	Increase in quality hotels	% Sales of typical products	
Sports tourism ratio	Increase of non-hotel accommodation on request[3]		
Nature tourism supply/demand ratio	% Quality hotels	Local personnel employment%	

Set of indicators tourist demand

Size of demand	Segmentation of demand	Quality of demand	Customer satisfaction
Increase in arrivals in five years	Nature tourism demand-supply ratio	Public awareness of a park	Opinion of accessibility and signs
Increase in visits in five year	Cultural tourism ratio	Main motivation for visiting park	Opinion on the variety of the tourism provision
Increase in average stay	Wine and food tourism ratio	Lack of touring outside the park	Opinion on environmental enjoyment services
Seasonality	Discovery tourism ratio		Opinion on wine and food quality
Internationality index			Opinion on quality of entertainment
Increase in internationality index			Opinion on the professionalism of the operators
			Opinion of the ease of finding information
			Opinion on quality/ price ratio
Extent of touring	Sports tourism ratio		Opinion on enjoyment of cultural assets

Set of web and ICT indicators

Destination's online visibility	Accommodation facilities' online visibility
Web positioning of the destination	Web presence structure
	Option to book online
	Presence on booking
	Presence on tripadvisor
	Opinion on tripadvisor
	Presence on trivago
	Opinion on trivago
	Presence on park's website

Set of web and ICT indicators

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	Presence on tripadvisor
	Opinion on tripadvisor
	Presence on trivago
	Opinion on trivago
	Presence on park's website

Set of indicators destination's image

Online photos	Tripadvisor	Tourist guides
Dmo vs ugc ratio Nature photo	Number of comments on tripadvisor	Appearance in national/international guides
Culture photo ratio	Opinion on tripadvisor	Detailed information
Free time photo ratio		Ratio of nature offer vs park offer in guides
Way of life photo ratio		Ratio of cultural offer vs park offer in guides
Traditions photo ratio		Ratio of nature offer vs park offer in guides
Food and wine Photo ratio		Ratio of food and wine offer vs park offer in guides
		Ratio of sports offer vs park offer in guides

4.2 *The competitiveness of Lucania's parks*

As mentioned, the integration of the Dwyer and Kim model with the Balance Scorecard method enables the assessment of the tourism performances of the four Lucano parks and, at the same time, the identification of strongpoints and major problems. Specifically, the survey showed that all the parks have intermediate levels of competitiveness displaying positive trends in various factors, while not lacking areas for improvement.

Murgia Par currently has a higher degree of competitiveness. It stands out for its diversified nature, sports and discovery provision, even more than currently requested; for its competitive accommodation system, given the existence of a sizeable number of beds in quality hotels and the most popular non-hotel accommodation among nature tourists (12th Ecotur Report). Its positioning on the agency circuit, the level of sustainability of the facilities and the opinion of the tourists about the current services are good. The demand situation is also favourable, considering that the flows have increased significantly, the seasonal nature and influence of hiking are limited and flows of foreigners are increasing. Finally, awareness of the Park among visitors, the degree of digitalisation of the accommodation facilities and the online profile and reputation are all high. However, the competitiveness of the image in the national and international guides is average and often there is only a brief mention of the Park as part of a more detailed description of Matera.

The aspects currently seen as uncompetitive are: the provision of the food and wine and cultural resources is lower than demand, the average stay is less than two night, the number of visitors whose main reason is to visit the protected area and the online users whose searches target the Park.

Second for competitiveness is the Parco del Gallipoli Cognato, which promotes a full package of resources for nature, cultural and discovery products in excess of demand and has seen a substantial increase in beds, especially in the most popular non-hotel accommodation facilities, with a high opinion of the services and a good level of digitalisation among

the facilities. The number of arrivals is also growing. The degree of competitiveness in the following factors is average: available beds in the most popular non-hotel accommodation facilities, seasonality and awareness of the protected area. Critical points are: the provision of too few resources to meet the demand in the sports and food and wine segments, the lack of beds in quality hotels, the low sustainability index of the facilities in terms of the indirect and allied economy, the lack of agency circuits, the high level of hiking, the five-year decrease in visits and average stays, a limited rate of internationality that has not grown over the years, a low percentage of visitors who come for the protected areas and users who look for and leave reviews of the Park, in addition to a derisory presence in national and international guides.

Next is the Parco del Pollini, whose strongpoints are the diversified provision, in excess of demand, in the nature and discovery segments, the increase in beds in the most popular non-hotel accommodation facilities, high visibility in the catalogues of national and international tour operators, the widespread awareness of the Park among visitors and the positive opinion of the services delivered. The number of searches for the destination on the web and the number of reviews on TripAdvisor are also high. An analysis of the data on the seasonal nature of the flows produces average values due to hiking and the main reason for the stay. This is also due to the level of digitalisation of the hospital system and the coverage in Italian and foreign guides.

However, there are gaps that need to be covered, including the limited provision compared to demand for discovery, wine and food and sports products, the five-year decrease in beds, the lack of beds in quality hotels and a still low level of sustainability of the facilities with regard to the allied economy. There are also critical factors for demand, such as the decrease in arrivals, the visits and average stays over the five years, a low internationality index that has not seen any increase in years and a low level of digitalisation among the accommodation facilities.

Finally, in the case of the Parco Nazionale dell'Appennino Lucano, supply exceeds demand for nature, cultural, food and

wine and sport products. The positives are: an increase in beds over five years for the most popular non-hotel accommodation facilities, the sustainability of the accommodation facilities and awareness of the protected area among visitors. Average values are found regarding the increases in arrivals and visits, the seasonal nature and hiking, the degree of digitalisation of the facilities and the volume of the online searches for the destination. The opinions on the services range from good to satisfactory.Factors requiring action are: the limited sports provision, the decrease in beds, the lack of availability of beds in quality hotels, the decreases in the average stay, a low rate of internationality, the absence of T.O. catalogues, the limited digitalisation of the facilities and a weak image reflected in little coverage in the guides, a derisory number of reviews on the web and a low percentage of tourists who consider the Park their main reason for visiting.

4.3 *The strategic positioning of the nature product*

After analysing the competitiveness, the study now shifts attention to another target: identifying strategies for better market positioning in the light of the analyses conducted on the domestic tourist situation, the preferences of coastal tourists, and on the basis of the competitive structure of the market.

Currently, the Lucano parks do not display very positive performances in the market of Italian protected areas, only the Parco del Pollino is in a more promising position. An analysis by CISET (Ca' Foscari University's centre for tourist economy studies) on the competitive situation of southern Italy with regard to the environment segment confirms the less than dynamic performance of Basilicata. According to Ecotur, the Parco Nazionale del Pollini lies in sixth place among the ten most requested of Italian tour operators and is the first and only protected area in southern Italy. Finally, a Unioncamere survey on the awareness of tourists regarding Italian parks showed that only Pollino was recognised in the catchment areas of demand.

It emerged from the surveys conducted that only 33% of tourists were interested in nature and that a visit to the

protected area was the main reason for staying for 25%. The rates of increase in the arrivals and visits, with the exception of the Parco della Murgia due to the presence of Matera, were negative and require repositioning. The marginal presence of the Parks in the main tourist information and agency channels (web and guides) is an additional sign. In consideration of these analyses, a close examination is required of the factors that influence competitiveness at the national level in order to decide on strategies for a better positioning on the market and in the minds of tourists, including coastal. BCG was used for this purpose in order to identify the tourist products with the greatest potential for development compared to the demand, taking account of the competitive context.

The Matrix is based on two dimensions: the relative market share, that is the destination's share of the market compared to its main competitor, and the sector's rate of growth. On the basis of these two dimensions, the matrix is subdivided into four quadrants, in which the products are classified as competitive, less competitive, attractive or less attractive.

During the analysis, BCG was used to evaluate which secondary products in relation to the main product, that is, nature, on which it is intended to focus, could contribute to the strategic positioning of the destinations with regard to a main rival, identified as the Parco Nazionale d'Abruzzo, which, according to the 12th Ecotur report, is the most popular among nature tourists. An initial examination of the number of arrivals and the turnover of the protected Lucano areas compared to the competition made clear the need to consider the Lucano parks in the analyses not as individual units but as a tourist-territorial aggregation, since the competitor has a substantial numerical advantage over the individual destinations. This initial result is, of itself, a strategic indication: the integration of the parks could be a real opportunity to break into the markets with numerous advantages for the domestic competitiveness of the destinations. Aggregating the data, it is clear that the integration would have the positive effect of establishing an almost complete correspondence between the provision offered and the tourism demand for nature, cultural, wine and food and territorial

discovery products; it would additionally guarantee a variety of accommodation able to respond to market demand, with a beneficial influence on the seasonality and internationality of the flows. Moreover, a more varied provision could reduce the phenomenon of touring outside the protected areas and persuade tourists to extend their stays in the destinations. Aggregation could, finally, ensure easier access to the channels of promotion-advertising and improve the visibility both on the web and in the guides.

The results of the matrix confirm that the wine and food product, also demanded by coastal tourists, demonstrates the highest potential. It displays both a high growth rate and a high market share. The Lucano parks are very competitive in this product as demonstrated by the fact that they have 7 geographically-branded products. Wine and food is the most profitable product both with regard to the potential demand and that of the coast. It is important to underline, in this regard, that the wine and food demand currently exceeds supply in three out of four parks, that is, Murgia Materana, Pollino and Gallipoli Cognato parks, notwithstanding the fact there is a significant wealth of resources.

The cultural and discovery products, on the other hand, display a low growth rate and a high market share: while cultural reasons are not the major driving force of tourism within the parks, they do command a large slice of the market. What's more, it's the second most popular option for coastal tourists. Considering the vast wealth of cultural resources in the rural areas and the uniqueness of the Parco della Murgia Materana with its stone churches and the city of the Sassi, which gained international renown in 2019 through Matera, the product is certainly strategic, mature and able to generate certain income for low investments. Among the four parks, those that should focus most on cultural products to fill the gap between supply and demand are Parco della Murgia, for which it is necessary to enhance the connection between the natural resources and the cultural wealth of Matera, the driving force for the regional flows, and Pollino.
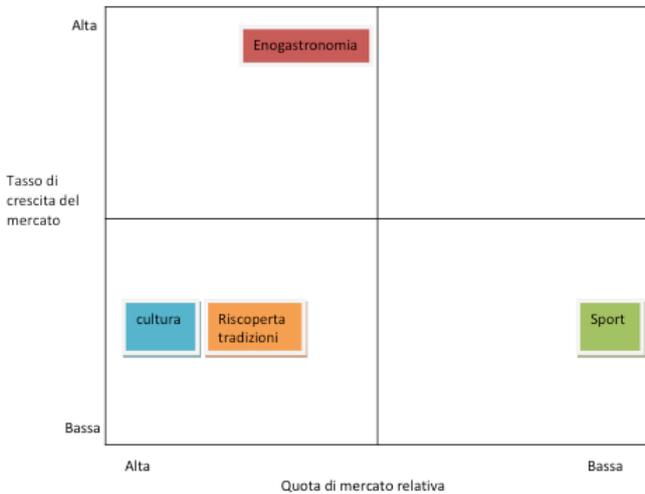
A different approach is required for the sports product, which is marked by a low development rate and a low market share: this is a product that generates limited profits and tends to be eliminated or is retained in order to complete the range. In reality, taking account of the fact that demand for sports tourism currently exceeds supply in three of the four parks (Pollino, Gallipoli Cognato and Appennino Lucano), which are developing hiking itineraries connecting the three protected areas and that, through the formula of major attractions like the Flight of the Angel in Gallipoli Cognato and the Flight of the Eagle in Pollino, the parks can play the card of experiential sports tourism, the recommendation is to keep it in the portfolio to complete the range, with the revival and restructuring of the existing facilities from the perspective of bringing together resources and enhancing the provision without major investment.

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Scientific Session 4

Participatory processes in tourism and cultural management

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The European Capital of Culture: a tool for promoting human capital. Matera 2019 case study

1. *Introduction*

The events, both at national and international level, are increasingly being considered not only marketing tools for promoting other products or services, but also real businesses, elements of tourist attractiveness and entertainment that determine also an "important social impact on the hosting community because they contribute to the formation of a strong sense of belonging and a sense of place". Starting from these considerations, this study focuses on aspects of evaluation determined by the events on a territory and its hosting community. A strategic role in the planning process and in the city image relaunch is covered by what literature also calls "mega events", as catalysts of territorial transformations. The "mega events appear as an instrument apt both to create value in the context and to promote the territory image in the perception of external people". In particular, this paper presents the start of the empirical study on the case "Matera European Capital of Culture 2019": it focuses on the local people involvement and the value created by the big event on the perception and the culture of welcome. The study outlines the specifics concerning chances for development, opportunities to seize, territorial impacts, goals and organisational setup for their management through the activation of a bottom-up process that can result more efficient and sustainable in the long term than a top down

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management. Participation can be a tool used by destinations for promoting a sustainable tourism development, that is based on local community's needs; then, it is a valid alternative to the traditional destination management where residents are passive subjects suffering effects of decisions and strategies decided by other people. A particular attention is given to the analysis of case studies of other European Capitals of Culture that complete and enrich the research work and the summary of the existing literature, providing reflections and illustrative information for the description and the understanding of current processes.

2. *Cultural events as a driving force for the development of a territory: theory*

Literature provided several definitions of the "event" phenomenon, each time outlining some specifics. Getz (1993), one of the researcher who studied more in detail this topic, for example defined an event as "themed, public celebration", while Cherubini (1997) outlined that events must have "a limited duration in time". The literature, above all English, but recently also the Italian one, has focused on some type of events, first of all big events, even though it has never found a shared, univocal and coherent classification. Getz, in some cases, defined them "real tourist attractions". As such, they constitute one of the more dynamic product of tourism and leisure industry, whose appeal comes from the temporariness and uniqueness of each event that with the festival and celebrative atmosphere make them very different from other attractions. Re-elaborating a taxonomy used by Hall (1989), resumed also by the International Olympic Committee (IOC, 1998), Roche (2000) elaborated a classification of events in four types: Mega Events, Special Events, Hallmark Events and Community Events, adding, among the criteria to evaluate, two important elements like the type of audience (the target) and the attention of medias (it is fundamental since the event should attract people, often from all the world). Mega Events (a concept introduced by Ritchie in 1984) refer to happenings with a global involvement both in terms of target/market and

television coverage; Olympic Games, International Expositions and European Capital of Culture fit in this category. To Special Events type correspond global or national target and the national or international televisions interest. Hallmark Events include for example sport competitions and happenings addressed to a national target, whereas Community Events have a limited target and they attract local medias (television and press) attention. Roche's taxonomy definitely prefers some events and has many shortcomings since several events have no adequate place in his model. On the contrary, Chito Guala (2002) elaborated a more detailed classification and events are evaluated in terms of their goals and type. In this sense, Guala aimed to further widen the range of big events including a specific category for major works and dividing Roche's special events and hallmark events sections in five different typologies. According to these typologies big events are: fairs, religious, sport and cultural events, but these are just some types of events and the category can further vary in time and include new events that, for their dimension and value, become part of it. It is interesting to note that Ritchie (1984) distinguished events for their quality and their possibility to be directly associated to a specific territory. His definition states "one-time or recurring events of limited duration, developed primarily to enhance the awareness, appeal and profitability of a tourist destination in the short and/or long term".

2.1 *Mega events in territorial city marketing*

"European Capitals of Culture" belong to the so-called "big events" (or "mega events") category. In this way are defined those events that refer to intervention plans whose organisation has significant effects on territorial level. They are high profile interventions of relatively short duration, associated to important public and private investments and they expect the involvement of a considerable number of participants. While the event itself has always a limited duration, its implications can last long after the happening: what is left to the urban and territorial context after the event is concluded is called legacy. It can be symbolic values, cultural identity elements, but also infrastructures,

buildings and facilities to use in the post event period. The concept of "mega event" was introduced by Ritchie towards the end of '80s who defined it "major one-time or recurring events of limited duration, developed primarily to enhance the awareness, appeal and profitability of a tourist destination in the short and/or long term. Such events rely for their success on uniqueness, status, or timely significance to create interest and attract attention". Mega events arise from innovative projects able to mobilise the potential for local development, support the image reinforcement and facilitate the infrastructural development. Generally, another sign of the growing interest in mega events is linked to the development of territorial marketing and, particularly, of city marketing whose actions are related to the organisation of events both for tourists and local people. So, city marketing is defined as a set of strategies for optimising the advantages of setting in single cities specific events, considered useful for the creation of economic, cultural and development benefits. Then, events aim also to coordinate interaction between the processes of offer and fruition by potential citizens in order to increase the city perceived value, in terms of liveability too.

3. *The "European Capital of Culture": identity and policy*

The programme "European City of Culture" or ECOC has a complex history that shows the increasing interest of the European Union in cultural action. ECOC aims at improving the awareness and bringing closer the People of the Member States through the promotion of the richness and diversity of European cultures, by highlighting that European culture is characterised by "having both common elements and a richness born of diversity". The selected city, with the aim to promote cultural relations in the European Union, for a year, has to show the richness of its cultural resources, to present its cultural life on the international scene and attract tourists through an agenda of events. Launched in 1985 with Athens being the first title-holder, the programme followed a rotational model of the nominations, that is to say every member state received the title in turn. Each State selected both the city to nominate

and the local authorities that would organise the event. Between 1990 and 1992 some changes occurred, a system of multiple simultaneous nominations and the extension of the programme to cities of non EU Countries replaced the rotational model. The Council of Ministers designated the ECOC on the basis of an application report presented by national governments in the name of the applying cities. The second overhauled phase ended in 2004 and the next year a third phase began with a real change of the rules. The ECOC has stopped being an intergovernmental action, decided unanimously by Member States, and has become a community action. The rotational system among Member States has been reintroduced following the turns of Presidency but they do not coincide. Non EU States can participate in the programme with simultaneous nominations. The application modality and the nomination procedure, as concern the Member States, have been officialised while the application proposal procedure has remained a standard. The designation does not depend on political pacts, but on the evaluation of a panel of experts. Every year the jury of experts in cultural matter writes a report and presents it to the Commission, Parliament and Council. The Council officially designates the title city on the basis of the Parliament advice and the Commission recommendation. In the early years of the ECOC programme, the title was assigned to well-known tourist cities, big cultural centres and destinations preferred on the international market, like Athens (1985), Florence (1986), Amsterdam (1987), Berlin (1988), Paris (1989), Madrid (1992). The designation of Athens was a right considered the Greek initiative, but it was also a symbolic designation because it reactivated the narration of the European origins: if the roots of the European civilisation are to be found in Greece, the European modern world is born in Florence and confirms the symbolic meaning of the choice of these cities. Florence was the first Italian city to hold the title. The role covered by the city in the history as a cultural and tourist centre did not highlight the initiatives promoted by ECOC, but in the meantime the title fostered improvements on infrastructures and restoration of historic monuments. A change happened in the '90s, when for the first time the event was held

in places that most people does not associate to culture. In this way, ECOC title from an acknowledgement of the cultural pre-eminence of big capitals, has become a tool for development of marginal cities too. The high-point of the programme was achieved in 2000. This year represented an exception, for the first time nine cities, that is to say all the applying cities, were chosen with the motivation of the metaphoric meaning of the passage between two millenniums. It was a selection of urban cultures that with their differences in dimensions, history and culture symbolised the union in diversity.

