

**Mobilisation and Mutual Learning Workshop Report and Roadmap on Sustainable Tourism:  
Tourism provides income but also destroys the values that brought it  
to Cyprus – How can we preserve both?**



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## **TOURISM PROVIDES INCOME BUT ALSO DESTROYS THE VALUES THAT BROUGHT IT TO CYPRUS – HOW CAN WE PRESERVE BOTH?”**

Workshop Place and Date: Nicosia, 22-23 November, 2016  
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The purpose of this report is to summarize the results of the first Cyprus Mobilization and Mutual Learning (MML) workshop about Sustainable Tourism in Cyprus that took place on the 22nd and 23rd of November, 2016 in Nicosia in the context of the project “Marina [www.marinaproject.eu](http://www.marinaproject.eu)– Marine Knowledge Sharing Platform for Federating Responsible Research and Innovation Communities” funded by the Horizon 2020 Programme of the European Union. The Cyprus Mobilization and Mutual Learning workshop is one of the 34 European MMLs that will be conducted by the Marina project partners all over Europe, as well as the first of two local and one international that will be conducted in Cyprus in 2017/18. The goal of the MML workshops is to create common visions, engage stakeholders to decide on common action plans on important marine issues related to the European Blue Growth Strategy, which will be exploited as policy recommendations on a national and European levels.

The Cyprus MML was organized by the Cyprus Neuroscience & Technology Institute (CNTI) and XPRO Consulting Limited and it brought together seventeen (17) representatives from the marine and tourism related public and private sectors, NGOs, citizens and local authorities interested in issues concerning Sustainable Tourism in Cyprus.

The MML Workshop was realized using the Structured Democratic Dialogue participatory methodology to examine different perspectives and to decide with concrete action of how to preserve Cyprus’s marine and coastal heritage and at the same time improve its tourism industry.

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## EXECUTIVE SUMMARY

Cyprus has always been praised about its natural beauty, cultural and historical heritage. It has some of the most remarkable beaches (784 km long coastline) and clear seas in the Mediterranean Sea. Since 2000 Cyprus welcomes more than 2,5 million tourists per year and an average of 200.000 cruise-ship visitors (67% from EU Countries). The increase of tourism in Cyprus in the last 2 years has been approximately 8%. Cyprus plays a considerable role in the overall EU-28 scene and helps raise the total market share of the Mediterranean region to 37.1%.<sup>1</sup> More than 29,000 people were employed in hotels and restaurant businesses, in 2015, a number amounting to 8% of total employment in the same year. Tourism is one of the main sources of Cyprus's income with more than 2 billion Euro/year meaning 18% of Cyprus GDP, which is way above the average EU GDP rate of 10% contributed by Tourism. It is worth noting that tourism is one of the EU Blue Growth sectors. The predominant factors for choosing Cyprus as a holiday destination, is the high quality of natural features of its coastal areas and the marine water quality and richness compared to other top European tourism destinations, as well as its cultural heritage. The question is **“how can Cyprus improve and further develop its tourism industry towards sustainable tourism, by protecting its natural marine and coast environment?”**. This question has several dimensions that must be act upon such as political - collaboration among several governmental organisations for effective regulation, oversight and execution; economic (e.g. economic growth, employment, consumer confidence...) – how to make tourism sustainable and environmentally viable for safeguarding the marine and coastal heritage that creates it; social and cultural (e.g. demographic changes, lifestyle factors, fashion changes/trends, labour/social mobility, income, consumers' attitudes...) – modern tourists are looking for authenticity and uniqueness so the new trends must be carefully evaluated; technological: Use modern technology like drones to patrol coastlines for avoiding ship pollution and citizen- observatories through mobile phones to report pollution sites and inappropriate environmental behaviour; legal (e.g. industry regulations, competition regulations, taxation, employment, health and safety regulations...)- e evaluate current regulations and make them simpler and operational; environmental (e.g. regulations and restrictions, environment protection, stewardship, sustainability...) - raise citizen and business awareness about the environmental protection and sustainability; capacity building and education - educate citizens about the value of the sea in their daily lives.