3.1 *Benchmarking and best practices*

It is always more frequent that policy makers of regions and cities use the organisation of events to accelerate change processes and attract investments, raise marginal areas, build new infrastructures and redesign the urban plan. For a lot of European cities, the event "European Capital of Culture" represents or represented the opportunity to trigger the mechanisms of value creation crucial for the local development in an economic, environmental, cultural and social perspective. The mega event has certainly had an important impact on the cities that really invested on culture. One of them, definitely, is Santiago de Compostela (2000): this city revealed that it was not just an important pilgrimage destination linked to the most famous European route, but also offered cultural and artistic attractions, in particular shows, live performances and music succeeding to increase the number of visitors by 15%. The main goal of Avignon (2000) application was its will to promote cultural tourism stimulating local creativity and strengthening its image as an important international tourist destination. The events agenda was broad and included several cultural domains with positive effects on local tourism (+25%), economy and the international value of the city. Among the most important events that continued in the years following the title, there are the "Trans Dance Europe Network", "Teorema Network" and the "Contemporary Art Museum Yvon Lambert". The year 2004 marked in a strong and evident way also Genoa, that

was renovated through the realisation of about 130 projects: some special projects were addressed also to children, schools and socially underprivileged people. Another relevant case is Pecs, European Capital of Culture in 2010. This city, situated in south-western Hungary, is one of the oldest Hungarian city. Close to the borders with Croatia and Serbia, it has represented a model of integration among people of Hungarian, Serbian, Swabian, Croatian origins, becoming famous and achieving important goals both on cultural and socio-economic aspects. 650 projects were defined and 4.675 cultural events were implemented: they were characterised by a strong cooperation with both the other ECOC cities (Essen in the Ruhr and Istanbul) and the other Balkan Countries with the aim to create a new transnational region called "Southern Cultural Zone". The European Capital of Culture in 2012 was Guimarães, a Portuguese city of Celtic origin. The designation was perceived as an opportunity for the development of the city and the surrounding region. The goal was boosting the improvement of the quality of life through social and economic renovation and the promotion and enhancement of city and its inhabitants cultural value. Around 2,000 events, involving 25,000 artists and professionals of music, cinema, photography, figurative arts, theatre, dance, street art, were organised during the whole year. In 2013 Kosice, a little city (with about 200,000 inhabitants) of western Slovakia was designated as ECOC and emerged as an international tourist destination thanks to the celebrity obtained through this title. The final cultural programme combined traditional art festivals and experimental art forms that reflected the multiethnic identity of the city. The cultural offer included about 300 events and the presence of around 1,000 artists during 2013.

4. *Matera 2019: perceptions and expectations of a community involved in a mega event*

"In contrast with other paths that in the last 50 years led to the positive change of the image and trajectory of Matera, the particularity of the path towards the designation of Matera as

European Capital of Culture 2019 is that this candidature was planned also with inhabitants of Matera and Basilicata". In fact, the application report given to MIBACT on the 19th of September 2013 opens with the following statement: "The citizens of Matera and Basilicata, men and women, elderly and children, want the city and the region to take part in the competition because they wish to open up to Europe, link up with other cultural inhabitants and, with them, look forward to a better future for our communities". The focus is on the social and collective dimension of culture and the role covered by inhabitants' cultural participation in the improvement of the city. This long path was started in 2009 by a group of citizens who proposed the candidature of Matera through actions aiming to raise awareness about a goal considered by most people too far in time. In 64 years Matera left the definition of "national shame", became world heritage and seized the European Capital of Culture opportunity. Considered the capital of the Rupestrian Culture, Matera has succeeded to become a city able to innovate and promote a vision of culture as a means for the community social growth and open to sharing, without losing its identity. The goal of the application is to make the city of the Sassi both a cultural place open to differences and contaminations, able to attract tourists, and a hospitable place able to create added value in innovative sectors as the creative one. The application dossier of Matera focuses on 5 themes that explain the concept "Open Future":

Ancient Futures: Matera is based upon an economic and social model whose roots are in the distant past and is now re-proposed worldwide in a modern perspective: an example is the reconsideration of the agricultural and ecological model. Matera is committed to bring together long-standing practices with accessible life models able to influence ideas about culture and development over the coming decades.

Roots and Routes: Matera has been a land of exchange, transition and transformation. The city and the whole Basilicata have been characterised by long-standing mobility from Greeks, Byzantines and Romans' paths to other forms of mobility related to new immigration and emigration, in particular of young people. The theme explores the several possibilities of mobility.

Reflections and Connections: Matera proves that art, economy, environment, everyday life are aspects to reconsider in order to build new cultural and economic models for small territories, and to find a solution to life models being now in crisis.

Continuity and Disruptions: the abandonment of Sassi cave-dwellings in 1950s represented the collapse of a community and the rupture with its own past. But now the Sassi are the connection to that past and become a place for experimenting new technologies, economies and residential models open to the whole Europe.

Utopias and Dystopias: Matera symbolises the forgotten cultures, the Southern cultures that, with their values, can provide a different solution to European problems and create projects for designing new models for social and economic development. Matera will be the place where imagine alternatives to consolidated urban realities.

5. *Method of research*

The field survey to analyse in detail the case study of Matera 2019 was conducted through questionnaires to inhabitants of Matera. The questionnaire was structured with closed-ended questions and was administrated to a sample of 300 citizens from July to September 2015. The data were collected as that the sample of respondents was the most representative possible. The questionnaire was divided in two parts. The first one focused on tourism and the relation between territory and residents: so it questioned the citizens' behaviour towards tourists and their views about the territory they live in. The second part highlighted the residents' perception of Matera designation as "European Capital of Culture".

5.1 *Results*

The first section of the questionnaire had the specific aim to understand the relation among residents, tourists and territory. Some questions were conceived in order to analyse which are

the effects of tourism on the territory and the city heritage according to the Matera's inhabitants and their involvement in the tourism planning. The most part of them agree on the fact that the presence of tourists has positive effects and benefits for the community. Thus, tourism is not seen as a threat for the characteristics of a place and culture but as an opportunity to strengthen them: 70% of respondents think that tourist presence helps to improve the "identity and the cultural heritage of Matera", with a 66% of them indicating the enrichment of "the community's quality of life". It has to be noticed that the percentage of people highlighting the possible problems caused by tourism on the city is very limited: only 3% attribute to tourism no positive effects, stating that tourism damages "identity and local culture". In the context of the relation tourism and territory, the residents were asked if they have the feeling to be involved in city tourist planning process and the answers were dual: 59% think their involvement "adequate/very adequate", while 41% find it "inadequate/ completely inadequate". The second part of the questionnaire focused on the designation of Matera as "European Capital of Culture 2019" and the effects that it could have on social, cultural and economic aspects of the city. 43% of respondents think that the designation gives to Matera and the whole Basilicata region more visibility as a tourist destination, 26% consider it an important recognition for the community as concern production and economy and 18% indicate as a benefit the realisation of projects of city requalification. 33% of residents are informed and follow Matera 2019 programme through social networks and 32% through newspapers and local press. Fewer respondents indicate other digital media like the website of Matera municipality (6%) or the portal of Matera 2019 (9%). The important difference between the use of social media and other digital channels reflects the continuous and profitable communication work done by Matera 2019 web team during the application process. The web team's work on social channels linked to Matera 2019 made them more known than other traditional media. The citizens of Matera were also asked to imagine the future of their city: 56% of respondents in the future see Matera as a cultural and tourist city, whereas

12% a city where living, working and studying, 14% see it as an European city, 10% a city for young people, 3% see Matera as an experimental laboratory for innovation and technology. Matera cultural sector, and in detail its historic archaeological heritage, is considered the main factor of attraction of the city. 91% think that the Matera territory cultural sector can have positive effects on regional economy, specifically 35% state that it can bring employment, 25% believe it can diversify productive sectors, 24% think it can restore historical memory. The organisation of international events and a greater involvement of citizens in planning the path to Matera 2019 are considered actions that can improve the effectiveness of the event.

6. *Conclusion*

The empirical survey framework showed that Matera community is aware of the city cultural value and the great expectations linked to the designation as European Capital of Culture. One of the sectors to be mostly impacted by this designation, considering the data and residents' perceptions, is the tourism industry. It has to be noticed that in 2014 the arrivals registered in Matera were 150.000 and for the first time, the overall number of overnight stays was more than 200.000. In light of these dynamics, Matera (that was already widely promoted thanks to the media effect of Mel Gibson's *The Passion* in 2004) should become the driving force for the relaunch and the development of the whole Basilicata region; Matera 2019 could be the ambassador of the whole region that can show itself and become known thanks to this mega event. In detail, the designation as European Capital of Culture could become a key tool in the set of territorial marketing strategies (Evans, 2003, 2005), integrating the offer of the neighbouring and suburban areas in the territorial offer. So, simultaneously to the event, these areas could gain new visibility and promotion both in terms of tourism and investments. As highlighted by case studies analysis, a mega event like this can have important effects also on the social dimension, above all in marginal areas. In detail, an opportunity deriving from the designation could be the enhancement of Matera residents' sense of community that

currently is not widespread. This reflects the residents' disaffection of the past years, when Matera was considered "the shame of Italy". The celebrity gained through the mega event could definitively release the city from being seen as a national shame. In this sense, 40% of the interviewed residents show the need of promoting opportunities to involve the community and make it participate in the planning of Matera 2019 path. This would be fundamental to make the citizens the protagonists of this mega event success, and activate a process to regain their identity that is essential to maximise the legacy of the post Matera 2019.

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The role of online peers' interaction for cultural heritage enhancement: re-thinking the city of Recanati as an open-air museum

1. *Problem statement*

In the last fifteen years, the innovation brought by Information Computer Technologies (ICT) combining internet and mobile connections together has provided to everybody the possibility to access all kind of data and the conceptualization of the Internet of things (IoT). Internet of things (IoT) is a concept and a paradigm that considers pervasive presence in the environment of a variety of things/objects that through wireless and wired connections are able to interact each other, cooperating to create new services (Ashton, 1999).

In this sense, the Digital Revolution has involved the evolution of technology in a new definition of the city, urban spaces and citizenship that implies not only vertical infrastructures, but also a substructure based on what is called the "human capital". As a consequence of being "smart", technologies must dialogue with the cultural potential of human being, where "cultural" should address the relationship between «collective meaning» and «personal sense» of knowledge and activity (Zittoun, Mirza, Perret-Clermont, 2006).

The focus on the human capital motivates the willingness of local governance in structuring city capable to dialogue with its citizens and visitors, co-structuring new meaning together

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with the support of different stakeholders. This partnership contributes to determine the smartness of what is called by European Landscape Convention (2000) a "landscape", that is to say "an area as perceived by people, whose character is the result of the action and interaction of natural and/or human factor". This virtuous circle produces not only a renewed meaning of "smart city", but also a learning ecosystem. Education in this context is persuaded as a bottom-up process, where people and places are central.

2. *Objectives*

For the occasion of the candidacy of the city of Recanati (MC-IT) as Italian Culture Capital in 2018, a local cultural association proposes to the local government to redesign the city guide published as a book in 1998, for the occasion of the Giacomo Leopardi second birth centenary. The realized city guide had its focus on a special target as children and teenagers, taking into consideration that a lot of schools, pupils and their teachers are used to visit the Leopardi's house and the city cultural masterpieces. Despite the carefulness in the adopted codes and the educational characteristics, this guide appears nowadays surpassed by the increasing use of multimedia devices and hypermedia. New media seem to offer a different narration of the reality, more interactive and holistic, allowing the user to be the learner but also the producer, the publisher, the editor, etc.

Based on these motivations, there is a project to transform the existing city guide into an interactive app, with educational purposes, particularly focused on the interaction between visitors (both adults and children) and the cultural heritage offered by the historical city.

3. *Methodologies*

The purpose is to create an invisible ICT that proposes the city of Recanati as an open-air museum. The interactive guide will be designed as an app that dialogues with public places of

the city and the heritage hotspots. The app will be linked to an online portal, enriched by cultural contents that can be proposed by citizens and visitors. The importance of the contribution of single person or groups represents the basis for meaning making. Especially in online communities, social roles are faded: people perceive others as a "peer" collocated in the same space (virtual or real) and for this reason open to learn and listen in a timeline that can possibly cover "all life". By using this kind of ICT, people can in fact interact, sharing and creating their own itineraries in a web portal linked to the ICT and making the city familiar and manageable.

The realization of the app will involve several stakeholders as the local governance, local cultural heritage institutions and associations, local schools, the University of Macerata and private companies situated in Marche Region. In particular, to guarantee an effective interaction among peers, the design of interactions among users within the device will be curated by the University of Macerata (UNIMC) and it is based on the principles of Activity Theory on Human-Computer Interaction (HCI), as well as on Educational Psychology theories about peers interaction and meaning co-construction.

4. *Results and further steps*

The project realization is in progress. The app is structured with the aim of activating civic sense and city enhancement promoted in bottom-up direction (not the reverse). The app will constitute a good practice to be replied in other cities with strong cultural heritage. By using the same design, it will be possible to create an international community with the same aims and theoretic background.

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Bringing together tourism practices: experiences from the first international student competition on "Place branding and mediterranean diet"

1. *Introduction*

In May 2016 the University of Macerata and the Piceno Laboratory on Mediterranean Diet jointly organized an international Student Competition in Fermo (Italy), bringing together scholars and students from 5 Higher Education Institutions. The idea behind the event was that an experiential location-based and collaborative approach to learning in tourism could have important potentials.

The Piceno Laboratory on Mediterranean Diet started working with one of the universities involved through the EU-funded project Gastronomic Cities, aimed at creating a city branding based on food and gastronomy. During the project, participatory multi-stakeholder approaches were applied to allow a reflection on the assets available on the territory. What emerged was that Fermo on the one hand did not have an iconic food product, but on the other it was one of the places where the Seven Countries Study was carried out. This study is one of the longest ones to investigate how diet and lifestyle would affect cardiovascular diseases across different countries and cultures over an extended period of time (<http://www.

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sevencountriesstudy.com/>). Moreover, since 2013, UNESCO inscribed Mediterranean Diet to the Representative List of the Intangible Cultural Heritage of Humanity, recognizing the "skills, knowledge, rituals, symbols and traditions" related to this food culture, as well as the sharing and consumption of food as the foundation of cultural identity and communities in the Mediterranean (<http://www.unesco.org/culture/ich/en/RL/mediterranean-diet-00884>).

Thus, involved stakeholders agreed to use the Mediterranean Diet as umbrella brand to promote the Fermo territory. The idea was to develop a place brand aimed at attracting tourists appreciating the Mediterranean Diet lifestyle, by focusing on gastronomic products and practices, and the way they would be both pleasurable and good for health and wellbeing.

Within this context, involved stakeholders concurred to carry out an International Student Competition where students could have an active role in promoting the Fermo territory through social media, by leveraging on Mediterranean Diet lifestyle, and associated health and wellbeing benefits.

Scholars, students and local entrepreneurs were called in this five-day event to allow a real-time promotion of the Fermo territory through the use of ICT tools. This experiential learning format would make students discover how to carry out a social media promotion aimed at supporting place branding, by linking Mediterranean Diet gastronomy and lifestyle to the Fermo territory.

This paper presents the event as a case study. Starting from the ideas underpinning the design of the event and the related learning lessons, this study explores in particular the impact of an experiential learning format on social media. Given that authors of the papers have been actively involved in the planning, implementation and evaluation phases of the event, this paper has been methodologically designed to be an action research study by following emerging insights from the participants of the event. The main aim is to investigate *how the participants to the international student competition, viewed here as tourists, use their social channels to share and evaluate the experience and, doing so, can enhance the possibilities offered by photo-*

sharing services for identifying and analysing the most popular attractions of a place. To this end, the employment of geolocation information contained in photographs and posts in social platforms (Twitter, Facebook, Instagram) were explored, extracting needful data about the users. The tracking, collection and analysis of digital footprints by the tourists can be a valuable source of information for both tourists and stakeholders.

The article is structured in 4 sections chapters, including this introduction. Section 2 presents this study's theoretical background, in particular the pedagogical framework and the ICT tools used during the international student competition. Section 3 describes the context where the international student competition took place, the background for the choice to arrange such event and the use of the competition context to test relevant ICT tools. Section 4 presents and discusses some preliminary results. The final chapter concludes highlighting the main findings.

2. *Theoretical background*

2.1 *Pedagogical framework*

The Higher Educational Institutions and Universities are facing new challenges and expected to play a crucially important multifaceted role, for example scientific advisors, communicators, inventors and facilitators (Trencher *et al.*, 2013). In this context and in line with the principles of the third mission and the relative suggestions at the European level, Universities are progressively giving importance to promoting entrepreneurial attitude among the students (Etzkowitz *et al.*, 2000; European Commission, 2004; Rasmussen *et al.*, 2007). Several scholars have shown how new functions and duties of educational institutions have emerged over the last decade. Trencher *et al.* (2013, 2014a, 2014b) outline that Universities are actively called to become part of a co-creation for sustainability process. Given the width of sustainability challenges, Universities can be involved in the societal changing process and in the development of a long-term thinking, which is a compelling necessity with regard to sustainability. Sneddon *et al.*

(2006) underline the need of vast campaigns of education, debate and public participation to promote and implement changes in attitudes, aspirations and social values. These aspects can contribute to empower stakeholders and communities and represent a very relevant dimension of sustainability. It has been stated that: "the learning approaches such as mentoring, facilitation, participative inquiry, action learning and action research are ways of exploring the sustainability agenda" (Aries, 2007). This suggests the necessity to reconsider the role of Universities and Higher Education Institutions and their pedagogical approaches. Both the European Commission and the academia agree that to foster sustainable development of a place or region, it is necessary to involve all relevant stakeholders: top-down approaches are gradually being superseded by community-based participatory approaches (Kavaratzis, Hatch, 2013; URBACT, 2013). Not only local participation builds capacity and raises efficiency and effectiveness of implemented sustainable development projects, it also "redistributes power and empowers the destination community, creates social capital and strengthens local identity" (Idziak *et al.*, 2015: 1343). In tourism, Murphy (1985) introduces the notion of community involvement as a fundamental aspect of sustainable tourism development. These considerations open to a key question about entrepreneurship teaching approaches and methods as well as local community involvement. Several studies suggest that traditional teaching methods are not as effective as participatory ones when educating entrepreneurs (Bennet, 2006). Some scholars argue for an action-oriented approach that could improve the dialogue between stakeholders and facilitate knowledge diffusion (Johannisson *et al.*, 1998; Gibb, 2002; Rasmussen, 2006). Problem-Based Learning (PBL) can be seen as a possible solution for fulfilling such emerging education needs. PBL relies then on a student-centred and self-directed educational approach. In this sense, it belongs to the activist-learning family of teaching methods whereby student involvement is the key to the development of their understanding of a field, a theory or a skill (Paris, 2011). PBL has an important social dimension: learning is viewed as occurring via understanding of core concepts while nurturing inclusive participation between students in a stimulating learning

environment, as a classroom or the field (Agnew, 2001; Donnelly, 2010). While such aspect was originally intended as collaborative participation between students facilitated by an educator, it can be argued that it fits hand-in-glove with involving actors external to the academia, as local stakeholders, who can interact with the students and provide important stimuli and insights that shape and implement educational paths to sustainability (Savin-Baden, 2004). A similar approach that takes into consideration the spatial and experiential dimension of PBL, is the Location Based Learning (LBL) adopted in tourism education (Croy, 2009). The core idea here is that effective learning occurs in the "real world". Croy and Hall (2003) discuss the role of a LBL approach in tourism degree, stating that the results of investigations based on students' engagement with a certain destination can be useful to develop partners' understanding and planning for tourism in that location. LBL principles get along with the idea that sees in proximity a key issue for knowledge development, as discussed by Ren *et al.* (2014) with regard to an Innovation Camp student experience.

3. ICT tools applied to social contexts

3.1 User generated data collection and digital footprints

Monitoring and tracking the so-called User Generated Data (UGDs) represent the future pathway for observing, recording, and analysing the dynamics of our environments (i.e. cities, urban open spaces, rural areas etc.) and, more in general, the behaviour of people who live these spaces (Ratti *et al.*, 2016). As well, mobile devices are significantly changing the way people interact with their surroundings; they are constantly improving their capabilities and, overall, they are able to sense the environment and the user's location. This combination is playing a pivotal role in the mainstream of data collection. This is the era of digital footprints, left by individuals in their daily activities, which can be used as data to make statistics and to extract metrics about our spaces, directly from the users (Wolfgang *et al.*, 2013). These information sources are geo-located and embody numerous opportunities, as they

offer the possibility of working with high spatial and temporal data, always available and always updated. The advantage of collecting digital footprints ranges among different domains, for example security, cities management, retail and cultural heritage (García-Palomares *et al.*, 2015). Also in tourism, collecting and analysing digital footprints can be useful from the perspective of understanding the tourists' point of view and behaviour in relation to a destination. The tourism experience is nowadays strictly related to the digital approach. In fact, people visiting a new place start their planning from the web, which offers the broader set of opportunity and makes the user's feedback the major criteria of decision. The stage of preparation of the trip is generally followed by the visiting experience, when tourists collect pictures and share insights. Furthermore, it concludes at home, when photographs and experiences are made available to networks of friends or other potential tourists (Wang *et al.*, 2012). The last decade has seen the rise of the role played by the food and beverage sector in relation to tourism and in this context tourists tend to be particularly active in digitally sharing their culinary experiences with friends and strangers around the world. Doing so, they promote a sort of social media competition to define who has the most unique F&B experiences. The tracking, collection and analysis of these digital footprints can be a valuable source of information for both tourists and stakeholders. Tourists can take their decisions with more awareness about the place they are going to visit. Digitally active stakeholders, in particular tourism and hospitality operators can easily obtain the user's feedback to evaluate the performances of their offers, and also reach a worldwide public. Tourism data are important for destinations, especially for planning, forecasting tourism demand, marketing, measuring economic impacts and benchmarking. Digital footprints can be classified as passive and active. Passive tracks are left through interaction with an infrastructure, such as a mobile phone network, that produces entries in locational logs. Active prints come from the users themselves when they expose locational data in photos, messages, and sensor measurements. For the purpose of this test, only the latter have been taken into consideration.

Our educational tools provide a system for automatic collecting multimedia data produced by students and classify these contents based on their social impact, to show how social multimedia contents can be considered not only a method of promotion, but also a method for high quality multimedia contents collection, given a clear policy and project on place branding.

4. *The international student competition case study*

4.1 *Background context: the area investigated and the path towards the student competition*

The Municipality of Fermo has 38,000 inhabitants. It is the leading city of the province, a reference point for 39 provincial municipalities that is located in the Marche Region (Central Italy). The entire Province of Fermo has 180,000 inhabitants and it covers about 800 square kilometres that stretches from the Sibillini Mountains to the Adriatic Sea, with a density of 230 inhabitants/sq Km. The local footwear and leather goods industry has experienced a decline, following the national and the regional trend. Agriculture is widely diffused, and the main products are: cereals, vegetables, grapes, olives and livestock.

Tourism and gastronomic tourism represent a fundamental axis of development both for Fermo Province and for the whole Marche region. Nevertheless, numbers of incoming flows are still limited, if compared to other Italian areas. The total number of tourist arrivals in Fermo in 2012 was 82,759 with 889,627 overnights. Only 5,400 were international arrivals corresponding to 30,000 overnights. The peak season is July and August, which comprises 34% of annual arrivals (<http://www.urbistat.it/adminstat/it/it/demografia/dati-sintesi/fermo/109/3>). In Fermo province, the agri-tourism sector has represented the building block for the development of gastronomy and rural tourism in the region allowing the development of typical food and wine sector, for the past 20 years. Wine and food supply chain potential is considered by many stakeholders as an important development axis to support eno-gastronomic tourism. For this

reason, over the past 25 years, Fermo Municipality funds and supports "Tipicità", a festival about the typical local products, especially food and wine, held every year in the Fermo industrial area and attracting more than 10,000 visitors. In 2013 Fermo Municipality took part to in a European project to advance its gastronomic ambitions that resulted in the URBACT, a network of 5 European "gastronomic cities". The aim here was to work together in order to develop and implement strategies and actions that leverage gastronomy as a tool for urban development (URBACT, 2013). These include the facilitation of exchange of experiences and learning among city policy-makers, decision-makers and practitioners and the assistance to policy-makers and practitioners to define and put into practice Local Action Plans (LAPs) with long-term perspectives. LAPs represent the final outcome of the whole project for city: a strategic document addresses that identifies needs, analyses problems, and proposes feasible sustainable solutions. It is from the dialogue between the Fermo stakeholders and the University of Macerata that the proposal of the "International Student Competition" emerged as a possible way to: a) carry on the stakeholders' engagement work started with gastronomic cities project, b) train students starting from real problems and challenges, c) promote the whole Fermo's territory under the Mediterranean Diet umbrella brand, d) capitalize on the work, knowledge exchange and activities stemming from the EU-funded project gastronomic cities. During the LAP creation process, the weakness of the Fermo eno-gastronomic tourism offer emerged: the main problem was identified in Fermo lacking an iconic product that could be used for branding the city based on its eno-gastronomic culture. On the other hand, a strength was identified in Fermo being one of the places where the Seven Countries Study was carried out – one of the major studies to investigate diet and lifestyle for cardiovascular diseases across different countries and cultures over an extended period of time (<http://www.sevencountriesstudy.com/>). The Piceno Laboratory on Mediterranean Diet was born to support these findings.

Thus, it is explored how students involved in a student competition (and tourists in general), while using their social channel to share and evaluate the experience, can enhance the possibilities offered by social sharing services for identifying and analysing the most popular attractions of a place. Tracking, collection and analysis of digital footprints can be a valuable source of information for both tourists and stakeholders. Novelties proposed on this field are described below, are all part of an educational toolbox experimented in our student competitions and can be summarized in: automatic systems for user generated multimedia data collection and digital footprints; augmented reality application for sensible outdoor spaces and agri-food territorial navigation; sensorial profiles collection as a novel crowd based food and wine quality evaluation and education.

5. *The competition as a location-based learning community and a test panel for digital footprints*

The five-day event arranged by the University of Macerata and The Piceno Laboratory on Mediterranean Diet is an international student competition, i.e. an event where teams of students across different countries, schools and geographical regions and countries, compete for a prize. Education, enjoyment and creativity play a fundamental role in the students' involvement in the competition. Students had the opportunity to attend courses and experiential learning activities held in different locations (historical theatres and buildings, wineries, agri-tourism facilities). The focus of such activities was on the potential of ICT (Social/Web) for place branding. The activities included: a) seminars led by academics; b) field trips in wineries and farms in the Fermano territory; c) tasting sessions and show cooking; d) meetings and workshops with local public and private stakeholders; e) folkloristic dinners and events in historical towns and villages. In addition to the students, other event participants were scholars (the tutors of the students and invited keynote speakers) and local stakeholders (entrepreneurs, public agency representatives). For each group, specific objectives were

identified. The objectives for the students, in particular for those coming from abroad, were: a) Discovering linkages between gastronomy, events and place branding; b) Understanding the potential of food and gastronomy for sustainable development; c) Developing skills for destination management challenges; d) Understanding the potential of ICT for place branding activities; e) Discovering Italian culture, lifestyle and gastronomy.

The objective for the community of scholars involved was to promote a community of practice with the opportunity to share knowledge and experience whilst planning future research and teaching activities. The objective for stakeholders was to elaborate innovation and development paths to increase the international reputation of the destination, through an ICT-based real time advertising and promotion of the territory. The competition was used to test the ICT tools presented in the previous chapter. The group of students is here viewed as a panel of digitally active tourists. Students were expressively asked to leave their footprints during the competition.

6. *The data*

In the scenario of the student competition, we tested a digital footprints collection over 50 users coming from 10 different EU countries, from 24 to 42 years old, publishing contents on Facebook, Instagram and Twitter using the hashtag #iscfermo and #mediterraneandiet.

The test's main goal was to collect and measure data and insight to demonstrate that the quality and completeness of collected data can be used as the basic data for low cost place branding promotional project and to feed user generated location based Augmented Reality touristic applications. Data were gathered using Keyhole®, a web-based service which allows to track keywords related to specific hashtag from Twitter® and any other social platform used by the users. Consequently, once the dashboard is properly set up, it is possible to uncover information about pictures, locations, impressions and performances of the social sharing activity. Table 2 presents some examples of digital footprints, data and insights gathered during the test.

Table 2 shows that, even if with a small number of users, the impact of a shared communication is huge. Also the total number of multimedia digital footprints and locations is enough to use these contents as the basis for the implementations of a "measure to promote" policy and for feeding a mobile application with novel and up to date digital and multimedia contents.

Features	Feature Description	#total data
# Tweets	Total number of Tweets in the test period filtered on specific hashtags	258
# Instagram posts	Total number of Instagram posts in the test period filtered on specific hashtags	196
# Facebook posts	Total number of Facebook posts in the test period filtered on specific hashtags	363
Total Impact	Total number of users (friends, followers, etc.) reached by the analysed post estimated with respect to the 25% of the total number of followers of users posting on the specific hashtags	873,920
Total interactions	Total number of interactors (i.e. users performing share, like, retweet, love actions on the different socials) with all posts in the test period filtered on specific hashtags	3,546
# photos	Number of different photos (excluded emoticons and small resolution contents) published on social posts in the test period filtered on specific hashtags	413
# videos	Number of different videos (with more than 30 frames and excluding Facebook and iOS live contents) published on social posts in the test period filtered on specific hashtags	37
# locations	Number of different GPS localization information published on social posts in the test period filtered on specific hashtags (from photos on Instagrams or from posts containing geocoded GPS localization)	331 (from 14 different locations)

The test demonstrated that data collection framework is able to share and use multimedia data, together with GPS locations from 14 main locations in Fermo area. For every location, an average of 24 multimedia content is available. Trusting on users and comparing their contents with a manual annotation, about 76% of total contents are suitable for good quality promotional contents. A summary of the overall insights, even if preliminary, is that with only 50 users on 5 days we can gather data to describe, localize and cover with multimedia contents 14 different locations, with very low impact in terms of cost and a contemporary high impact in terms of promotions. From the AR experience side, we had the possibility to monitor the use of this technology by the students. The application was designed to show contextual information (i.e. audio tracks, archival images, web sources and so on), the augmented contents were shown in AR mode, with the same point of view of the user. The feedback from these panellists is positive, since they found the use of this type of experience very useful for outdoor scenario and to have deeper information of the surroundings.

7. *Potential benefits of digital footprints collection and implementation*

Digital Footprints data collection has its benefits.

New data source: social media data is publicly sourced information that offers a completely new reference of data researchers and marketers never had in the past. With every post, conversation and site or app visit, a user leaves behind pieces of information about themselves. This data goes beyond simple demographic information to robust details like preferences, intent, sentiment, activities and social networks.

Up to date data: in the past, customer/personal data was, well. This data was historical because it required a person to input the information into a system of record where it could be referenced at any time. Social media data offers not only this historical view but also an up-to-the-second, streaming view. When this data is combined, organizations have a complete

picture of their audience and can even use some of the data to predict future behaviour.

Representative data: digital footprints data is likely the best representation of a user because it is a streaming record of their beliefs, attitudes and actions. No other source of data offers the same kind of granular detail into a person's life. Organizations can use this data to get to know a person on an individual level.

Despite the large number of positive aspects, there are also a number of drawbacks to be considered, going from the need of powerful technology for real time big data analytics, to new skills lucks such as data scientists, to privacy and cyber security issues. The nature of social media data is constant, always on, always moving. In order for that data to be useful, one needs to see it as it unfolds. With this research we intend to show a preliminary pipeline for digital footprints management inside a more general place-branding framework. The proposed framework and methodology enables people to whittle down all of that big data into segments that make sense for user generated data. There will be an access to a set of analytic and filtering features such as keyword filters, Word Cloud, Mood and Sentiment, so that users can quickly obtain information about the preferred experience. On the other hand, users can be influenced and grabbing multimedia data for novel, high quality multimedia contents that can be useful for promotional purposes in a "real time content sharing from user generated data" policy that in the future should be automatically performed and monitored by bots, making all affordable also for low budget place branding projects.

8. *Conclusion*

A real-time dashboard is able to show how many people posted the pre-defined hashtag, along with the number of Retweets, Likes and Insights the campaign was generating. By activating this process, we can obtain how many people were reached, but it is also possible to forecast the impressions that this specific post can generate, due to the networking architecture of the social media. Moreover, by collection the

"retweets" of the users, it is possible to monitor the total impact of a specific campaign, since a certain event or experience will have an exposure that can be worldwide in a very small amount of time. Finally, we also tested the potentials of augmented reality (AR) tool to discover the main points of interests (POI) displaced among the hillside. AR was used as interactive service to help people in the way finding process with an immediate access to contextual information. By integrating the tracking of UGDs and the tracking of people using outdoor AR experiences, we can collect all the information needed to understand the behaviour of tourist and understand their insights. In addition to such ICT-related considerations, this study shows some interesting aspects concerning the potentials of location-based participatory methods in tourism. The results of this analysis, as well as the description of the tools and the project that have been presented by the groups of students involved, have been discussed with the stakeholders involved. Entrepreneurs and local stakeholders have gained knowledge about new tools for promoting the local tourism offer and they have acquired information about how the territory is perceived by visitors and web users. Students have played the role of facilitators and they have helped stakeholders to realize which are the weaknesses to reinforce and the opportunities to seize; thus entrepreneurs have had the chance to get an immediate and direct experience of youngest visitors segments needs. Moreover, students have been able to carry out a real-time promotion of the territory, applying academic theories to practical assignments through ICT tools and experiential learning. They had the chance to understand and support a social media approach to place branding aimed at strengthening associations between Mediterranean Diet food and gastronomy, its lifestyle and the health and wellbeing benefits that could be experienced by tourists visiting the Fermo area. Gastronomy, health, wellbeing and cultural identity of the place and its communities represent essential assets to be leveraged to develop food tourism drawing from the Mediterranean Diet brand.

The availability of ready to use information has opened a discussion on new media for the development of a sustainable

tourism program. Yet, this was the first step and a longitudinal study is on-going in order to monitor and evaluate long-term feedbacks in term of tourism development. Thus, this experience has strongly increased the networking ability of the stakeholders involved and has reinforced the relationship with researchers and universities. Students, on the other hand, have had the chance to improve their critical thinking capacity, together with their ability to work on projects addressed to specific problems.

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Ivana Čapeta Rakić*

Building and reconstructing public monuments for tourist photography. Two case studies from Dalmatian cities under the protection of UNESCO

The public monument is returning to Trogir. It will enrich the tourist offer and provide the tourist guides with the old-new story. The statue does not bother anyone, because Christ cannot obscure anyone's horizons[36].

The Bajamonti fountain was a tourist attraction. Everybody wanted to have their pictures taken in front of it, as they would again today[37].

The mayor of Split, Željko Kerum, confirmed that he intends to erect the world's largest statue of Jesus Christ on Marjan. He said it would be a tourist attraction, a new shrine…[38]

These are the three newspaper captions which testify to the trend which, under the guise of tourism needs in Dalmatian cities under the protection of UNESCO, justifies the proceses of building and reconstructing monuments in public spaces. The latter case was even broadcast by numerous international media including

[36] Dragan G. (9.11. 2011), *Trogirski boj oko spomenika spasitelja. 'Krist i anđeli okrenuli leđa Majstoru Radovanu*, Slobodna Dalmacija, retrieved from: <http://www.slobodnadalmacija.hr/dalmacija/split-zupanija/clanak/id/148161/trogirski-boj-oko-spomenika-spasitelja-krist-i-aneli-okrenuli-lea-majstoru-radovanu> (access date: 6th of July 2016).

[37] Brajević. I. (15.4.2015), *Bajamontijeva fontana bila je turistička atrakcija, svi su se htjeli fotografirati ispred nje, a tako bi bilo i danas*, Dalmacijanews, retrieved from: <http://www.dalmacijanews.hr/clanak/odq1-bajamontijeva-fontana-bila-je-turisticka-atrakcija-svi-su-se-htjeli-fotografirati-ispred-nje-a-tako-bi-bilo-i-danas#clanak/odq1-bajamontijeva-fontana-bila-je-turisticka-atrakcija-svi-su-se-htjeli-fotografirati-ispred-nje-a-tako-bi-bilo-i-danas> (access date: 6th of July 2016).

[38] *Isusov kip kao turistička atrakcija* (6.7.2011), retrieved from: <http://www.hrt.hr/122279/isusov-kip-kao-turisticka-atrakcija> (access date: 6th of July 2016).

the British Telegraph[39]. Luckily, it turned out that it was only a political spin on the eve of the local elections, but it is also an example which clearly illustrates the manner of functioning of the political establishment which uses public spaces as a backdrop for the tourism business and for their own propaganda.

Using the examples of two almost opposite case studies, this paper has several goals: to explain how the need to build and reconstruct monuments is justified by the purposes of the tourist offer; to explain the procedural models of the competent city departments and national authorities in the decision-making processes related to public monuments; and to explain their relationship towards the members of the interested professional, academic and cultural public who have shown interest in the issue at hand. Finally, the selected case studies will be examined through the prism of conservation theory. While discussing these cases, it should be borne in mind that Split and Trogir are cities rich in cultural attractions from all historical and artistic periods and that they do not lack original visual identities.

In the first case, the reconstructed sculpture is a cast in polyester resin and stone dust made as a copy of a stone sculpture representing the resurrected Christ and two small angels. The original sculpture is attributed to Nicholas of Florence or to his workshop[40]. The purpose and the original site of the sculpture is unknown and for a long time it has been the topic of various discussions by art historians. In 2005, a new hypothesis was created by professor Fisović who based it on the information taken from the book of chronicles *Memorie istoriche di Tragurio*

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[39] World's biggest Jesus statue sparks backlash in Croatia (12.7.2011), retrieved from: <http://www.telegraph.co.uk/news/worldnews/europe/croatia/8631390/Worlds-biggest-Jesus-statue-sparks-backlash-in-Croatia.html> (access date: 6th of July 2016)

[40] Folnesics H. (1914), *Studien zur Entwicklungsgeschichte der Architektur und Plastik des XV*, Jahrhunderts in Dalmatien. *Jahrbuch des Kunsthistorischen Institutes der K. K. Zen-tralkommission für Denkmalpflege*, VIII, Wien, 142; Fisković C. (1940), *Opis trogirske katedrale iz XVIII stoljeća*, Split; Markham-Schulz A. (1978), *Niccolò di Giovanni Fiorentino and Venetian Sculpture of the Early Renaissance*, New York, New York University Press for the College Art Association of America, 62.; Fisković I. (1992), *Nebeski Jeruzalem u kapeli Blaženog Ivana Trogirskog*, Prilozi povijesti umjetnosti u Dalmaciji 32 (Prijateljev zbornik I), Split, 502; Štefanac S. (2006), *Kiparstvo Nikole Firentinca*, Split, Književni krug, 127; Kovačić V. (2007), *Kip Krista Uzašašća*, catalogue unit in: *Nikola Ivanov Firentinac u Trogiru*, Trogir, 68.

ora deto Trav written by historian Ivan Lucius from Trogir in 1683[41]. In his study Fisković endeavoured to explain that the original site of the resurrected Christ was on top of a high column in the little cemetery in front of the cathedral[42]. Lucić actually mentioned a marble pillar beneath the sculpture of the Savior, which had already been dismantled in the mid 17th century for the purpose of erecting and decorating the new altar in the chapel of St. John. The citation reads: "Il parapetto della mensa, e la sua pianca col parapetto dello scabello per li candelieri era una pila di marmo, che stava nel cimiterio nuovo sotto la statua del Salvatore, che fú all´hora levata, e fattovi l´altare, che si vede"[43]. However, Lucić does not say anything about the appearance of the statue, nor about the time of its creation or the place where it was supposed to be standing in the cemetery. But despite that, Fisković's hypothesis[44] gave rise to the idea of (re)erecting the resurrected Christ monument in front of the Cathedral. The idea was announced in the daily newspaper 'Slobodna Dalmacija' on the 11th of May 2011[45] and again several days before the inauguration of the reinstalled sculpture which coincided with the celebration day of the patron saint of Trogir[46]. Although the sculpture was already in place and waiting for its grand opening, the municipal authorities and the Council for Cultural Goods of Trogir still had no official document regarding the setting up of the statue, since they requested one on the 3rd of November from the competent Conservation Department.