The EU-funded project MARINA aims to create awareness about Responsible Research and Innovation (RRI) in the marine environment. Responsible Research and Innovation (RRI) is an EU-initiative for tackling complex societal issues such as Sustainable Tourism. The RRI concept has six dimensions: Open Science, Public Engagement, Science Education, Governance, Ethics and Gender Equality. The MARINA project addresses pressing marine hot topics by promoting open science and science education, public engagement and governance, ethics and gender equality. One of the main instruments of MARINA are the Mobilisation Mutual Learning (MML) workshops where policy makers and implementers, citizens, scientists, researchers, local authorities and industry actors are actively participating for identifying real actions for addressing marine hot topics and European societal challenges and to become aware about RRI and its benefits. There are two rounds of MML workshops, where the first one took place from November 2016 – February 2017 with a total of 17 MML workshops and 350 participants throughout Europe.

<sup>1</sup> UNTO Tourism Highlights 2016 Edition, <http://www.e-unwto.org/doi/pdf/10.18111/9789284418145>

The Cypriot workshop was the second MARINA MML workshop held on 22nd and 23rd November 2016 in Nicosia Cyprus with 17 multidisciplinary participants on the first day and 12 participants on the second day. The participatory methodology used was the Structured Democratic Dialogue. The participants identified in total 53 actions to address the hot topic of sustainable tourism in Cyprus. After discussing in depth all 53 actions, clustering them, voting and further discussing, the participants reached a common language and a common vision and they identified the most critical actions to be implemented forming the Action Roadmap for initiating Sustainable Tourism in Cyprus. The Action Roadmap consists of 16 actions organised in 6 levels. The lower two levels with 5 actions comprise the root actions that all the rest of the actions depend on.

It is important to note that the MARINA MML workshop results relate and reflect well the RRI dimensions such as public engagement, governance, ethics, open science and science education. The only not reflected RRI dimension is gender. All participants appreciated the MML workshop methodology and process, which they found very beneficial. They all expressed their appreciation and motivation to follow-up on the agreed actions in their organisations. The MARINA Cyprus MML results will be beneficial to the Cyprus under-development sub-ministry of tourism.



## Hot Topic Triggering Question

Every MML workshop deals with a hot topic and a triggering question for active participation and for identifying feasible and realistic actions for providing solution possibilities to the hot topic.

In the case of the Cypriot MML workshop the hot topic is **Sustainable Tourism** and the triggering questions is:

**“It is every Cypriot’s interest and responsibility to protect the cultural marine heritage (both on land and under-water) of the island in order to continue to feed from it. What actions (Political, Economic, Social/Cultural, Technological, Legal and Environmental) are necessary to ensure that Cyprus lives in prosperity benefiting from sustainable tourism and at the same time preserving its tangible and intangible marine cultural assets that attract its tourism?”**

## INTRODUCTION TO THE HOT TOPIC OF SUSTAINABLE TOURISM

All MML workshop participants received the following description before the workshop in order to set the scene for the Cyprus MML Workshop: The hot topic of Sustainable Tourism is cross-cutting because it is about Tourism and Coastal cities, overfishing, pollution caused by human, land and sea activities, preservation of sensitive marine ecosystems, regulation, responsibility divided and not coordinated among many ministries, lack of strong measures to stop illegal fishing, touristic structure development and pollution.

Many of the Sustainable Tourism problems are: a) Volatility of demand through years and seasons poses sustainability challenges; b) Response capacity is limited by a fragmented and uncoordinated sector; c) Enduring problems in sustainability and visibility; d) Environmental issues challenging the development potentials; e) A structural lack of skills is limiting innovation and access to resources. Although a number of the above problems apply to tourism industry overall, there is clear evidence that the sea-and-sand mass tourism business model is the most volatile, environmentally unsustainable and creates limited value locally. These issues are structural in nature, and likely to continue or sharpen in the future <sup>1</sup>. The following key issues and challenges with the hot topic were identified before the workshop:

- Political – Raising awareness that Cypriot ministries must collaborate in order to tackle the raised issues. It would be even better to move all the responsibilities under one ministry and create an operational responsible body for regulation, oversight and execution.
- Economic (e.g. economic growth, employment, consumer confidence...) – Tourism is very important for Cyprus's national income and employment. It must be protected but also done responsibly to safeguard the natural beauties and marine cultural heritage.
- Social/Cultural (e.g. demographic changes, lifestyle factors, fashion changes/trends, labour/social mobility, income, consumers' attitudes...) – Tourists are not only interested by the beaches but also what is culture and what other activities are offered on the coast and in the sea. The new trends must be carefully evaluated and regulated in order to not to create "easy" income by destroying the marine ecosystems (i.e. luxury fishing of sharks just for fun and charging 1000 Euros per person).
- Technological: Use modern technology like drones to patrol coastlines for avoiding ship pollution.
- Use citizen observatories through mobile phones to report pollution sites and inappropriate environmental behaviour.
- Legal (e.g. industry regulations, competition regulations, taxation, employment, health and safety regulations...): Evaluate current regulations and make them simpler and operational.
- Environmental (e.g. regulations and restrictions, environment protection, stewardship, sustainability...): Raise citizen and business awareness about the environmental protection and sustainability.
- Capacity building and education: Educate citizens about the value of the sea in their daily lives.
- Include Responsible Research and Innovation (RRI) principles in the curriculum of young scientists and initiate RRI-driven scientific projects.

Cyprus is prised about its long-stretched beaches (784 km long coastline) and clear seas. Since 2000 Cyprus welcomes more than 2,5 million tourists per year and an average of 200.000 cruise-ship visitors (67% from EU Countries). The increase of tourism in Cyprus the last 2 years has been approximately 8%. Cyprus plays a considerable role in the overall EU-28 scene and helps raise the total market share of the Mediterranean region to 37.1% <sup>2</sup>.

More than 29,000 people were employed in hotels and restaurant businesses, in 2015, a number amounting to 8% of total employment in the same year. Tourism is one of the main sources of Cyprus's income with more than 2 billion Euro/year meaning 18% of Cyprus GDP, which is way above the average EU GDP rate of 10% contributed by Tourism. The predominant factors in choosing Cyprus as a holiday destination is the high quality of natural features of coastal areas and its marine water quality and richness compared to other top European tourism destinations, as well as Cyprus's cultural heritage. Thus, tourism also contributes to regional and potentially sustainable development, while shaping a European identity and awareness on natural and cultural heritage <sup>3</sup>.

Up to 80% of foreign tourists visit the coast of Cyprus. A tourist uses 3 or 4 times more water and energy than a permanent resident. Hence the pressure in coastal areas of Cyprus is growing and the fragile ecosystems are subjected to increasing misuse and overexploitation. Tourist infrastructure development, underwater noise, urban expansion, industrial and port development and expansion, and road infrastructure development add to the pressures. Direct threats to the systems include localised domestic pollution, agricultural inputs, industrial and some oil pollution. Excessive strip development along coastal areas has raised concerns that the carrying capacity of several coastal areas may already have been exceeded<sup>3</sup>. Tourism has a big effect on environment and health and it is one of the main serious threats that the Cypriot ecosystem is facing today together with residential and road infrastructure developments <sup>4</sup>.

Sensitive coastal areas include sand-dune systems, banks of shingle, cliffs, and coastal wetlands, all of which are subject to intense pressure. Coastal ecosystems provide habitats for flora and fauna such as the seagrass *Posidonia Oceanica* beds and sea turtle nesting areas. Since 1972, Cyprus law protects sea turtles' breeding ground, the only one in the Mediterranean. However, these nesting grounds are threatened by plastic pollution as well as tourists visiting them. Cyprus designated 40 Sites of Community Interest (SCI) and 30 Special Protected Areas (SPA) for their inclusion in the Natura 2000 Network, in order to implement the Habitat Directive 92/43/EC and the Birds Directive 2009/147/EC55. Furthermore, Cyprus has established 6 marine Natura 2000 sites and implements monitoring programs under the EU Habitats Directive (92/43/EEC) for species such as the Mediterranean Monk Seal, Green Turtle (*Chelonia mydas*) and the Loggerhead Turtle (*Caretta caretta*), which breed regularly on the island's beaches, as well as for marine habitats such as the *Posidonia* meadows and sea caves. In addition, the mapping of *Posidonia Oceanica* has also been implemented in all the marine Natura 2000 areas. The effective management of the marine Natura 2000 areas as well as all the marine protected areas significantly contributes towards the objectives of maintaining good marine water status. The endemic species of Mediterranean Cowry, *Cypraea spurca*, is now under threat from too much collection by people.