[41] Fisković I. (2005-2007), *Stup s Firentinčevim kipom Krista Uzašašća sred Trogira*, Prilozi povijesti umjetnosti u Dalmaciji 41, Split, 269-299.

[42] *Ibid*.

[43] Lucio G. (1683). *Memorie istoriche di Tragurio ora detto Trav*, Venetia, presso Stefano Curti, 489.

[44] The hypothesis was accepted by conservators Vanja Kovačić and Radoslav Bužančić, the former head of the Conservation Department of Trogir. Compare with: Kovačić V. (2007), *Kip Krista Uzašašća*, catalogue unit in: *Nikola Ivanov Firentinac u Trogiru*, Trogir, 68; Bužančić R. (2012), *Nikola Ivanov Firentinac i trogirska renovatio urbis,* Split, Književni krug, 97, 99, 101-102.

[45] <http://slobodnadalmacija.hr/scena/kultura/clanak/id/132192/trogir-kristov-kip-se-vraca-pred-katedralu> (access date: 6th of July 2016).

[46] <http://www.slobodnadalmacija.hr/scena/kultura/clanak/id/147913/trogirski-krist-stize-pred-katedralu> (access date: 6th of July 2016).

One of the first people to speak publicly about the inappropriateness of installing the sculpture at the site of the *Cimatorij* was professor Ivo Babić, a member of the Cultural Council of the City of Trogir[47]. Regarding this topic, he gave a public lecture where he presented his opinion according to which the original sculpture had probably never stood autonomously in space, i.e. it was designed frontally, to be observed from one side only[48]. Apart from professor Babić, numerous representatives of the University and of the civil society reacted as well. The reaction of the Tourist guide association "Tragurion" in particular stands out, since one of the "missions" of the monument was to provide an "old-new" story for tourist guides. From their statements we would like to highlight the following quote: "Due to a number of scientific inconsistencies related to the cast sculpture of Christ, and because of the devastation of the most beautiful Renaissance square in Trogir, tourist guides are outraged and they believe that the place where the sculpture was erected is not the best solution… We are sure that this intervention inside the urban tissue of the city will cause confusion in the performance of our work and the impossibility of offering a concrete answer to tourists"[49].

On the 16th of December 2011, an Internet petition was launched under the title: 'For removal of the concrete cast of Christ in front of the Trogir cathedral'[50]. The petition was signed by 730 people, among which the mayor of Trogir, numerous citizens of Trogir, as well as renowned Croatian and foreign university professors, sociologists, architects, conservators, visual artists, designers, and art historians. The full list of signatories,

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[47] On the 15th of November 2012, the Cultural Council of the City of Trogir, one of whose members is professor Ivo Babić, published a public statement regarding the setting up of monuments in front of the cathedral. Compare with: <http://www.gist.hr/?p=15> (accessed on 2nd of August 2016)

[48] Babić, I., *A surrogate monument on the* Cimatorij *in Trogir*, a public lecture, Academy of Arts in Split, 15th of March 2012; Babić. I. - Prijatelj Pavičić I. (2015), *Trogirski Krist: neprimjeren «spomenik» na neprimjerenom mjestu*, Analiza Galerije Antuna Augustinčića, 32-33/34-35, Klanjec, 47-62.

[49] <http://www.vodici-trogir.com/news-det.php?idn=4&lang=HR> (access date: 6th of July 2016).

[50] <https://www.change.org/p/gra%C4%91ani-hrvatske-za-uklanjanje-betonsk-og-odljeva-krista-pred-trogirskom-katedralom> (accessed on 2nd of August 2016).

accompanied by a letter and a detailed report signed by three doctors of science from the University of Split (the author of the text Ivana Čapeta Rakić, ph.D.; prof. Ivo Babić, ph.D.; and prof. Ivana Prijatelj Pavičić, ph.D.) were sent to the Ministry of Culture, the Ministry of Environmental and Nature Protection, and to the Ministry of Construction and Physical Planning. In addition to the reconstruction being very questionable, we also mentioned to the Ministries that the sculpture had been erected without the necessary permits. Apart from the former Minister of Environmental and Nature Protection, Mirela Holy, who responded that the issue at hand was not within the competence of her Ministry, no other Ministries responded to our requests.

Despite everything that has been done and stated, the monument is still there.

Almost five years after its installation, we asked the tourist guides how they and the tourists responded to the statue today, and we got the following response: almost all of the guides avoid mentioning the concrete sculpture of Christ. Occasionally, though rarely, guests do ask about the statue, and the answer which the guides give them is that it is a forgery and a product of arbitrariness of the local priest[51].

Second case

In the second case, a Facebook group was established under the title "Initiative for the Reconstruction of the Monumental fountain on the Riva of Split". It was an attempt to continue the story that began five years ago, when a campaign for the restoration of the fountain was launched and when 14,000 people gave their signature in support of the idea.

The fountain we are talking about was commissioned in 1880 in the stonemason's workshop of F. Dall'Ara e Comp in Milan, after the model provided by the Paduan sculptor Luigi Ceccone (1833-1919) and it was inaugurated in 1888 or 1890[52]. The occasion for commissioning the fountain was the celebration of

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[51] I would like to thank Leo Nikolić for sharing this information with me.
[52] Kečkemet D. (1994), *Splitska fontana*, Split, Logos.

the renewal of Diocletian's aqueduct, thanks to which the city of Split finally got potable water from the nearby Jadro river. The initiator of the idea was the mayor of Split, Antonio Bajamonti (by political orientation he belonged to the Autonomist Party). Many citizens of Split participated financially in this commission regardless of their political orientation and financial status. It was a matter of honor and an act of pride to be able to participate in it. Within the triangle of historicist buildings formed by the Bajamonti (Dešković) palace, the fountain, and the Prokurative square, the monumental fountain formed part of a unique ambiental setting. Although it was primarily erected to symbolize the city's water supply, it soon became a recognizable part of the visual identity of the city.

Over time, political climate in the city had changed. The fountain started to be identified with its originator, Ante Bajamonti, and his activity was regarded almost exclusively as that of an autonomist leader. Observing it as the symbol of an Italian Split, with a formal accusation that the lictor bundle at its top (the fountain ended in a sculpture naked to the waist, leaning with one arm against the lictor bundle) symbolized fascism – which could not have been further from the truth considering the fact that it was erected long before the emergence of the Fascist movement – Yugoslav nationalists wanted to remove it and replace it with a monument to King Alexander. Therefore, it was precisely the ideological-political motive that played the cruicial role in its demolition. Thus, the lictor bundle had been chiseled off it by the late 1944, and in 1947 the fountain was completely destroyed and demolished, save for a dozen fragments which were saved by the painter Vjeko Parać. Today, most of its fragments are located in the City Museum of Split.

The issue of the fountain fell into oblivion until the filming of a television show called "Velo misto" in 1980, whose storyline covers the period between 1910 and 1947 in Split. It was then that a faithful copy of the fountain was installed at the site of the original one. Its re-appearance on the seaside promenade, Riva, was greeted with general approval and because of it numerous citizens had their photos taken next to it. Keeping in mind that the copy of the fountain remained in the same place

even after the filming was completed, it is no wonder that after a while it was doused with large quantities of black paint by the Communist Youth, which again lead to its removal. However, already in 1987, the city's Tourist Board brought up the issue of its re-installment. It was only in 1995 that their efforts were met with full approval, when the City Council decided to reinstall the Bajamonti fountain to its original site, although the decision has still not been implemented.

Let us examine both of these cases from the perspective of conservation theories: the installation of the copy of the statue of Christ whose exact original position, size and the shape of its base cannot be proved with certainty and for which there is no reliable graphic or photographic documentation, does not comply with the basic principles of the conservation theory and pr actice worldwide, whereby one of the axioms says: the process of reconstruction must stop at the point where conjecture begins, and in this case moreover any extra work which is indispensable must be distinct from the architectural composition and must bear a contemporary stamp (The Charter of Venice, 1964, Article 9). Replacements of missing parts must integrate harmoniously with the whole, but at the same time must be distinguishable from the original so that restoration does not falsify the artistic or historic evidence (*ibidem*, Article 12). The case of Trogir not only violates several axioms of the international document which has served as the foundation for conservation and restoration activities for more than half a century, but has also compromised an important value due to which the historic city centre of Trogir was added to the UNESCO World Heritage List: the authenticity of the valuable original sculptures from the Romanesque, Gothic and Renaissance periods, preserved in their authentic architectural and urban environment. The Article 10 of the Nara Document On Authenticity (1994)[53] says: Authenticity, considered in this way and affirmed in the Charter of Venice, appears as the essential qualifying factor concerning values. The understanding of authenticity plays a fundamental role in all scientific studies of the cultural heritage, in conservation and restoration planning,

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[53] <http://www.icomos.org/charters/nara-e.pdf> (accessed on 2nd of August 2016).

as well as within the inscription procedures used for the World Heritage Convention and other cultural heritage inventories[54]. One of the fundamental texts during my studies at the Faculty of Conservation and Restoration was the one written by Ljubo Karaman and entitled Considerations Along the Lines of the Slogan "To Conserve, and not to Restore", published in the Bulletin of the Department of Fine Arts of the Yugoslav Academy of Sciences and Arts in 1965 (therefore, a year after the Charter of Venice). In the said text, dr. Karaman quotes the controversial architect and restorer Eugène Viollet-le-Duc, who defined his restorations in the following manner: to restore a building is not to preserve it, to repair, or rebuild it; it is to reinstate it in a condition of completeness which could never have existed at any given time[55]. His words refer to the architectural heritage, although he relied on the same principle in his restorations of stone plastics as well. The first disapprovals and reactions against such practice appeared already in the second half of the 19th century, while in 1893 Camillo Boito warned about the fact that today (!) it was not even possible to restore a monument to its original appearance, shape and essence, primarily because we are only rarely familiar with every detail of the original appearance of the monument. Ljubo Karaman had a more flexible approach to the rigid slogan – to conserve, and not to restore – allowing restoration interventions on a monument to a certain extent, but only under the following three conditions: 1. that the intervention is required by the inherited condition of the monument due to aesthetic considerations or functional needs; 2. that we are definitely familiar with the original appearance of the monument both as a whole and in detail; 3. that the intervention does not entail adverse consequences of any sort (p. 56).

[54] These axioms of the conservation profession were presented by the conservator mr. sc. Goran Nikšić in his public lecture: *Another look at the "case" of the Christ of Trogir*. Compare with: <https://www.facebook.com/notes/odsjek-za-konzervaciju-restauraciju-umas/drugi-pogled-na-slu%C4%8Daj-trogirskoga-krista/317446034975907> (accessed on 2nd of August 2016) Sampson Low, Marston, Low, and Sparte.

[55] Viollet-le-Duc E. (1875), *On restoration*, London, Sampson Low, Marston, Low, and Searle, 9. Available at: <https://archive.org/stream/onrestorationby00weth-goog#page/n18/mode/2up> (accessed on 2nd of August 2016).

Examples from contemporary conservation practice show that the method of facsimile reconstruction, i.e. a complete reconstruction of the destroyed monument according to its original appearance, is applied only under the following conditions: a) that the monument under reconstruction was destroyed in a sudden accident such as war damage, earthquakes, fires or other natural disasters, or was subject to deliberate destruction by human hand[56]; b) that the reconstruction is founded on reliable information on the original appearance of the monument, and not on assumptions about its possible original apperance; and c) that the value of the monument under reconstruction and its character deserve the application of this procedure[57]. If we try to apply these parametres to the Christ of Trogir, there is not a single item by means of which we can justify its installation; the monument was neither destroyed in a sudden accident such as war damage, earthquakes, fires or other natural disasters; its facsimile restoration was not prompted by any functional needs; nor are its original appearance as a whole and its original position known. Moreover, the sculpture has in many ways degraded the historical and ambiental value of the most important city square in Trogir. With its massiveness it simply does not fit in the intimate space of the square. It has reduced not only the visual but also the actual, physical measures and has disrupted the hierarchy of the *Cimatorij*. It is blocking the view of the most important medieval cathedral portal in Croatia which is decorated with reliefs carved by the master Radovan in 1240. And last but not the least, the Christ's

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[56] Some of the crucial monuments in Europe and in the world which were destroyed in war have been restored on the basis of the aforementioned criteria; for example, the Benedictine monastery complex of Montecassino in Italy immediately after the Second World War, the historic centre of Warsaw, and more recently the Frauenkirche in Dresden. The Croatian example of a successful facsimile reconstruction is the restoration of the early Christian baptistery in Zadar, destroyed during a bombing in 1944.

[57] Marasović T. (2009), *Primjena metode faksimilske rekonstrukcije na primjeru predložene rekonstrukcije splitske fontane*, in Vujić Ž, Špikić M. (eds.), *Ivi Maroeviću baštinici u spomen*, Zagreb, Zavod za informacijske studije Odsjeka za informacijske znanosti Filozofskog fakulteta Sveučilišta, 273-289.

back is turned to the church itself, which is wrong even from the iconographic point of view.

In the case of the fountain in Split, several conditions have been met. The demolition of the fountain in Split can be seen as a clear example of a sudden removal of a historical and artistic monument by human hand. As we have already pointed out, the fountain was removed due to an incorrect iconographic interpretation and due to political and ideological reasons. Deleting the memories of the past is not unheard of in history and art history. There are many examples of such actions called *damnatio memoriae*. Thus, here we would like to mention the well-known example from the period of the French revolution, when the statues from the façade of the Notre-Dame church in Paris were demolished due to a wrong iconographic interpretation[58], only to be re-constructed later on. Furthermore, the original appearance of the monumental Split fountain is known to the tiniest detail thanks to countless photographs taken from different angles during the sixty years of its existence on the Riva of Split. There is another important piece of information to support the reconstruction. Some fragments of the sculpture have managed to survive the demolition and are currently being kept in the City Museum of Split, allowing not only the facsimile reconstruction procedure, but at least a partial application of the process of re-composition during the restoration of the whole as well. Those remains can serve as valuable guidelines to sculptors and restorers in the process of creating the new sculptures, not only on the basis of the preserved documentation, but also through the study of the original statues (i.e. the so-called authorial "ductus"). Regarding the value of the fountain, it was perhaps what the opponents of the restoration tried to dispute the most. However, if we were to rely on the criteria for evaluation of cultural property currently defined by the Ministry of Culture of the Republic of Croatia, then the value of the fountain might be recognized in several categories, among which historical value stands out, which is

[58] This act inspired the renowned author Victor Hugo to publish a call for protection of cultural property entitled *Guerre aux demolisseurs!* (War on the Demolishers!).

primarily reflected in the model of the commission. Never had there been such unity among the citizens of Split before, nor has it ever occurred again. Certainly, the artistic value criterion is the one most subject to debates, especially with regard to the fact that historicism as a style has long been disregarded by art history. Nonetheless, the fountain was the most representative example of historicist sculpture in the city of Split.

Without entering into any further historical and artistic debates, I would like to mention two more quotations by the recently deceased Paul Philipott, one of the founders of ICCROM: "Historians (and art historians) can revise their diagnoses and attitudes, formulating them in a fully discursive manner, but the critical decisions made by conservators and restorers, however, define the appearance of cultural heritage as an artistic creation and as a historical document, suggesting a certain interpretation to the viewer". "Progress of restoration depends on the reactions of a wide audience, i.e. on the level of aesthetic and historical culture of the audience"[59].

To resume: two case studies have been presented. In the example from Trogir, the statue has been erected without any scientific justification or foundation in conservation theory, and is still standing in the site of *Cimatorij* despite the efforts and the desire of the civil public to remove the statue. The example of the fountain in Split has valid grounds in conservation theory, and as many as 14,000 signatories supported its reconstruction. Despite that, city authorities and the competent councils deftly avoid making a decision on this matter, while in both cases the opinions of the professional, scientific and interested public have been completely ignored.

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[59] Philippot P. (2007), *Restauriranje iz perspektive humanističkih znanosti*, in Vokić D. (ed.), *Smjernice konzervatorsko-restauratorskog rada*, Dubrovnik-Zagreb, K-R Centar, 108.

Scientific session 5

Archeology and museums

Fabrizio Fiori*, Massimo Rogante**, Alessandra Giuliani*, Franco Rustichelli*, Dino Taras***

Enhancement of the touristic attraction for Adriatic-Ionian Archaeological artefacts through advanced physical characterization techniques

1. *Introduction*

The Adriatic-Ionian area is a favourite destination of a tourism strongly attracted by the exceptional CH hosted by its sites. The purely cultural/artistic-type tourism currently existing in this area, however, needs to be elevated to a more accountable tourism from the point of view of knowledge of ancient production techniques and of scientific technologies to characterize the findings, placing the Museums of Adriatic-Ionian Area in a highly competitive position in relation to other European and non-European countries. Various CH activities in the Adriatic-Ionian area deal with restoration, chemical protection, software for virtual representations inside museums and digitalization, also to make CH objects available on-line, so that addressees would discover them and find value in learning more about this CH. Users, however, desire to engage more with culture, wishing to generate latest stories and to integrate the information in new creative projects, somehow involving also re-imagination. With a view to use enlarged and global dissemination of CH related knowledge, thus, CH should be exploited as enriched through new technologies and advance. Knowledge of nature and state of

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the metals, for instance, assists in gaining information about the relative mineral deposits, the conservation setting, the production and function technology and the authenticity of each individual archaeological artefact (Rogante, Kovács *et al.*, 2015).

Neutron investigations have recently become an increasingly significant probe for materials across a wide range of disciplines and can reveal substantial properties about materials. Neutrons are becoming ever more useful in the non-destructive advanced characterisation of materials and components of CH interests (Rogante, 2008; Rogante, De Marinis *et al.*, 2007). A multi-technique innovative diagnostic approach – taking into account neutron techniques such as PGNAA, TOF-ND, NR and SANS, as well as other methods such as XRMT, XRD and PIXE – in this case, can really contribute to the identification, valorisation and evaluation of conservation posed by various kind of CH artefacts, addressing diverse real case studies and including a variety of materials, kinds of objects, art-historical and archaeological questions (e.g., manufacturing techniques and dating). These advanced physical characterization techniques would give a fundamental support in increasing scientific examinations and diffusion of the CH findings. The assessment of the conservation state of artefacts would also be improved, moreover determining and testing the finest preservation policies to hold up alteration processes. This new approach not only would satisfy the archaeological curiosity of visitors, but would stimulate an additional aesthetic feeling with a great enhancement in the fascination of the involved museums. That would be of considerable benefit for the several ten thousands of visitors per year for each museum, half of them being students. An adequate dissemination of the innovative results would also promote a follow-up to an audience of CH experts: thereby establishing positive interactions among the different professional figures involved, contributing to produce a common language, endorsing multi- and inter-disciplinarity in the Adriatic-Ionian area and enhancing the touristic attraction.

Some examples of the results obtained by the considered methodologies are reported, in this paper, carried out by UNIVPM and REO. As additional steps, the considered

characterization techniques, already successfully experimented, can be employed to induce a valorisation of museums of the Adriatic-Ionian Region: e.g., to study the archaeological artefacts of the Archaeological Museum in Zadar, especially the most representative of the Adriatic-Ionian Culture. An example of interesting object, in this case, is a fragment of a creased copper/metal sheet from a submerged roman harbour site. We suspect it to be a sheeting for a boat hull, made to protect the hull from organic and inorganic marine elements. The analysis could help us determining whether this sheeting is modern, or a piece of roman sheeting. This would in turn perhaps increase our understanding of roman metallurgy and shipbuilding. Another example is a part of an amphora found on a shipwreck site, without analogies in archaeological literature. It has been widely dated, based on some artefacts found within the same context (shipwreck), but element analysis, e.g., could provide vital information about the production centre of those amphorae. This could also help us in determining the provenance of cargo and perhaps the type of content that was being transported in these amphorae.

2. *Examples of advanced physical characterization of archaeological artefacts and discussion*

Matilica was a *Municipium* at least from the half of the 1st century A.D. and it reached the greatest magnificence between the 1st and the 2nd century A.D. The *Piceni* (or *Picentes*) belong to the pre-roman Culture that gravitated in this central part of Italy essentially from the 10th to the 3rd century B.C., in practice the so called "Iron Age". The very favourable synergy developed between the Superintendence for the Archaeological Heritage of Marche Region and REO has allowed, in the last years, to broaden the knowledge of this subject, as well as of other archaeological contexts. The PGNAA facility at the Budapest Neutron Centre (BNC) has been adopted by REO to investigate bronze archaeological artefacts belonging to the Picenum necropolis of the *Matilica* site, Italy. These objects date back to the 7th century B.C. and they have been discovered during a rescue excavation carried out in the period 1994-2005

Figure 1. Biconical from the Santa Maria in Campo site (Fabriano) and its wall fragment analysed by PGAA

(Rogante, De Marinis *et al.*, 2007; Rogante, Kasztovszky *et al.*, 2010). 17 fragments selected from the archaeological founds have been analysed, together with a bronze fragment belonging to the archaeological area of Fabriano, Italy. Figure 1 shows one of the original objects, and its investigated fragment.

A comparison has been carried out of these Aenean objects, providing useful information for the study of the provenance. In particular, the major components with some interesting

trace elements of the bulk material have been determined, together with Sn/Cu mass ratios and a principal component analysis (PCA). As a main result, the absence of diversity, i.e. the compositional uniformity revealed between the artefacts discovered in the *Matilica* and Fabriano sites, has provided both the archaeological community and the audience with a further argument to consider Matelica area as a possible manufacturing metallurgical centre independent from the Etrurian (Tyrrhenian) region (Rogante, Kasztovszky *et al.*, 2010; Parrini, 2008).

Various periodical area surveys and annual excavations have been carried out in the last years at *Tifernum Mataurense* (Sant'Angelo in Vado, Marche Region, Italy), devoted to the rediscovery of this Roman municipality, of Umbrian origin, belonging to the Augustan *sexta regio*, situated between the high Metauro valley and the central Italian Apennine range. PGNAA, ND-TOF and PIXE have been considered by REO to investigate 6 metallic artefacts sporadically discovered over time in this area and archaeologically datable between the early and late Empire: a scalpel, a *capsella*, a fragment of gilded statue, a decorative metal sheet, the toe of a statue and a small coin (Rogante, Stortoni, 2014). One of the main purposes has been to compare the obtained data related to Cu, Sn and Pb alloying elements with those achieved by PGNAA on the Picenan bronzes from Matelica and Fabriano necropolis (Rogante, De Marinis *et al.*, 2007; Rogante, Kasztovszky *et al.*, 2010). The TOF-ND technique has been considered for qualitative and quantitative assessment of the phase composition, the structural properties of the constituents and eventual texture or grain orientation, helping to indicate possible manufacturing techniques. PIXE has been used for quantitative analysis. Figure 2 shows, e.g., the PIXE experimental set-up of the BNC, with one of the investigated objects.

14 PIXE spectra and the elements' concentration (%m/m) for each investigated area have been obtained, in particular detecting the major components (Cu, Zn, Sn) and the minor or trace elements (Ag, Au, Pb and Fe): thereby assessing the constitutive material for each object (e.g., tin bronze, brass with Ag as added component, tin bronze also with Ag as added component, etc.).

Figure 2. The PIXE experimental set-up with a fragment of bronze statue (toe)

The results, compared with archaeological and contextual data, have supplied knowledge useful also for a more precise dating of the life phases of this interesting – but still little well-known – centre not far from the Adriatic coast (Rogante, Kovács, 2015).

The PGNAA, NR and high resolution TOF-ND facilities of the BNC have been adopted by REO to investigate 8 metal archaeological artefacts belonging to the *Academia Georgica Treiensis* (*AGT*) collection: a basin, an *oinochoe*, three fibulas, an olla, a cylindrical rod, a polilicnes oil lamp (Rogante, Rosta, *et al.*, 2016). Some of these objects mostly dating back probably to the IX-IV century B.C. and presumed to be discovered in the Marche Region, Italy. The primary goal of these analyses was to advance the correct technological and material description of the objects, providing scientific data for further and more comprehensive comparative analyses also covering the find material from the close archaeological sites. The neutron investigations allowed determining the bulk composition, also providing a qualitative and quantitative assessment of the phase composition and the structural properties of the constituents, and radiographic images, helping to identify probable

manufacturing techniques. Additional examinations, by PIXE provided quantitative analyses of major and trace elements (e.g., Fe, Pb and As), in order to recognize the constitutive alloys and to supply information on the near-surface elemental composition, complementary to the data characteristic for the bulk. Figure 3 shows the TOF-ND experimental set-up with the polilicnes lamp, while Figure 4 reports a TOF-ND spectrum with the fitted peak positions.

Concerning the polilicnes lamp, for instance, the results have revealed that it was not made of bronze alloy as supposed, but in metallic zinc, melted and cast during the manufacturing process: the alloy contains an almost pure zinc phase, where just a very few amount of copper has been identified as minor element. The metallic zinc raw material and the two-piece mould applied in the casting revealed that this lamp does not belong to the Imperial Roman period, being a copy from the 19th century, in style and shape remarkably reflecting the Roman lamps typically made of copper alloy and pottery (Rogante, Horváth, n.d.).

The SANS and PIXE facilities of the BNC have been adopted by REO to characterize 9 linen fabric samples from pre-dynastic and Ptolemaic ages (2200-300 B.C.) belonging to the archaeological collections of the Egyptian Museum of Turin and to the Civic Archaeological Museum of Bologna, Italy, as well as 5 modern linen fabric samples, added for comparison. Among the results, the aging process has been revealed in a degradation of fibres' surface, which becomes very defect and large and, even for the oldest material, a very different structure has been observed as compared to the modern linen material. The evolution of the nano-scale structural properties of the linen vs. their age has been described, moreover, showing the degradation process of the material, which starts after an induction period (Rogante, Rosta, 2016; Rogante, Kovács, n.d.).

UNIVPM carried out neutron tomography analysis on three glass fragments from approximately the I-II century A.D., stemming from excavations in Altino near Venice, Italy (Fiori, Giunta *et al.*, 2006; Kardjilov, Fiori *et al.*, 2006). The fragments were investigated at the high flux measuring position of the neutron tomography facility CONRAD at the

Figure 3. The TOF-ND experimental set-up with the polilicnes lamp of the *AGT*

Figure 4. TOF-ND spectrum and fitted peak positions, with reference to the polilicnes lamp of the *AGT*
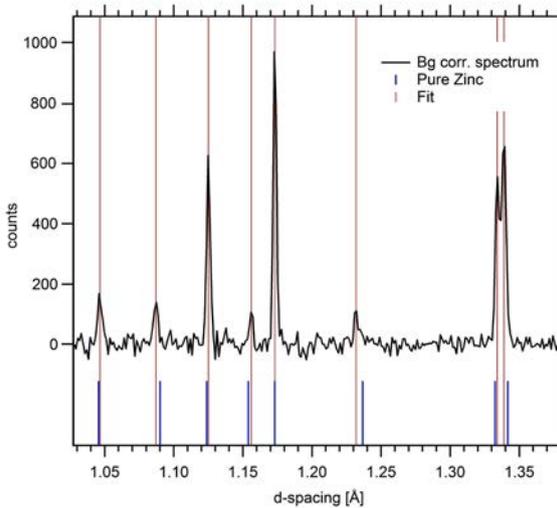
Helmholtz Zentrum Berlin (HZB). The Altino archaeological site has a complex stratigraphy, where at least three different historical layers are present, corresponding to ages starting from approximately the VII century B.C. There is still a large amount of different items which have been recently collected there. In many cases these items have to be handled carefully and destructive analyses or analyses introducing a risk to damage an object are a problematic choice. Even cleaning the samples of clay or earth is a delicate problem. Therefore neutron and X-ray tomography are reasonable techniques to be applied in order to visualize the samples, their inner structure or for example, to look for inscriptions or engravings. Also defects (mainly due to segregation induced by corrosion) and the eventual presence of substructures and finer chromatic domains can be visualized. In figure 5 images obtained from the 3D reconstruction of a glass sample are shown.

The chemical composition of the glass material has been determined by X-Ray Fluorescence (XRF). The corresponding data are presented in table 1. In a first qualitative analysis of the neutron tomography data, areas of high-attenuation could be clearly identified, as shown in figure 5b. These areas could be related to earth, clay and minerals containing hydrogen mainly sticking to the sample surface. Also void structures (figure 5c) could be found in the inner region of the sample and their sizes could be determined quantitatively. The voids can also be seen on three tomographic images representing slices at different sample heights, see figure 6. The presence of soil in inclusions and on the surface are seen as brighter areas in the images. For archaeology the information about the size and the distribution of the voids (dark areas) in the glass can be a hint concerning the glass production process in the ancient past.

Complementary XRF elemental and neutron diffraction (ND) structural analysis were carried out by UNIVPM on two bronze statuettes (Figure 7), one Egyptian (XXI-XXX dynasties, 1070-343 B.C.) and one Etruscan (IV-III centuries B.C.), belonging to a private collection (Giuliani, Fiori *et al.*, 2008).

Table 2 shows the elemental composition of the two items as obtained by XRF.

Table 1. Composition of I-II century A.D. glass item fragments from Altino Museum (Venice)

Material	SiO$_2$	Al$_2$O$_3$	CaO	Na$_2$O	Cl	Others (<1%)
wt. %	67.2	2.50	7.31	19.3	1.33	Bal.

Figure 5. Neutron tomographic reconstruction of a glass sample from the excavations in Altino: (a) general view of the sample; (b) highly-absorbing areas; (c) quantitative analysis of the voids in the glass material
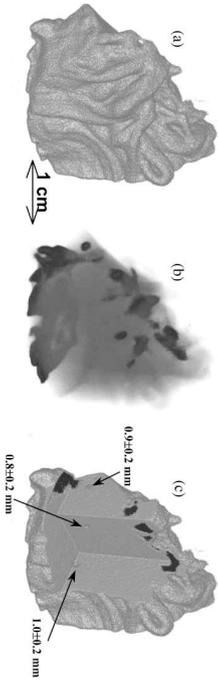
Figure 6. Tomographic slices taken at a sample height of (a) 4.1 mm, (b) 6.5mm and (c) 10.7 mm

Table 2. Elemental composition of the two statuettes, as obtained by XRF (wt.%)

	Cl	Ca	Cr	Fe	Ni	Cu	Zn	As	Sn	Pb
Etruscan	0.4±0.3	1.4±0.9	0.08±0.01	2.2±0.6	0.2±0.02	78.9±6.1	1.1±0.3	0.8±0.2	6.7±1.8	8.2±202
Egyptian	-	-	0.3±0.4	0.6±0.6	0.2±0.05	90.2±1.0	0.1±0.2	<0.1±0.02	5.3±0.3	3.2±0.3

Figure 7. Etruscan (a) and Egyptian (b) statuettes. Gauge volumes where ND measurements were carried out are put into evidence
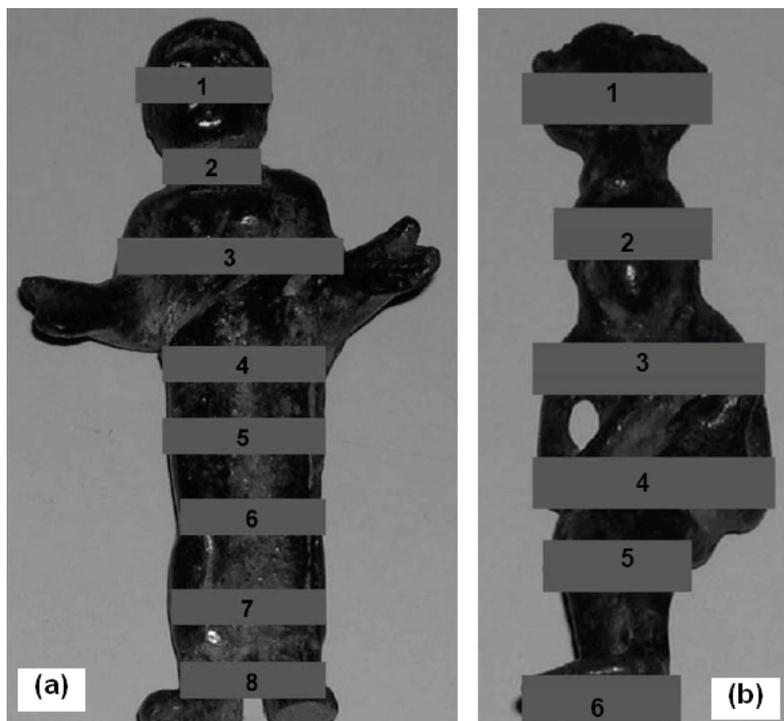
Although conventional XRF would have been sufficient in establishing the difference in surface elemental composition between the Egyptian and the Etruscan statuettes, the structural analysis of the bulk of the two objects required the use of ND not normally encountered in cultural heritage studies and with which archaeologists and museum conservators are not familiar. Such non-destructive techniques relate to key issues for the future conservation of artefacts and can answer the archaeological questions about their manufacturing methods. ND experiments were carried out on the high-resolution powder and stress scanning diffractometer D1A at the Laue-Langevin Institute (ILL) in Grenoble, France. ND data analysed by the Rietveld method (Figures 8-9) contain clear indications of the working processes involved in the production of the artefacts.

Figure 8. Diffraction pattern from the head of the Etruscan artefact

Figure 9. Diffraction pattern from the head of the Egyptian artefact

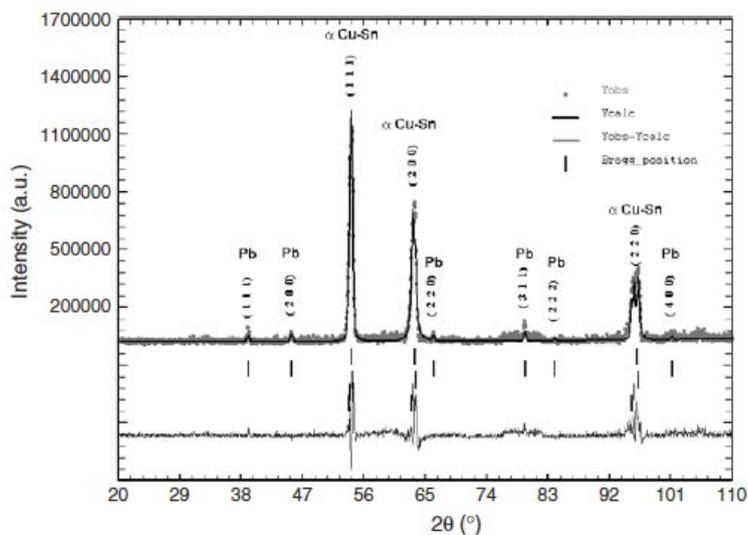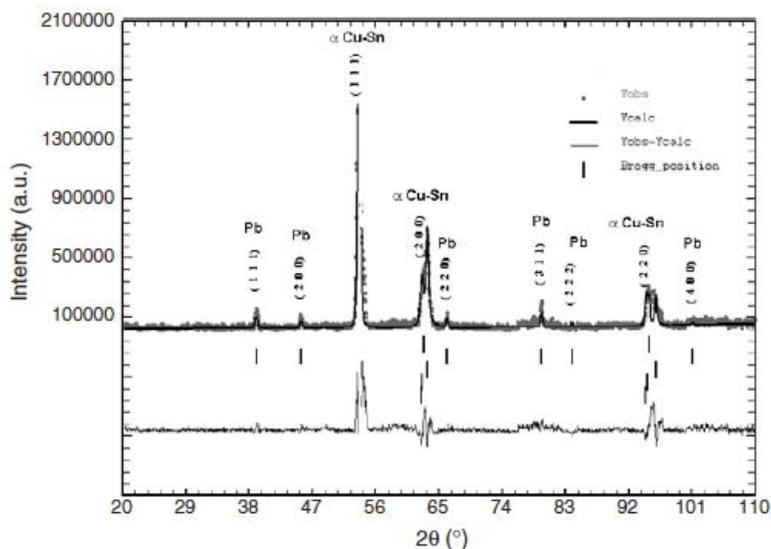In fact, the alloy consists predominantly, in both cases, of Cu with a varying Sn content, i.e. between 1.8 and 8.3 wt% in the Etruscan item and between 4.9 and 15.8 wt% in the Egyptian one, respectively (Table 3-4). This variation of Sn content inside the bronze alloy is expected if we assume, from archaeological considerations, that both statuettes were produced by wax casting. This manufacturing technique in fact foresees an uncontrolled cooling down speed of the melt; because of this, a non-uniform Sn wt% inside both statues was obtained by the Rietveld analysis.

The same statuettes were also investigated by hard X-rays at ILL (100 keV < E < 420 keV, fig. 10) (Bastie, Hamelin *et al.*, 2006), using Bragg diffraction pattern analysis associated with diffracted energy analysis, in order to obtain microstructural information such as texture and grain size, which are linked to the particular manufacturing technique or process. Figure 11 shows the diffraction patterns obtained from the two statuettes, that appear to be very different. In fact, the Egyptian artefact gives rise to a more localized diffraction pattern than the Etruscan one. The principal explanation of such difference is that the grain size of the Egyptian artefact is much bigger than that of the Etruscan one. The grain size for the Egyptian item was indeed found to be larger than 1 mm (each grain has its own Laue diagram), while the grain size for the Etruscan item can be estimated to be lower than 1 mm. From the energy analysis of the diffracted spots and the complementary neutron diffraction experiment described above, it can be concluded that both statuettes consist of bronze with a principal cubic structure FCC and lattice parameter $a = 0.3648 \pm 0.0003$ nm for the Etruscan artefact and $a = 0.3670 \pm 0.0005$ nm for the Egyptian one. From historical considerations, we believe that both items were produced by solid waste wax processes of casting, and their observed different microstructure is due to a higher cooling speed after casting for the Etruscan artefact. Moreover, for both statuettes, different textures were observed for the different parts of the body, suggesting, in particular, a finishing hammering process to obtain the head dress of the Egyptian statue.