The marine environment is of particular importance for Cyprus, both for environmental as well as economic reasons given the dependence of the island on tourism. The status of the marine and coastal environment of Cyprus is evaluated as Good-High environmental ecological status, based on the implementation of the Water Framework Directive (2000/60/EC) and physico-chemical parameters, along with various monitoring programs such as the Med POL of UNEP/ MAP and Impact Environmental Assessments.

<sup>1</sup> Study in support of policy measures for maritime and coastal tourism at EU level Specific contract under FWC MARE/2012/06 - SC D1/2013/01-SI2.648530 Final Report DG Maritime Affairs & Fisheries, Rotterdam/Brussels, 15 September 2013

<sup>2</sup> UNTO Tourism Highlights 2016 Edition, <http://www.e-unwto.org/doi/pdf/10.18111/9789284418145>

<sup>3</sup> <http://www.eea.europa.eu/soer-2015/europe/tourism#note1>

<sup>4</sup> <http://www.eea.europa.eu/soer-2015/countries/cyprus>

According to the stock assessment results until 2010, the stock level of four of the most commercial fish species in Cyprus was in “over-fishing” status. The fishing mortality (F) for each species was greater than the fishing mortality threshold (F0.1). Cyprus has completed the 1st phase of the Marine Strategy Framework Directive. The implementation of the Marine Strategy Framework Directive is a challenging task for the island due to the limited human and economic resources.

In the 2015 bathing season, a number of 21 short-term pollution incidents were reported. Investigation of all incidents showed no sources of pollution originating on land, but most probably by illegal dumping of waste from boats or ships. These issues continued during summer of 2016. Wastewater treatment plants are in operation for the 4 large agglomerations on the coast of Cyprus. Wastewater effluent is almost entirely reused for irrigation. There is no disposal of untreated wastewater (municipal or industrial) to the sea. Two of these treatment plants, i.e. the Limassol/ Amathousa STP and the Larnaca STP, periodically dispose tertiary treated effluent to the sea during the winter months.

Cyprus climatic conditions (increased sunlight and high temperature) and the salinity of the coastal waters in the Eastern Mediterranean are quite unfavourable to the survival of microorganisms. The desalination plants, which provide fresh water to the island (84% of the drinking water in drought periods) have also an impact on the marine environment due to the increase of salinity at the points of brine rejection<sup>5</sup> and the increases of marine organisms’ mortality at the seawater absorption points<sup>6</sup>. The coastal areas of Cyprus are not rich in numbers of marine life mainly due to small inputs of nutrients and pollution. Under the Fisheries Regulations, standards have been adopted for substances in effluent and the environmental quality of recipient seawaters, but still overfishing takes place of young fish populations. Furthermore, illegal shark fishing takes place by charter luxury cruises taking tourists on leisure fishing.

The MEDPOL Programme carries out monitoring for tar on beaches and dissolved hydrocarbons in the seawater. Another issue is that no port reception facilities for bilge or ballast waters exist in Cyprus, although regulations on their establishment and operation have been recently prepared. An oil-pollution combating unit is in place, a national oil spill Contingency Plan has been implemented and sub-regional oil combating arrangements have been established with Egypt and Israel, with EU support. Prohibitions exist on the disposal of lubricants and other oils and in the use of organotin-based anti-fouling paints in the marine environment. The Cyprus’s coastal area and the under-water area is Cyprus’s cultural coastal and marine heritage attract the tourists. However, these are continuously adversely affected causing deterioration of biodiversity and cultural heritage. The rapid development of the tourist industry has negatively affected the coastal zones, with the construction of hotels and tourism complexes. It is not sufficient, neither sustainable nor responsible to focus only on economic factors and urban development. The increasing use of natural resources, waste generation, and build-up areas affect nature negatively. The threat of climate change, mainly due to extreme weather events and rising sea levels, the development of marinas along the coast in conjunction with tourist villages, are changing the island with a consequent negative impact on the environment.