Table 3. Refined parameters by Rietveld analysis and derived Sn content in the Etruscan artefact

Investigated area	d_{min} (Å)	Min. Sn content (wt%)	d_{max} (Å)	Max. Sn content (wt%)	Average Sn content (wt%)
1	3.6274	2.4	3.6557	7.8	4.5
2	3.6251	2.1	3.6559	7.8	3.3
3	3.6246	2	3.6564	7.9	3.0
4	3.6261	2.2	3.6584	8.3	3.0
5	3.6249	2	3.6578	8.2	3.5
6	3.6244	1.8	3.6563	7.9	3.5
7	3.6249	2	3.6565	8.0	4.2
8	3.6268	2.3	3.6564	7.9	3.6

Table 4. Refined parameters by Rietveld analysis and derived Sn content in the Egyptian artefact

Investigated area	d_{min} (Å)	Min. Sn content (wt%)	d_{max} (Å)	Max. Sn content (wt%)	Average Sn content (wt%)
1	3.6404	4.9	3.6653	9.6	7.7
2	3.6673	10.0	3.6833	13.0	10.1
3	3.6523	7.1	3.6848	13.3	8.7
4	3.6482	6.3	3.6984	15.8	14.7
5	3.6411	5.0	3.6863	13.5	12.5
6	3.6418	5.1	3.6814	12.6	11.8

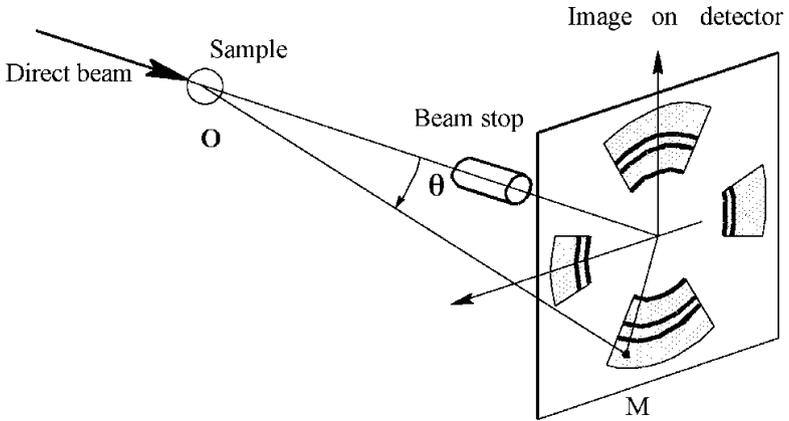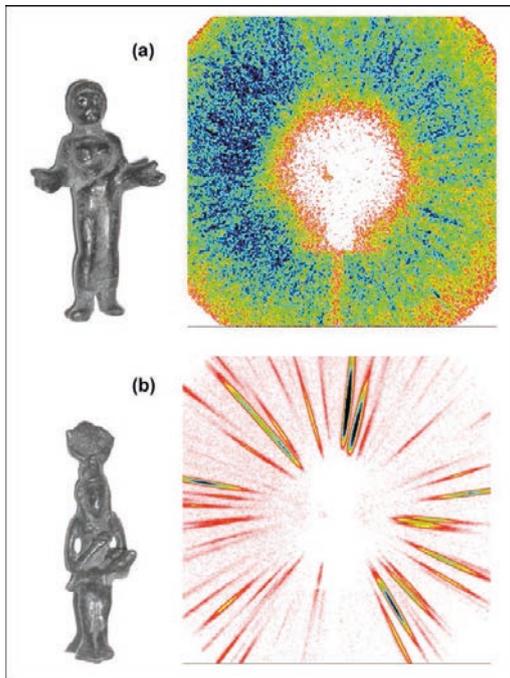Figure 10. A schematic view of the hard X-ray diffractometer

Figure 11. Diffraction pattern from (a) the Etruscan statue and (b) from the Egyptian statue

3. *Conclusions*

CH artefacts collected in Adriatic and Ionian museums need to disclose completely their story, and CH institutions have already started to act strategically (e.g. digitizing these artefacts), to help the audiences discover them and find value in learning more about Adriatic-Ionian cultural heritage: the virtual backup and digitized material heritage is contributing to the extended use and the global dissemination of CH knowledge. Nevertheless, the existing approaches are not enough: users need to involve with culture, integrating the available information and incoming in creative projects. CH, thus, should be exploited and enriched through innovation and new technologies.

The approaches and methodologies considered in the present work would help to address nature, authenticity, provenance, origin environment, diffusion, manufacturing techniques adopted in the fabrication and state of conservation related to the considered CH objects. These techniques would supply essential information to Museums, such as data on material's microstructure and structural properties, composition and other key data (including those arising from comparisons of fundamental parameters), fundamental in order to complete the mosaic of information already acquired on the CH artefacts of the Adriatic and Ionian area. They would help also the creation and development of an innovative system of CH artefacts' exhibition: thereby distinctively supporting the elaboration of an Adriatic-Ionian policy for jointly promoting the Region as a tourist target oriented towards cultural tourism, opportunely interconnected with the CH of the involved geographical areas and the related historical-archaeological contexts. These results will strongly contribute to formulate new significant hypotheses on ancient realities of the Adriatic-Ionian area, throwing a new light on different socio-economical and cultural scenarios that indeed, at the present state of the art, are still enough complex to be interpreted: the touristic attraction for both Adriatic-Ionian Archaeological artefacts and culture, thus, will be actually enhanced.

To show the connection between physical techniques and art, finally, will help to increase the Cultural Tourism in the Adriatic and Ionian Area and to decrease the disaffection of the young people to scientific subjects and courses of Science: the vision of the scientific images, showing the connection that the physical techniques have with art, will awake the enthusiasm in young visitors of the involved Museums and touristic areas.

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20th c. challenges and split (Conservation, heritage, presentation, *et al.*)

Problem Statement

Fundamental problem is the definition of cultural heritage, how it relates to models of constructing identities and, ultimately, what values does it uphold. When it comes to the city of Split, Croatia's second largest, and the largest city situated on the eastern Adriatic coast, which possesses rich cultural heritage and a city centre protected by UNESCO as the World Heritage Site, the biggest problem seems to be the period of the 20th c. This was the period of significant modernization processes, which are mostly not considered to be an important part of identity and, more often than not, this heritage is not adequately protected or used as a potentially interesting attraction to the general public. As a consequence these artefacts are being lost, and locations and environments are altered to the point of their complete disappearance.

This presentation would attempt to show the 'invisible' cultural and artistic history which was not displayed in a museum or studied, and which would offer an extraordinary material for showing modernist 'inversions' in Split during the 20th c. In that regard, it would point out examples of artistic practices which utilized attractive spaces in the Diocletian's Palace, different structures of architectural modernism, but also certain segments of industrial heritage which entered the sphere

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of everyday life and design. All this content may be incorporated into the tourism programme, but it would primarily be useful for the community in the sense of its lifelong education and active participation in articulating that content.

Objectives:

Sensitizing the public to the wider meaning of the term heritage and culture, and of the necessity to appreciate modernist currents articulated in Split during the 20th c.

Results:

Collecting artefacts and data; collecting memories from living witnesses; encouraging professional and scientific interest in the 20th c. forms of heritage.

Further steps:

Displaying objects in museums within the existing museum formats, especially through the medium of exhibition. Inscribing real estate and movable property into the register of cultural heritage.

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Review of the development of South-Eastern European Digitization Initiative

1. *Introduction*

Cultural Heritage Digitization is a relatively new field of research, and due to its dynamical development, it's generally accepted definition still doesn't exist[60]. Since it was technologically defined and conditioned since its beginning, mainly it was considered as a tool for converting from the analogue to the digital form. Today, however, the cultural heritage digitization represents a complex process that is based on intersection of different theoretical and practical knowledge, and it connects the fields that have been developed independently, like museology and computer science. A project of cultural heritage digitization can include, among other things, the translation of the cultural heritage from the analogue to the digital form, the development of the digital repositories, the description of digital content, as well as the development of its long-term preservation and protection policy.

In the south-eastern European region, the first cultural heritage digitization projects occur in the mid nineties of the 20th century[61]. Their creators were mainly the cultural institutions

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[60] More on the concept of cultural heritage digitization see Sotirova, Paneva, Ivanov, Dobreva (2012). Access to Digital Cultural Heritage: Innovative Applications of Automated Metadata Generation (K. Ivanova, Ed.).

[61] For example, the Mathematical Institute SANU is one of the pioneers when it comes to Serbian culture heritage digitization. In the period of 1995-1996 the Institute was a part of two projects that made a breakthrough in this field. The first one was a creation of an expert system for archeology. The system was called Pandora

and centers for scientific research that were supported by different national and foreign funds. It is important to mention that, at that moment, the systematic digitization of cultural and scientific heritage still didn't exist. The initiative itself was made difficult due to the fact that the official national strategies and standards dedicated to the issues of the cultural heritage digitization did not exist, so that on one hand, the existing standards of the foreign organizations were used[62], and on the other hand, the support was sought-after in the experience, as well as in the ''artistic freedom". The consequence of this was reflected in the diversity and inconsistency of the existing digital repositories in which the digitized content was presented. Another common concern of further development of digitization of cultural heritage was the lack of the financial support[63], as well as the lack of networking and cooperation between the institutions[64].

An important step in the development of the cultural heritage digitization in the countries of the south-eastern Europe was made in 2004, when The South-Eastern European Digitization Initiative (SEEDI) was launched. As an international network, SEEDI gathered several institutions and individuals interested in the matter of digitization of cultural heritage in the south-eastern European region (Ognjanović, 2009: 179). The result

and it was designed as a consulting system for dating excavated objects, but also for training of young archeologists (see Mijajlović, Ognjanović, 2004). A Survey of Certain Digitization Projects in Serbia, 53.). The second one was the digitization of old maps, engravings and photographs from the collection of the City Museum of Belgrade (see: Old maps, engravings and photographs from the collection of the City Museum of Belgrade (1996)).

[62] For example, the standards and policies proposed by, among others, the Dublin Core Metadata Initiative (see History of the Dublin Core Metadata Initiative.); the Text Encoding Initiative (see TEI: Text Encoding Initiative) and the Bentley team (see Development of the Encoded Archival Description DTD).

[63] It is noticed that the digitization of cultural heritage is a financially demanding process and in the case of economic crisis could be among the first to be abandoned (Lavendrine 2003: 192). For example, Greece has withdrawn from the project EM-BARK at the end of 2010, due to the outbreak of the economic crisis (Butigan-Vučaj 2010: 82).

[64] More on the problem of collaboration, as well as lack of institutional commitment see Recommendations for coordination of digitisation of cultural heritage in South-Eastern Europe (n.d.).

of its work was a stimulus for the cultural, educational and scientific institutions in the south-eastern region of Europe to form their own digital libraries and collections, to create the standard suggestions, and to connect amongst themselves and cooperate.

A short history of SEEDI network development is shown in the continuation, as well as the analysis of its mission and its results, in order to estimate its effectiveness in the development of the scientific and cultural heritage digitization in the south-eastern region of Europe.

2. *Foundation*

SEEDI network stems from two documents dedicated to the cultural heritage digitization problem in the south-eastern region of Europe, Borovets Declaration from 2003[65] and joint research project *Digitisation of Cultural and Scientific Heritage* between Bulgaria and Serbia from 2004[66].

The idea of starting an international network arose during the symposium dedicated to the digital preservation of cultural heritage that was held in Borovets in Bulgaria, in 2003[67]. On that occasion, it is noticed that the countries and the institutions in the south-eastern region of Europe were left behind in the field of contemporary trends in cultural heritage digitization, due to the isolation and the absence of networking[68]. Referring to the recommendations of the European Commission, given in Action Plan from 2001 that promoted, among other things, the importance of cooperation with the goal of increased visibility and access to the digital content[69], the representatives of the nine

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[65] See Borovets Declaration: South-Eastern European Network for Digitisation of Scientific and Cultural Heritage (2004).

[66] See Joint Research Project: Digitisation of Cultural and Scientific Heritage (n.d.).

[67] See International congress of the Mathematical Society of South Eastern Europe ''MASSEE 2003'', Borovets, Bulgaria (September 15-21, 2003).

[68] Among the SEE countries, only Greece was the EU member state in 2003 (see EU member countries (n.d.).

[69] See Lund Action Plans: Action Plan on coordination of digitisation programmes and policies (2001, April 4).

organizations from Bulgaria, Serbia and Montenegro, Denmark, Ireland, Romania and Ukraine signed a document known as Borovets Declaration. As an important task within the goal of cultural heritage digitization development in the south-eastern region of Europe, the declaration stated taking measures for strengthening communication and exchange of ''technological expertise, standards and practical skills within the region, taking into account the experience of colleagues outside the region''[70].

Soon after the signing of the Declaration, in January 2004, the Institute of Mathematics and Informatics BAS from Bulgaria and Mathematical Institute SANU from Serbia made an agreement about joint cooperation within the digitization of cultural heritage projects. The agreement called upon Borovets Declaration, and as a strategic goal stated ''stable basis for future cooperation with other European countries''[71].

The conditions for making this kind of basis were already formed by the middle of 2004, during the meeting held in Belgrade, within the conference dedicated to the cultural heritage digitization[72]. The first concrete suggestions on defining the work and organization of the future network were given at the meeting. The meeting's participants gave the proposal of the network's name ''The South-Eastern European Digitization Initiative (SEEDI)'', and defined its first tasks: to invite the individuals and institutions from the south-east region of Europe to sign the Borovets Declaration in order of expanding the network; to form a unique mailing list; to organize its members' meetings frequently; to put the magazine and the web presentation of the National Centre for Digitization in the service of promotion of the network's work[73].

It is important to mention that during this period, the network still doesn't have an official name nor regulations.

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[70] See Borovets Declaration, 135.

[71] See Joint Research Project, 2.

[72] See The Third International Conference "New Technologies and Standards: Digitization of National Heritage 2004", Belgrade, Serbia (June 2-5, 2004).

[73] See Conclusions of the Round Table on the Future Cooperation 2004 (n.d.)

3. *Mission and Organization*

The document that started the SEEDI community officially, and gave it its formal note is the so called *SEEDI – General Guidelines*[74]. This document, that was suggested in 2006 and is based on Borovets Declaration, represents the first SEEDI statute. In it, the basic tasks and the future organization of the south-east European countries' (SEE) network was defined.

In the Statute, SEEDI was defined as ''open forum'' that gathers the experts from the field of heritage preservation, computer science technologies, humanities and fundamental sciences with a goal to "develop awareness about digitization of cultural and scientific heritage", mainly in the thirteen SEE countries[75]. In the Statute were also listed the eight specific goals, that can be brought down to three basic tasks: the widening of the SEEDI network; strengthening and facilitating of the cooperation between SEE countries; and providing help in the preparation of the national standards and strategies concerning the cultural heritage digitization.

Statue states, when it comes to organization, that the governing body of SEEDI is made of the Executive Board, Chairperson and Vice-Chairperson. The Executive Board that is elected every two years, is primarily made of the representatives of the SEE countries – SEEDI members. Its task is that during the meetings (that are organized when needed) with the majority of its members' votes, solves all the important issues concerned with the SEEDI managements. For example, it confirms the election of the new members that can be either an institution or an individual. Chairperson and Vice-Chairperson are elected every two years by the Executive Board with a task to "open, chair and close the SEEDI meetings".

In order to promote and share SEEDI mission, the Statute creators also envisioned a few ways of dissemination, for

[74] See SEEDI-General Guidelines.

[75] In the Statute, the following countries were mentioned as the SEE countries: Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Greece, Montenegro, Republic of Moldova, Romania, Serbia, The former Yugoslav Republic of Macedonia, Turkey and Ukraine (see SEEDI-General Guidelines, 1-2.).

example, by organizing the meetings (conferences and working meetings)[76], by creating a special web page and forum[77], and by publishing the scientific papers in the *Review of the National Center for Digitization*[78].

The Review of the National Center for Digitization, published both on paper and in electronic form, is officially the journal of the National Center for Digitization (NCD)[79]. Over ten years ago, the Mathematical Institute SANU and other relevant Serbian cultural and research institutions initiated the formation of a Center for the digitization of cultural and scientific heritage. One of its main tasks was to launch the scientific journal dedicated to the issues of digitization. After the establishment of SEEDI network, the decision was made to use this journal as a measure for publishing the ''selected papers presented at the SEEDI conferences'' (Ognjanović, 2009: 181).

Even though the Statute predicted all the important elements for the existence and functioning of an organization, the question remains if and how much its mission is realized in the practice? The answer this question, one should analyse the results and impact of SEEDI network during the past ten years.

4. *Results and Impact*

In the period between 2005 and 2014, SEEDI has organized ten events, including two experts' meeting and eight international conferences. The events were organized once per year in a different SEEDI member state and hosted by one or more institutions, representatives of the country, where the event took place. In some cases (e.g. in Croatia and in Serbia), ministries have been involved, either as a host or as a sponsor. While there were no a regular income (except in 2005, the conference fee was never predicted), the events were supported

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[76] See SEEDI events.

[77] The official website of the SEEDI network is available at <http://seedi.ncd.org.rs/index.htm> (accessed June 30, 2016).

[78] See ELib of the Mathematical Institute of the SANU (n.d.).

[79] See National Center for Digitization (n.d.).

by national and international funds, such as Central European Initiatives (CEI), as well as private donations. The total number of scientific papers and projects presented during these events is 337, and average number of SEE countries that participated every year was 6,7 or more than a 50% (see Table 1).

5. *National Center for Digitalization*

Over ten years ago, the Mathematical Institute SANU and other relevant cultural and research institutions initiated the formation of a center for the digitization of cultural and scientific heritage. The center was called the National Center for Digitization (NCD). Some of the members of NCD besides the Mathematical Institute SANU where other relevant national research and culture institutions like the Mathematical faculty Belgrade, National Library of Serbia, National Museum Belgrade, Archeological Institute Belgrade, Archive of Republic of Serbia, Serbian Institute for Monument Protection etc.

The idea of the Centre was to unite researchers from different fields in order to digitize and preserve cultural and scientific heritage of Serbia. The main subjects of this multidisciplinary cooperation was the following: 1) to coordinate the efforts of institutions involved in the cultural and scientific heritage digitization, 2) to establish and promote a national strategy for cultural and scientific heritage digitization, 3) to explore, adapt and implement the international standards and protocols for the cultural and scientific heritage digitization and preservation at the national level. To develop new standards in those areas where they don't exist, and to 3) launch the cultural and scientific heritage digitization and make plans for possible migration process to new formats and technologies for already digitized data. All of the projects initiated by the NCD are continuous and ongoing.

Cultural Monuments in Serbia is a digital catalogue collection of immovable cultural heritage located on the territory of the

Table 1. In the period between 2005 and 2014 SEEDI has organized ten events, which provide a valuable resource, such as Lists of participants, Programmes, Book of abstracts and Proceedings, for studying the activities of SEEDI community

No	Year	Place	Host	Papers	SEE/EU/ Other	Support
1	2005	MK	Institute of Informatics, Faculty of Sciences, Skopje, Macedonia	37	05/07/01	Central European Initiative (CEI)
2	2006	BG	Institute for Bulgarian Language BAS; Institute of Mathematics and Informatics BAS	19	09/05/02	Central European Initiative (CEI)
3	2007	ME	Central National Library of Montenegro, Cetinje, Montenegro	28	07/03/01	NLB Monte-negrobanka
4	2008	RS	Faculty of Mathematics, University of Belgrade, Belgrade, Serbia Mathematical Institute SANU, Belgrade, Serbia	49	08/02/01	Ministry of Culture RS; Ministry of Science RS
5	2009	RS	Mathematical Institute SANU, Belgrade, Serbia	32	09/03/00	Committee for digitiza-tion of the UNESCO commission of Serbia
6	2010	BA	Faculty of Electrical Engineering, Sarajevo, Bosnia and Herzegovina	35	07/03/05	No infor-mation available

No	Year	Place	Host	Papers	SEE/EU/ Other	Support
7	2011	HR	National and University Library in Zagreb, Zagreb, Croatia; Ministry of Culture of Republic of Croatia; Croatian State Archive; Museum of Contemporary Art Zagreb;	32	05/04/00	Inkunabula Scanning Solutions
8	2012	SI	National and University Library, Ljubljana, Slovenia	36	03/06/01	Slovenian Research Agency; Ministry of Education, Science and Sport; etc.
9	2013	HR	National and University Library in Zagreb, Zagreb, Croatia; Ministry of Science, Education and Sports of the Republic of Croatia	29	05/03/03	Inkunabula Scanning Solutions
10	2014	RS	Mathematical Institute SANU, Belgrade, Serbia	40	09/05/03	CEI; Ministry of Education, Science and Technological Development of the Republic of Serbia

Republic of Serbia[80]. This project was a joint endeavor of a multidisciplinary team gathered by the National Center for Digitization with the aim of providing models for developing an electronic catalog of cultural monuments in Serbia and digitizing the corresponding documentation. The catalogue contains documentation about over 1300 monuments. The digital data consists of digital photos, maps, plans, with text descriptions and metadata (Šegan, 2014: 22). It is also important to emphasize that a part of this project was the "Digitization and electronic presentation of Medieval Serbian Monasteries", which was partially supported by the UNESCO in the framework of the Participation Programme 2004-2005.

Serbia-Forum is a digital platform for the presentation and research of digital cultural and scientific heritage of Serbia[81]. Serbia-Forum aims to present the cultural heritage of Serbia using proven encyclopedic articles and digitized elements of the heritage. The web application is based on dynamic content generation and presentation delivered by the JSP Wiki framework, running on the Tomcat 7 web server (Mihajlović, 2014: 18). Serbia-Forum derived from another similar e-encyclopedia initiative, "Austria Forum". The Austria Forum project brings almost all of the advantages of a Wikipedia like e-encyclopedia with the diverse multimedia content advantages of Europeana. It is also even more region specific in terms of its content then Europeana, bringing the content to the level of a country and thus to the level of a specific culture (Mihajlović, 2013: 49).

Digital National Libarary of Serbia (DNLS) was created on the bases of the Serbia-Forum platform[82]. It contains a large number of digital documents from the collection of the National Library of Serbia, such as newspapers, magazines, books, periodicals manuscripts, old and rare books, cartographic material etc. It was built on the principles of open access to knowledge and information. DNLS offers access to heterogeneous information

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[80] See eCatalogue of Cultural Monuments in Serbia (n.d.).
[81] See Serbia-Forum (n.d.).
[82] See Digital National Libarary of Serbia (n.d.).

resources as OPAC catalogues, online and offline databases, digitized book and non-book materials and e-books. The goal of DNLS is to open cultural treasure to the worldwide users, including it in a world's cultural heritage concentrated in Cyberspace (Butigan-Vučaj, 2002: 42).

eLib of the Mathematical Institute of the SANU is an electronic library which offers freely accessible mathematical journals in full text[83]. The objectives of the database are: improving online presence, long term preservation of scientific journals published in Serbia and exchange of information in mathematics and related fields. The eLib system currently contains 19 journals, 774 volumes, with over 9500 scientific papers. eLib is among the 5 largest European academic repositories of this kind. Statistics about the number of visitors and downloads show that e-Lib was visited and used by researchers from almost all countries in the world. The scientific content from eLib was also used for research purposes: a study was conducted to identify patterns and long-term trends in scientific collaborations that are characteristic for a community which mainly consists of Serbian (Yugoslav) mathematicians (Savić, 2014).

6. *Conclusion*

During the Ninth SEEDI Conference, which was held in Belgrade in 2014, a proposal was made to organize a next gathering in Cluj-Napoca, in Romania. However, due to a lack of financial support, the idea was never realized, and the further destiny of SEEDI network is not clear in this moment. The Executive Board has to make a decision if the network is still a necessity, and does its' influence corresponds to impact of actual international initiatives, such as Digital Heritage Congress?[84] If the answer is yes, then there is a question how the SEEDI should be developed in future, as the independent network that relies on the financial support of various sponsors or as the part of the broader European network?

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[83] See ELib of the Mathematical Institute of the SANU (n.d.).
[84] See Digital Heritage: the Federated World Congress (n.d.).

Since its existence, SEEDI has developed as a unique framework of professionals, who helped to create a steady infrastructure in the region. The next step should be a preparation of the SEE institutions to take part in the EU initiatives, such as, for example, the EU Strategy for the Adriatic and Ionian Region (EUSAIR)[85] or the European COST programme[86], which goals are in accordance with the SEEDI mission. This should help a small scale SEE projects to integrate with the large-scale resources.

To conclude, the further existence of SEEDI depends on the actual needs of SEE countries and institutions, their integration in the EU initiatives and creation of stable financial policy.

[85] See What is EUSAIR (n.d.).
[86] See About COST (n.d.).

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Bektash Mema, Luiz Seiti

Assets, values and specifics of cultural heritage in southern
Albanian region (Ancient Chaonia)

During the post communist period especially during the last
decade, several Albanian higher education and local authorities
and foreign institutions, through projects, researches and studies
have been made a lot of progress toward the highlighting of
cultural heritage values in southern Albanian region (Ancient
Chaonia) which has been recently highly frequented from the
domestic and foreign visitors turning it into one of the most
attractive regions (in whole Albania) related to cultural tourism.

The most highlighted issue along the timeline of post
communist period especially after 2000 is strongly connected
with establishing and consolidation of archeological parks. This
issue according to our thoughts has been the most effective way
to change some sites into most visited ones.

Process of establishing archeological sites started with that of
Butrint where the interest of Albanian state was very high and
where possibilities to transform Butrint and its surroundings in
a park were very close to completion the objectives in a short
period of time. Butrint was one of the sites with archeological
excavations history for more than one century. During the
decade of '20, last century Italian archeologist Luigi Ugolini was
the first who realized spectacular excavations making evident
for the visitors rare monuments. Establishing of this park and
the great interest of visitors (more of them foreigners) brought
to a new way of thinking and to a new experience for scientific
circles and local authorities. Gradually its progress brought

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implementation of a new philosophy, the one of collaboration among scientific circles and local authorities for a modern management of cultural heritage values.

As result along the years it was enriched quite enough the map of archeological parks in southern region of Albania: park of Phoenike, Antigonea, Hadrianopol, and Melan. Inclusion of Gjirokastra city into UNESCO list (2005) served as a great encouragement for the growing of visitor interest. Like this started a new qualitative stage for bringing values of cultural heritage close to the visitors as the result of established complex infrastructure (still in development process).

Gjirokastra city and its surroundings (Drino's Valley), for their rich values of cultural heritage, is treated continuously in an integrating way. We stress once again the fact that this area has the tendency to be transformed in a big archeological park and into a natural laboratory where students and researchers can face with all kinds of cultures from early prehistory stages up to late medieval period.

In function of this objective for several years, among the university circles and research study centers which have had on focus of their scientific research studies the cultural heritage is raised the question if sites with high intensity in the field of heritage can get the status of archeological parks. Related to the implementation process, should be taken in consideration research work of Macerata University, Kamerino University, Albanian Institute of Archeology and Gjirokastra University.

These research institutions brought a new philosophy for the management of cultural assets with focus on: correlations community-territory; integration of historical- cultural and panoramic-environmental assessments; conceptualizing of sites as generators of culture, entertainment and social experiences, as a potential possibility for economic uses and environmental administration, as an analyze of environment in certain vigorous and chaotic transforming moments, as a development process for the preparation of new human resources, to make evident respective rapports between compounding components of territory; taking in consideration of regional development policies etc.

During several years researching processes had defined the boundaries of the sites with high intensity of cultural heritage values, were taken in consideration environmental values where is living and acting a human being and any other living species, social conditions which affect a certain human community (in Gjirokastër and its surroundings there is a presence of diverse ethnical, religious, education and cultural groups), entire conditions (circumstances) which affect spiritual conditions of communities, entire conditions where is installed an object or it happen a phenomena; the entire elements which co-live and collaborate with specific objects etc.

In some projects which we have accompanied in a integral way with each other[87], is treated in the best completed way a certain territory in Gjirokastra surroundings, in its center have been found ruins of one of the most important antique urban centers which according to the historical data[88], has kept names of Hadrianopol and Justinianopol[89]. The site of Hadrianopol and its surroundings, during the periodical process of researching study is assessed as a landscape dominated from objects which possess historical and archeological values, which according to geophysical studies have survived along the centuries in certain environmental and earthly conditions.

Expedition group leaded from Prof. Perna, have respected rigorously principles of archeological excavations. Related to the archeological artifacts with rare values, in order don't to let them decomposed during new relations with environment, it was took care to realize within the timeline the conservation and restoration process.

We have to state that research studies for Hadrianopol site (close to the village of Sofratika) started a new stage. It was get any positive issue realized during the traditional excavations avoiding limitations and especially empiricism that such research

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[87] Here are included University "Eqrem Cabej", University of Macerata (Italy) and Archeological Institute (Tiranë).

[88] Albanian Encyclopedic Vocabulary, Volume II, Tiranë 2008, p. 875.

[89] Names of emperors Hadrian and Justinian- The name Hadrianopol it is mentioned for the first time in *Tabula Peutingeriana*. During the centuries V-VI, according to Prokop of Cezarea it is mentioned with the name *Justinianopol*.

category of researches possess. In respect to a standardized project plan, it was made possible proper assessing of archeological assets and other elements of the landscape which characterize this territory which is under transformation process. The project which is under development tends to encourage economic and social development policies of that territory.

New philosophy which lead the whole research study of the Hadrianopol site, seriously attract the interest of Albanian scientific circles, including here important institutions such as Archeological Institute which is known nowadays as Institute of Cultural Monuments.

The above mentioned achievements served as an encouragement for a new governmental decision making process. A reform of Ministry of Tourism, Culture Youth and Sports for a well management of cultural heritage, turned the Archeological Park of Antigone and two other ancient cities of Drino Valley in Gjirokastër, Hadrianopol, situated close to Sofratika in Lower Dropulli area and Melan which is situated close to Nepravishta village.

Following the great interest of visitors, Office of Administration of Antigone extended its activity in order to promote more the sites of Hadrianopol and Melan, and other highlight archeological and religious sites (Close to Tekke in case of Melan).

Cupola of rich and complex heritage is also Gjirokastra city, part of world cultural heritage. Situated on the slopes of Wide Mountain it has a dominant position over a rich landscape full of historical facts. It is labeled as "city of 1000 stairs" and includes hundred of –tower-houses of ottoman style with stone walls and stone roofs, with wooden balconies dominated from magnificent castle raised over a bluff hill.

Neighborhoods of ottoman style are constructed over the crests which get out from the castle in the shape of light beams up to the lower part of the valley where modern constructions and university campus are situated.

A feature of urban centers in Drino Valley (very rich with archeological sites) have been displacement of the center at the beginning with Antigonea and later on with Hadrianopol/

Justinianopol and lastly (middle medieval period) with Gjirokastra.

Actually valley of Drino which from the administrative point of view is part of two municipalities that of Gjirokastra and that of Dropull, not only that possess a city (such as Gjirokastra) highly frequented from the visitors and a three dimensional archeological park Antigone-Hadrianopol-Melan), but also unlimited assets unexplored and not promoted quite enough yet.

In whole valley area are found several cultures and monumental artifacts such are: prehistoric stations, urban and mini-urban antique centers BC & AD, unlimited assets of Byzantine culture (monasteries, churches etc.), with numerous castles a part of which were constructed or reconstructed during the period of Ali Pashë Tepelena reign.

Related to the above mentioned assets in the strategy of Gjirokastra University, is taken in consideration improvement of scientific research studies and attempts to bring these stations close to the visitors, in order to enrich map of archeological park and other sites. The objective will be realized in collaboration with important partners such are: University of Macerata, Albanian Institute of Archeology, Institute of Cultural Monuments etc.

According to the above mentioned strategy which will be implemented in the next four years and through a rational collaboration with municipalities of the whole southern region (included in regions of Gjirokastra & Vlora), with Vlora University, with archeological parks of Antigone-Hadrianopol-Melan, Butrint, Phoinike, Amantia etc., in order to transform this region full of cultural assets into an important part of tourism development.

Other abstracts and papers accepted

Gabriella Pultrone*

The Natural and Cultural Heritage for Sustainable Tourism in the Adriatic Ionian Macro-Region between Theoretical and Operational Aspects

1. *Introduction*

Cultural and creative industries, sustainable cultural tourism and the safeguarding of natural and cultural heritage are widely recognized as powerful drivers for sustainable economic growth, employment, cohesion and poverty reduction, at all levels. In OECD countries, tourism is big business, directly accounting for 4.7% of GDP, 6% of employment and 21% of exports of services (OECD, 2014). According to UNTWO (*Tourism and the Millennium development goals*), the responsible and sustainable development of tourism is capable to alleviate poverty, hunger, gender inequality and environmental degradation. That is why UNWTO is working with this significant economic sector (destinations and companies) to maximize its environmental, economic and social impacts worldwide. Tourism creates opportunities for entrepreneurship and provides millions of direct jobs worldwide, as well as countless more through its multiplier effects on related sectors such as trade, manufacturing, construction or agriculture. It is already one of the largest employment sectors in many countries and a fast entry vehicle into the workforce for young people and women in both urban and rural communities. Specifically, UNWTO is working with UN sister agencies, governments, the private sector and civil society to catalyse action and advance the

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tourism sector's contribution to the achievement of the MDGs. In line with its Global Code of Ethics for Tourism, UNWTO has created *TOURpact*, a framework for Tourism Partnerships for Development, advancing Corporate Social Responsibility (CSR) through international tourism, allowing the private sector and civil society to partner with the international community to advance a fairer, sustained, balanced and green growth through tourism, thanks to a unique platform for dialogue and action, bringing together key global players.

Within this framework, culture has the potential to build bridges and shape more effective reconciliation processes with the full participation of the communities, which realize that Cultural Heritage involves all aspects of their past and present, of what they consider valuable and wish to pass on to future generations. According to the World Tourism Organisation (WTO) data, almost 40 per cent of all international tourism and travel trips include, or are motivated by, cultural heritage itineraries, including mainly visits to heritage sites (castles, churches, historic houses, ancient monuments, etc.), followed by visits to artistic or heritage exhibits (museums and galleries, etc.). The cultural tourism market in Europe is therefore becoming increasingly competitive. A growing number of cities and regions in the European Union are basing their tourism development strategies on the promotion of cultural heritage, and the number of cultural attractions is growing rapidly (Greg, 1996).

The natural and cultural heritage is capable to support an effective endogenous development through the deployment of accumulation economies that feed on each other and on themselves. Therefore, national and local governments are pursuing creative strategies to promote the qualities of their territories, in order to develop their full potential in terms of innovative, sustainable, responsible quality tourism (with particular attention to the most vulnerable and disadvantaged people). Thus, they are trying to take advantage of their landscape, nature, maritime areas and their hinterland, cultural heritage, regional products, regional gastronomy and traditional quality products.

At European level, as tourism substantially contributes to Europe 2020 objectives for smart, sustainable and inclusive growth, most governments are committed to maximize the opportunities of the financial framework for the 2014-2020 EU programming period and to develop strategies, programmes and projects giving impetus to sustainable development and to the integration of sectors related to tourism, natural resources and cultural heritage.

In this context, this paper aims at highlighting the opportunities arising from the Adriatic Ionian Macro-region, above all strategies, programmes and projects relating to models of tourism focused on the enhancement of natural and cultural heritage. They can contribute to promote the sustainable development of the whole region as well as to increase the cohesion of a geographical area, which counts on its maritime resources as a key determining factor, by considering its many peculiar complex themes and aspects from a historical, geographical, environmental, socio-economic and political point of view and in a Euro-Mediterranean perspective. In fact, the region keeps its own physical unity between the two great European peninsulas, i.e. the Balkan and the Italian ones. Despite the morphological differences of its coasts and the different characteristics of its settlement structure, history gave prominence to exchanges and mutual knowledge for a long time. Furthermore, archaeological evidence and historical, geographical and literary sources show that it has always been a trading hub between the two shores and their respective hinterlands (Pultrone, 2004: 19-53).

The paper aims also to suggest possible research themes and projects in which universities can make a decisive and innovative contribution, and research, training and "third mission" are virtuously interconnected thanks to a logic network, such as UniAdrion. Their contribution should be set within a broader process of co-creation that variously involves other public and private stakeholders (Ministries of Culture and Tourism, tourism organisations, national statistics organisations, regional authorities and municipalities, NGOs, farmers, producer groups, processing industry, short supply chains, industry associations, citizens).

2. *Macro-regional Strategies: Towards Shared Goals and Opportunities for a Common Prospect of Prosperity and Well-Being*

Within the framework sketched so far, the pursuit of the above-mentioned goals can be more effective in a macro-regional and transnational perspective, through coordination between relevant EU policies as well as between EU and national, regional and local policies having an impact on territorial cohesion and respecting the principle of subsidiarity, even because macro-regional strategies are based on the principles of no new EU funds, no additional EU formal structures and no new EU legislation, and therefore they call for optimal use of existing financial resources, better use of existing institutions and better implementation of existing legislation.

Specifically, a *Macro-regional strategy* is an integrated framework endorsed by the European Council, which may be supported by the European Structural and Investment Funds among others, to address common challenges faced by a defined geographical area, relating to Member States and third countries located in the same geographical area which thereby benefit from strengthened cooperation contributing to the achievement of economic, social and territorial cohesion. Macro-regions are so designed as a place of integration and facilitation of all EU policies, which contribute to the growth of the economy and society in the territory of several Countries with common characteristics. All the adopted macro-regional strategies, covering several policies, are accompanied by a rolling action plan to be regularly updated in light of new, emerging needs and changing contexts. The four EU macro-regional strategies so far adopted concern 19 EU member-states and 8 non-EU countries, and involve the following geographic areas: the *Baltic Sea Region* (2009); the *Danube Region* (2011); *the Adriatic and Ionian Region* (2014); the *Alpine Region* (2015).

In a nutshell, macro-regional strategies represent a new opportunity, a value added for comprehensive development of a larger region, addressing common challenges and potential. Therefore, they require a stronger involvement of civil society,

including through national and regional parliaments and consultative networks or platforms, enhancing awareness for the strategic objectives and timetable, in addition to an enhanced use of information and communication technologies to facilitate modern, fast and cheap communication between stakeholders (European Commission, 2014).

Specifically, the *EUSAIR strategy* – described in a Communication from the European Commission to the other EU Institutions, and an accompanying *Action Plan* which complements the Communication – aims at promoting the sustainable economic and social prosperity of the Adriatic and Ionian region through growth and jobs creation, by improving its attractiveness, competitiveness and connectivity while at the same time preserving the environment and ensuring healthy and balanced marine and coastal ecosystems (European Commission 2014a and 2014b). It concerns 8 countries: 4 EU Member States (Croatia, Greece, Italy, Slovenia) and 4 non-EU countries (Albania, Bosnia and Herzegovina, Montenegro, Serbia), so significantly contributing to the EU integration of the candidate/ potential candidate countries in the region. Further opportunities arise because the Adriatic Ionian macro-region also includes some countries involved in the *Danube macro-regional strategy* (Slovenia, Croatia, Serbia, Bosnia and Herzegovina and Serbia) and EU lagging Regions (*Convergence objective*), such as Puglia, Basilicata, Calabria and Sicily, with common objectives and priorities (<http://ec.europa.eu/regional_policy/sources/ docgener/panorama/pdf/mag37/mag37_it.pdf>).

Many problems and opportunities characterizing the Adriatic Ionian macro-region can be effectively tackled only through cooperation between countries and through a regional approach. The main priority areas and objectives of the *Action Plan* should emerge as shared aspirations and sustainable solutions to common challenges, related to the following four thematic pillars: *Blue Growth*, mainly focussed on blue energy, aquaculture, maritime, coastal and cruise tourism, marine mineral resources and blue biotechnology; *Connecting the Region*, whose overall objective is to improve connectivity within the Region and with the rest of Europe in terms of transport

and energy networks, through coordination of infrastructure works and improved operation of transport and energy systems between the interested countries; *Environmental Quality*, addressing the issue of environmental quality, with respect to marine, coastal and terrestrial ecosystems, and considering it as an essential factor for underpinning human activities in the Region and for ensuring economic and social well-being for its peoples; *Sustainable Tourism*, centred on the development of the sustainable and responsible tourism potential of the Region, through innovative and quality tourism products and services, and of responsible behaviour on the part of all stakeholders (wider public, local, regional and national private and public actors, tourists/visitors).