Considering all of the above it is important that the protection and development of coastal and marine areas (species, habitats, landscapes and seascapes) are integrated into special development strategies for larger areas, under the umbrella of an Integrated Marine and Coastal Area Management (IMCAM). Despite the efforts from the government, municipalities and NGOs, the problem continues because the oversight of marine waters is divided among several ministries and so are the responsibilities.

Other sources used for the above are: [1] <http://www.eea.europa.eu/soer-2015/europe/tourism>, [2] [Cyprus 2015 Bathing Water Report](#), [3] [EEA Coastal and Marine Zones](#)”

<sup>5</sup> [http://www.moa.gov.cy/moa/wdd/wdd.nsf/All/E98E46A1550BE936C2257B8F0039DDBD/\\$file/4th\\_conf%2007JUN2013.pdf](http://www.moa.gov.cy/moa/wdd/wdd.nsf/All/E98E46A1550BE936C2257B8F0039DDBD/$file/4th_conf%2007JUN2013.pdf)

<sup>6</sup> [http://uest.ntua.gr/adapttoclimate/proceedings/full\\_paper/Thrasivoulou.pdf](http://uest.ntua.gr/adapttoclimate/proceedings/full_paper/Thrasivoulou.pdf)

## SUSTAINABLE TOURISM RELATES TO RESPONSIBLE RESEARCH AND INNOVATION

Before the workshop the hot topic was examined to identify how it relates to RRI. Responsible Research and Innovation (RRI) is an EU-initiative for tackling complex societal issues such as Sustainable Tourism. The RRI concept has six dimensions: Open Science, Public Engagement, Science Education, Governance, Ethics and Gender Equality. The MARINA project addresses pressing marine hot topics by promoting open science and science education, public engagement and governance, ethics and gender equality. It was concluded that it closely related to RRI because it requires:

- Engagement (of all societal actors and their joint participation in the RRI process): This hot topic requires engagement from citizens, hotels and related tourism industry, fishermen, municipalities, wastewater treatment plants, desalination plants, ministries and other regulatory bodies, the semi-governmental Cyprus Tourism Organisation, as well as environmental NGOs and universities and the Cyprus College of Tourism and Hotel Management.
- Gender equality (which highlights the need to integrate the gender dimension in the RRI context): Many Cypriot institutes and high positions are occupied mainly by males, even though Cypriot women are highly educated and have the skills and capacity to hold high positions and responsibility roles.
- Science Education (as a means to make change happen through raising awareness and embedding RRI into educational curricula): Awareness about the sensitivity of the coastal and marine environments must be raised as well as the importance of RRI in higher education structures (colleges and universities). Environment (environment protection): Public and industry awareness campaigns are necessary through a specific media campaign.
- Open Access (as a means to boost innovation and increase the use of scientific results): Many marine studies are not open to other public services, research centers and the public.
- Ethics (aimed at increasing societal relevance and acceptability of RRI outcomes): Ethics and punishment for not obeying regulations without exception must be applied. To do the right thing at the right time.
- Governance (aimed at developing a framework that integrates the aforementioned elements): Since the responsibility and regulations fall under three separate structures: 1) the Department of Merchant Shipping, the Fisheries Department, Ports Authority; 2) the Department of the Environment and the Ministries of Trade, Environment Department and 3) Municipalities for the public Health, common visions and common action plan must be created. It would be better to move the responsibility under one ministry.

During the workshop’s introduction the above RRI dimensions were presented and explained. After the workshop the above conclusions were re-examined based on the results of the MML Workshop, in order to identify how the agreed actions relate to the RRI dimensions.

## MML WORKSHOP METHODOLOGY USED: STRUCTURED DEMOCRATIC DIALOGUE

The workshop was executed and facilitated based on the method of the Structured Democratic Dialogue (SDD). SDD is a modern participatory method of discussion and decision making for the management of complex problems and issues involving multidisciplinary and multi-sectoral stakeholders.