In addition to the aforementioned pillars, the *Action Plan* includes topics under each pillar, actions and projects (presented by way of examples to stimulate further initiatives). Another feature highlighted in the *Action Plan* is that the strategy encourages a horizontal approach and the interdependence between its four pillars, such as the fact that climate change mitigation and adaptation as well as transition to a low-carbon economy have an impact on transport, energy, and tourism.

EUSAIR goals can be achieved using all Programmes operating in the area, such as: Programmes directly managed by EU (Life+, Creative Europe, Horizon 2020, Cosme, Erasmus +, etc.); ECT interregional, transnational and bilateral Programmes; ERDF, ESF, EMS funds; contribution from other institutions (EIB, ERBD, WBIF); National/International public/private donors.

Among these, and in the light of the Community Strategic Guidelines (Lisbon/Gothenburg), the *Transnational Cooperation Programme 2014-2020 Adriatic-Ionic* (ADRION, <http://www.southeast-europe.net/en/about_see/adriaticionianprogramme/index>), covering regions from the eight partner countries but potentially affecting the environment of a much wider area. It aims to promote innovation in governance and integration between member states and candidates, relying on the rich natural, cultural and human resources of the area, promoting the economic, social and territorial cohesion. It is divided into five Axes (1-*Intelligent and innovative Region*; 2-*Sustainable*

Region; 3-*Interconnected Region*; 4-*Governance of EUSAIR EU Strategy*; 5-*Technical Assistance*), which also provide coordination with EUSAIR, with RIS3 strategies (*Research and Innovation for Smart specialization*) at regional and national level, and with the innovative initiatives of governance and competence networks.

Given the peculiarities of the Macro-region, the Horizon 2020 Topic *Cultural Heritage of European Coastal and Maritime Regions* is also of great interest (Pillar *Societal Challenges*, *WP Europe in a changing world – inclusive, innovative and reflective Societies* <https://ec.europa.eu/research/participants/ portal/desktop/en/opportunities/h2020/topics/23192-cult-coop-07-2017.html>). In fact, this Research and Innovation action (RIA) complements previous and ongoing EU research on cultural heritage in rural, mountainous and urban settings. European coastal and maritime regions have – over the time – developed rich, multi-layered, varied and extremely rich cultural heritage (tangible and intangible), as a result of a combination of natural landscapes and human actions. As is known, tangible heritage (coastal towns and villages, submerged landscapes and underwater artefacts, harbours, dams, light houses, arsenals, buildings of the fishing and marine industry, boat builders, etc.) is intimately embedded into the multiple layers of intangible heritage (myths, daily practices, languages, traditions and crafts of local cultures of communities of sailors, fishermen, boat builders, merchants, etc.) also including links with the development of creative enterprise and services. These coastal cultural landscapes are very much exposed to environmental challenges, such as climate change (rising sea levels), other forms of pollution, dense or scattered urbanisation, tourism pressure, the fundamental transformation of the European fishing industry due to over-exploitation of fish stocks and erratic policies of sea or shore conservation at national level. That is why, university research aims at providing local communities and local, national and European policy-makers with a coherent framework for risk assessment and sustainable management of European coastal cultural heritage in a way that involves local stakeholders.

These are just a few of the many opportunities in which the themes of tourism, cultural heritage and creative industries require an innovative and integrated approach within a broader vision of sustainable development for the EUSAIR. Research has been working in this direction for a long time, e.g. in the "Network of Universities", UniAdrion (<http://www.uniadrion. net>), established within the framework of the Adriatic-Ionian Initiative, on the occasion of the International Conference "*Culture as a Bridge – The Interuniversity Cooperation in the Adriatic-Ionian Basin*" (15th-16th December 2000, Ravenna, IT), with the purpose to create a permanent connection between Universities and Research centres from the Adriatic-Ionian Region. The university network includes five working groups working on protections, cataloguing and promotion of cultural heritage, environment and sustainable environment, cultural tourism and development, economy, communication, ports and economic relations, as well as the technical aspects of its network (European Commission, 2014c).

So far, many universities of the eight EUSAIR countries have joined the network since its establishment, but no Sicilian and Calabrian University is yet part of it. Nevertheless, Calabria and Sicily, two southern Italian regions overlooking the Tyrrhenian Sea and stretching on the Mediterranean, could play a key role of junction and connection, due to their strategic location.

3. *Sustainable Tourism as a Challenge and a Key Driver for Increasing Regional Attractiveness*

The success of the strategy and the future of the Adriatic Ionian Macro-region will depend on the way all the actors, variously involved at different levels, will be able to implement the provisions through actions and projects in an integrated approach, as in the case of the '*Sustainable Tourism' pillar*, which is strongly linked to the other three pillars and plays a key role as driver for the future of the whole area. Furthermore, this pillar provides appropriate guidelines for the implementation of the EU Tourism Policy (European Commission, 2010, 2014e) through different appropriate funding tools (European

Commission, 2014a, 2016a), and is in line with the *South-East Europe Strategy 2020* (Regional Cooperation Council, 2013). Specifically, its smart growth objective reinforces implementation of the *Ljubljana Process* which calls for integrated rehabilitation of cultural heritage in the Region.

As a matter of fact, when properly developed by enhancing local knowledge and safeguarding natural and cultural diversity, tourism strongly benefits the regional economy by creating quality and sustainable jobs and promoting the conservation of landscape and cultural heritage, both in coastal regions and hinterland, in cities and rural territories, contributing to promote social inclusion and interesting opportunities for youth employment. However, proper management of intensive tourism activities is fundamental in order to mitigate possible negative effects on the coastal, marine, and hinterland environment on which it strongly depends. At the same time, facilitating the socio-economic perspectives, removing bureaucratic obstacles, creating business opportunities and enhancing the competitiveness of SMEs are essential for the development of tourism.

Within this complex processes, a number of factors related to land use, which is one of the principal drivers for environmental and landscape changes, should be taken into account. In particular, demand for food, forest products and renewable energy has a strong impact on the landscape; land use changes have implications on soil carbon storage and greenhouse gas emissions, and affect biodiversity conservation and water management; a sustainable destination is a sustainable territory where ecological, social and economic equilibriums are always respected in the ordinary activities of the local community, irrespective of tourism. Therefore, the carrying capacity of tourism destinations should never be exceeded if the decay of natural and cultural attractions and the consequent slackening of the tourism market are to be avoided. These are the risks entailed by the lack of an active policy of planning and protection which should prevent businesses and market mechanisms from having negative impacts on the environment or from causing the interest of the tourism market in certain destinations to tail off.

In fact, tourism is a complex phenomenon full of contradictions, whose growth is inevitably associated to the consumption of energy and environmental resources (Cicerchia, 2009; Macchia, Mazzanti, 2004). For this reason, the Integrated Coastal Zone Management (ICZM) is a tool and dynamic process destined to last and evolve in time and to involve all the concerned parties. It aims at aggregating the various policies which influence coastal regions through the planning and management of coastal resources and space (http://ec.europa.eu/environment/iczm/index_en.htm). Yet, it is not only an environmental policy since it set itself the goal to promote the economic and social wellbeing of the coastal zones. Among the EU recommendations for the ICZM, worth mentioning are: the need of a strategic approach to coastal zone management; a national assessment aimed at identifying the main subjects, the laws and institutions which influence coastal zone management; the use of national strategies in collaboration with the regional authorities and the interregional organizations to apply the principle of integrated coastal zone management; the cooperation with the neighbouring countries, EU institutions and other groups of interest. In order to achieve these objectives, multiple legislative, planning and economic tools, information campaigns, Local Agendas 21, voluntary agreements and promotion of best practices will be implemented. One of the strategic factors for the implementation of IMCZ is the territorial sustainability of the settlement growth that can be achieved through the tools and processes of spatial planning, which, thanks to the acquisition and processing of data on land uses and pressures and to Geographic Information Systems (GIS), is able to understand the dynamics and direct the processes of coastal systems (Pultrone, 2011). In this regard, it would also be useful to study the various tools of territorial planning and the general and implementation plans in the macro-region.

Another useful tool to implement tourism policies is the *European Tourism Indicator System* (ETIS), launched in 2013 by the European Commission. It is a voluntary management tool aiming to help destinations to monitor and measure their sustainable tourism performance, by using a common

comparable approach. Its monitoring results are based on self-assessment, observations, data collection and analysis by the destinations themselves and provide destinations with the basic information they need to monitor sustainability and to manage tourism activity more effectively. The ETIS was based on 27 core indicators and 40 optional indicators, subdivided into four categories (1. *destination management*; 2. *social and cultural impact*; 3. *economic value*; 4. *environmental impact*). Over 100 destinations across Europe implemented and tested ETIS and provided the Commission with feedback about their experience. It provides destinations with a fully tested system and a more realistic set of core indicators (European Commission, 2016b). It would be interesting to see how many tourist destinations in the EUSAIR are using or have decided to use ETIS, identifying for each of them the developmental stage with reference to Butler's *tourism destination life cycle model* (with its five phases: 1. *pre-tourist* or *exploration*; 2. *pioneer* or *involvement*; 3. *growth* or *development* or *take-off*; 4. *organization* or *consolidation* or *maturity*; 5. *saturation* or *stagnation*) and monitoring the effects over time, for planning and assessment purposes (Butler, 1980, 2006).

All the eight countries included in EUSAIR have elaborated specific national strategies for tourism development by leveraging the abundance and diversity of their natural and cultural assets, which characterize cities and territories, coastal areas, rural and inland areas. Of course, there exist many differences between them. In the various Balkan states, tourism as an industry falls under the jurisdiction of different ministries. For example, in Greece and Croatia, the most developed tourist countries in the Balkans, there are specific Ministries of Tourism. In Turkey, Bosnia and Herzegovina, Albania and Montenegro, the tourism policy is created in ministries where tourism is combined with other sectors, such as culture, youth and sport, environment and sustainable development. In countries such as Romania, Bulgaria, Macedonia, Slovenia and Serbia, tourism is managed by the Department of Tourism and Hospitality Management within the Ministry of Economy and Energy, Regional Development and Administration, Technology and Finance. Their tourism

products – the sum of goods and services, fulfilling specific travel needs and including transportation, lodging and food, sports and recreation, events, merchandise, souvenirs, natural beauty, cultural heritage – are: marine tourism; mountain tourism, including winter sports and active holidays; cultural tourism, which includes visits to cultural and historic sites, attendance at events and festivals or visiting museums, and is considered a great opportunity to the rich cultural and historical heritage; business tourism and conference tourism, including travel for corporate or organizational meetings, conventions, congresses and incentives trips; rural tourism involving visiting rural areas, and including local gastronomy, traditional crafts, hospitality and specific architecture of the villages; health and spa tourism (Metodijeski, Temelkov, 2014).

In Italy, there is one *Ministry of Cultural Heritage and Activities and Tourism* (MIBACT), two sectors whose jurisdiction is shared by the state and regions, since the Government elaborates the strategy of the country on International Tourism and Regions retain autonomy in the promotion and development local specificities (Camera dei Deputati, 2015).

The new *Tourism Strategic Plan 2017-2022* (TSP) – born of an extensive comparison between Ministries, Regions, ANCI, unions, trade associations – is conceived as a "living" body in constant evolution and will be presented at the Parliament in September. Among its key points: digital revolution; adaptation of the infrastructure network; innovative marketing; reduction of administrative and tax burden; improvement of the quantity and quality of employment; simplification of the regulatory system. Among the priorities of the TSP there is a wide diversification of tourist destinations – with a strong focus on environmental and cultural sustainability – so that the flow of visitors will not only focus on the most popular and overcrowded resorts, but will be directed to other underperforming territories, such as interior and rural areas, medium-sized cities of art, natural and marine parks (<http://www.pst.beniculturali.it/>).

Also in the 2014-2020 regional operational planning, the Italian regions included in EUSAIR have given great prominence to the role of tourism for the promotion of the territories and

for the development of objectives in line with the European objectives of inclusive, smart growth, taking into account the Smart Specialisation Strategy-S3 and in complementarity with the National Development Plan (NDP) *Culture and Development*.

Basically, there are the conditions to successfully pursue EUSAIR objectives. After approval of the macro-regional strategy, in November 2014, EUSAIR launched its implementation phase involving regional and national governments in the construction of effective governance to support the entire process of detection of priorities, planning and implementation of actions.

The meetings held and planned are intended to facilitate the formulation of measures-interventionist projects and their consistency with available programmes and financial tools (SIE Funds and EU Programmes under direct management, national and regional programmes), although so far it has been observed that some countries, which adhere to the strategy, have not participated regularly and/or have not been able to make adequate contributions. At the same time, the following needs have emerged: to organize moments of sharing and meeting between the managing authorities of the main European funding programmes (Regional, National and Regional Cooperation) and the parties (national and regional) involved in the implementation of the EUSAIR Strategy; to map the database in order to predict activities within the *Project Axis 4* of the ADRION programme as well as to construct a platform in which all the pillars can contribute with their results (Adriatic Ionian Macro-regional Platform).

The meeting report of the working group Pillar 4 highlighted that Italy was the only country participating at the negotiating table with well-defined strategic choices. As far as the Italian country governance is concerned, there is a good understanding of work and sharing of choices between the regions and the MIBACT. For a more effective EUSAIR action, a greater involvement of the Ministries working in the other pillars would be desirable, in particular of the Ministry of Agriculture, as a few actions included in the EUSAIR strategic plan require close collaboration between Pillar I and Pillar IV. It would therefore be

appropriate to establish an ad hoc working group that involves Regions. In addition, the Marche Region stressed that specific branding actions should be introduced as a prerequisite to enhance the EUSAIR actions of Pillar IV. As regards the tourism supply diversification (products and services), main topics of interest emerged: the development of innovative management models of creative products that have a positive and effective impact on the area; the development of creative and cultural industries and sharing of good practices in support of artistic entrepreneurship; the creation of a creative district in the macro-region; enhancement of the most representative product clusters; strengthening of thematic tourist routes and creation of new routes; definition of niches of excellences in the broader Region and their interconnection to enhance the tourism offer.

A requirement which still should characterize every type of product and supply of the macro-region is accessibility. Accessible tourism is defined as very high quality of supply, because it should meet the needs of everyone: children, elderly, mothers, persons with disabilities who move slowly, who do not see, or suffer from food allergies, etc. Definitely, the needs of the tourist industry should be combined with "hospitality", which means attention, dialogue, technical knowledge, quality of places, services, infrastructure facilities, and training of operators. In order to conquer this market, a vision made of knowledge and skills, which today is the heritage of few people, should become a common heritage.

4. *Conclusions*

The success of sustainable tourism policies requires that the governance structures and processes that support and manage tourism are sound and effective. A key to this is the engagement of the private sector and other stakeholders alongside government at both national and local level (Sustainable Tourism for Development Guidebook, 2013).

Specifically, the natural, cultural and archaeological heritage in the Adriatic Ionian macro-region is a strong asset which

should be enhanced in the light of the numerous opportunities arising from European, national, regional and local policies and their implementation, which requires the active participation of various local actors.

Alternative or innovative and sustainable forms of tourism (e.g. sports, eco, cultural, nautical, thermal, rural, religious, educational, business, etc.) and their integration with festivals and creative industries have also interesting potential for development.

Cross-border co-operation within the strategy does also offer possibilities for developing the hinterland (rural areas, joint identification and promotion of transnational thematic tourist products and routes). Joint action in that area should be based on an analysis of large-scale spatial development tourism trends and its potential impact on the wider socio-economic development, as well as on systematic exchange of know-how.

Careful planning and effective participation focusing on business, product and process innovation can be considered as valuable tools for the sustainable development of the whole EU Macro-region. Their implementation needs the promotion of integrated planning approaches, aimed at enhancing the quality of life of citizens and mitigating environmental and climate threats.

In spite of its excellent geographical position between Europe and the Mediterranean (and in view of a future Mediterranean macro-region), the cultural and tourism potentials of the Adriatic Ionian macro-region are not sufficiently and/or appropriately used and enhanced, due to the different political, institutional and normative situations of its territories, settlements and infrastructure as well as to the urban and regional planning tools that should guide the physical and functional changes, within a vision of the future which should be as shared as possible. Spatial planning could be considered a buffer mechanism between the private and the public sector for the benefits of all the stakeholders, including entrepreneurs, tourists, local people, universities and research centres, public institutions and local and central governments.

Therefore, planning and programming tools should bear new practices of local governance based on the idea of integration and unitary development of the coastal areas (subjected to a high anthropic pressure), the hinterland (increasingly populated and in a state of neglect), the urban systems, the rural fabric of small centres and the naturalist areas (Pultrone, 2011).

In order to implement the EUSAIR, it is equally important to improve quality management and sustainability through quality labels (e.g. the European Tourism Quality label ETQ) or other joint labels, as well as to promote service innovation through the use of ICT, developing the links between health tourism and active ageing; to promote activities and services based on cultures and values, food and wine tour, to support active social inclusion and opportunities for youth in remote areas and areas exposed to demographic changes; to stimulate Smart Specialisation and Smart communities through the creation of thematic tourism platforms for collaboration between the scientific community, public authorities and businesses; to carry out research and innovation strategies able to spur innovation and creativity in the tourism and cultural sectors; to facilitate networking and mobility of artists and cultural operators in the frame of contemporary production and creative industries, e.g. festivals. Last but not the least, the success of public and private social, cultural and economic initiatives, based on the principle of sustainable tourism, is closely linked to the quality of landscape, "essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity" (European Landscape Convention, 2000). The recognition of every place as a crucial factor for people's quality of life and the call to integrate landscape in cultural, environmental, rural, social, economic and spatial and urban planning policies, as well as in the other policies which can influence landscape directly or indirectly, pave the way to interesting prospects about its design through actions of protection, management and innovation (Pultrone, 2011 and 2012).

The identification and development of an Adriatic-Ionian 'basket of tourist products', which are based on nature,

landscape, cultural heritage and creative industries and can be associated in a unique manner with the Region as well as diversified as to satisfy more and more demanding tourists, are of crucial importance for its sustainable development, the improvement of cohesion, better quality of the environment and of life, employment growth. Existing good practices of successful macro-regional projects and actions in the EU Strategy are a reference from which to draw appropriate methodological lines and interesting contents (European Commission, 2014d).

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Enhancing Sustainable Tourism in Adriatic-Ionian Region through co-creation: the role of Universities and Public-Private Partnerships

edited by Francesco Adornato, Simone Betti, Andrea Caligiuri, Alessio Cavicchi, Mara Cerquetti, Francesca Coltrinari, Luigi Lacchè, Roberto Perna, Francesca Spigarelli

Under the aegis of EUSAIR policy, Sustainable Tourism is considered a pillar. The goals set for the pillar are the diversification of the macro-region's tourism products and services along with tackling seasonality of inland, coastal and maritime tourism demand and, improving the quality and innovation of tourism offer and enhancing the sustainable and responsible tourism capacities of the tourism actors across the macroregion.

In light of this background context, the international workshop "Enhancing Sustainable Tourism in Adriatic-Ionian Region through co-creation: the role of Universities and Public- Private Partnerships", was organised in Macerata in September 2016.

30 paper proposals were submitted to the Scientific Committee in the form of abstracts. Following a peer review process, 19 were selected and accepted for publication in the proceedings.

These papers, projects and case studies demonstrating the collaboration between universities and local stakeholders in different fields and disciplines from several Adriatic-Ionian countries, were organised in 5 different conference sessions, namely: 1. Cultural and Tourism Destination - management and promotion, 2. Tourism Policy and ICT, 3. Coastal and maritime tourism, 4. Participatory processes in tourism and cultural management, 5. Archaeology and museums

In copertina:
Grafica di Chiara Crucianelli

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