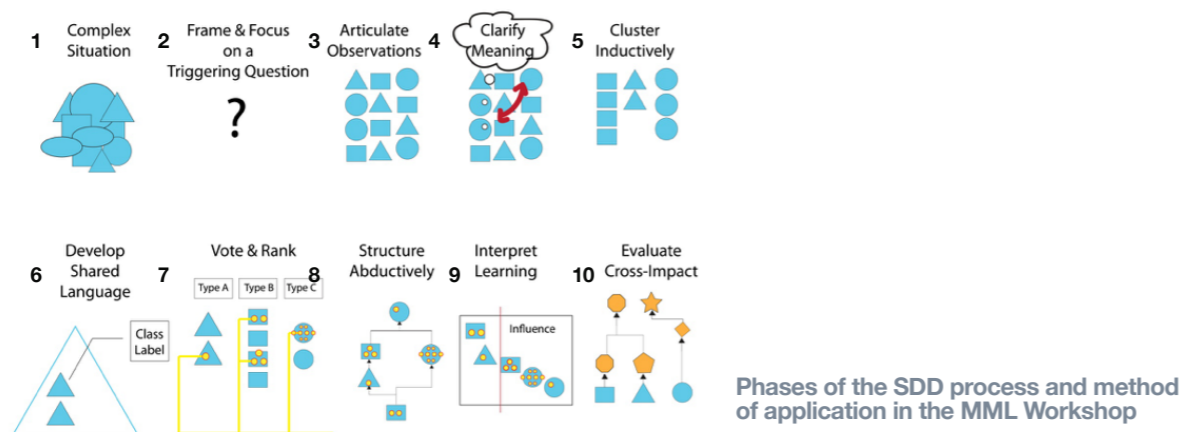
### Avoiding phenomena “Groupthink” and “Erroneous Priorities Effect”

In meetings where no measures are taken to protect the authenticity of all opinions, there is risk that some participants will support views that represent the majority of the group because they do not want to “go against the group”. This results in participants reaching an apparent agreement, which only represents the “most powerful opinion”. This phenomenon is known as “Group Think”. The Structured Democratic Dialogue SDD method prevents this phenomenon by using the Nominal Group Technique, which requires equal time and equal importance to each idea/ opinion protecting the authenticity of every idea, thus ensuring that the phenomenon “Group Think” does not appear.

By definition a complex problem cannot be solved by solving all individual sub-problems, but it requires exploration and detection of relations between the sub-problems. It is proven that if different stakeholders discuss and propose actions to solve a complex problem, but then choose those actions that the majority sees as important, they are likely to decide to invest in solving sub-problems, which at first seem important (in the eyes of the majority) but they might not be in reality. However, if the same stakeholders were prompted to explore the influence of an action to solve a sub-problem over another action, they would choose different actions. This phenomenon is known as Erroneous Priorities Effect.

The SDD<sup>2</sup> method utilizes a so-called Interpretive Structural Modelling (which is incorporated in the Cogniscope™ system), which eliminates this phenomenon with the use of mathematical algorithms, to ensure that the prioritization of ideas is based on the influence they have on each other.

The Structured Democratic Dialogue method is considered particularly effective in resolving multiple conflicts, interests and values and to bring the participants closer to agree on a common understanding and strategy for resolving the issue.



<sup>1</sup> SDD was developed in the 1970s with the initiators Alekos Christakis (Christakis, 1973), John Warfield (Warfield, 1982) and Hasan Özbekhan (Özbekhan, Jantsch & Christakis, 1970), in under the Club of Rome.

<sup>2</sup> SDD is based scientific on 7 laws of science of complex systems (complex systems) and government (cybernetics) and it has been scientifically documented worldwide in hundreds of cases over the last 30 years. More information on the methodology of the Structured Democratic Dialogue exist in books (Christakis & Bausch, 2006; Flanagan & Christakis, 2009), websites (Wiki, 2010), simple introduction to the theory (Laouris, 2012), or earlier related applications (Laouris, Dye, Michaelides & Christakis, 2014; Laouris, Michaelides & Sapio, 2007; Laouris & Christakis, 2007).

The implementation of SDD is performed in well-defined phases and 10 steps, where a deeper understanding of the topic it is gradually achieved and solutions in the form of actions can be identified and agreed. SDD facilitates the creation of a common understanding of the different dimensions of the topic and importantly priority is given to some ideas over others depending on their influence over each other.

The following illustration explains the SDD method, where a complex topic is reorganized and rewritten, so that it is possible to intervene and to change. The phases of the illustration can be summarized as follows:

### Before the beginning of the MML Workshop

**Phase 1 with steps 1 and 2:** The complex problem/ topic is described and framed and a triggering question is defined. This phase took place before the MML workshop and the participants received the Hot Topic description and the triggering question before arriving to the workshop. The Hot Topic was defined by XPRO (Xenia Schneider) and reviewed by CNTI (Elena Aristodemou and Yiannis Laouris), ISPRA (Sasa Raicevik), Nausicaa (Iwona Gin) and EurOcean (Tiago Garcia). CNTI and particularly the facilitator of the MML workshop, Dr. Yiannis Laouris, defined the Triggering Question. Dr. Yiannis Laouris from CNTI and his team facilitated the workshop.

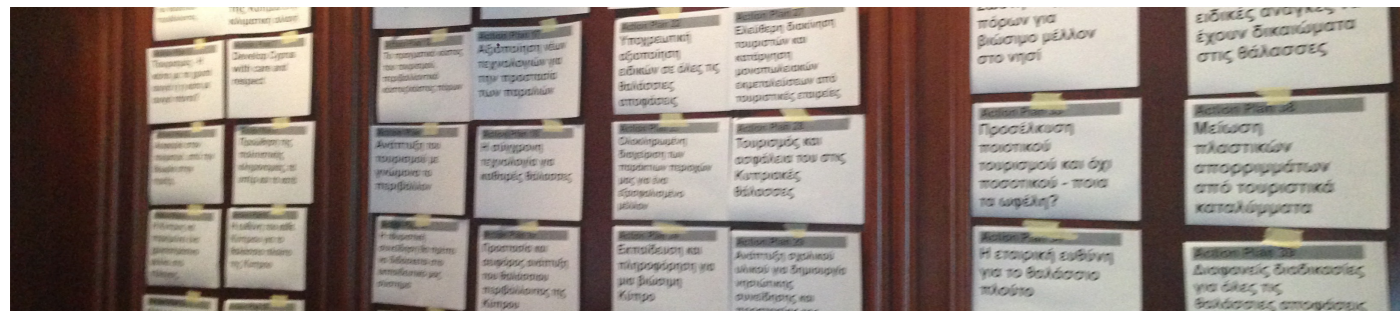
### DURING THE MML WORKSHOP – DAY 1

All participants are sitting in a “U” formation so that they can see each other. The facilitator, Dr. Yiannis Laouris, was standing in the middle of the formation. A short presentation (Appendix 1) about the MARINA project and RRI and a briefing about the triggering question were given to the participants by Xenia Schneider.



**Phase 2 with steps 3 and 4:** All participants are asked to provide possible ideas/actions to the Triggering Question. One by one, the participants state and explain their ideas/actions to all other participants. This requires active participation and active listening by all. Simultaneously, the action is recorded in Cogniscope™ software. The explanations are videotaped. The explanations must be specific and understandable to all. The others participants may seek clarification, but they are prohibited from criticising the idea/ action.





**Phase 3 with steps 5 and 6:** All ideas/actions are grouped into categories or clusters based on similarities and common characteristics. The method requires that the clustering takes place while the participants are asked how two random ideas have enough common features to justify placing them in the same cluster (without this cluster yet existing!). This bottom-up process results in evolutionary clusters and participants benefit from an in-depth discussion around the meaning and importance of each action/ idea, enabling the creation of wider consensus regarding the hot topic discussed. Through this process, participants develop a common vocabulary and a common understanding about the various aspects of the hot topic (triggering question) being discussed. Broad consensus is achieved through discussion of possible different perceptions in relation to the meaning and importance of each idea/action. The clustering is registered in the Cogniscope™ tool. The clusters and their actions/ideas are printed and displayed on the wall, so that all participants can see them.

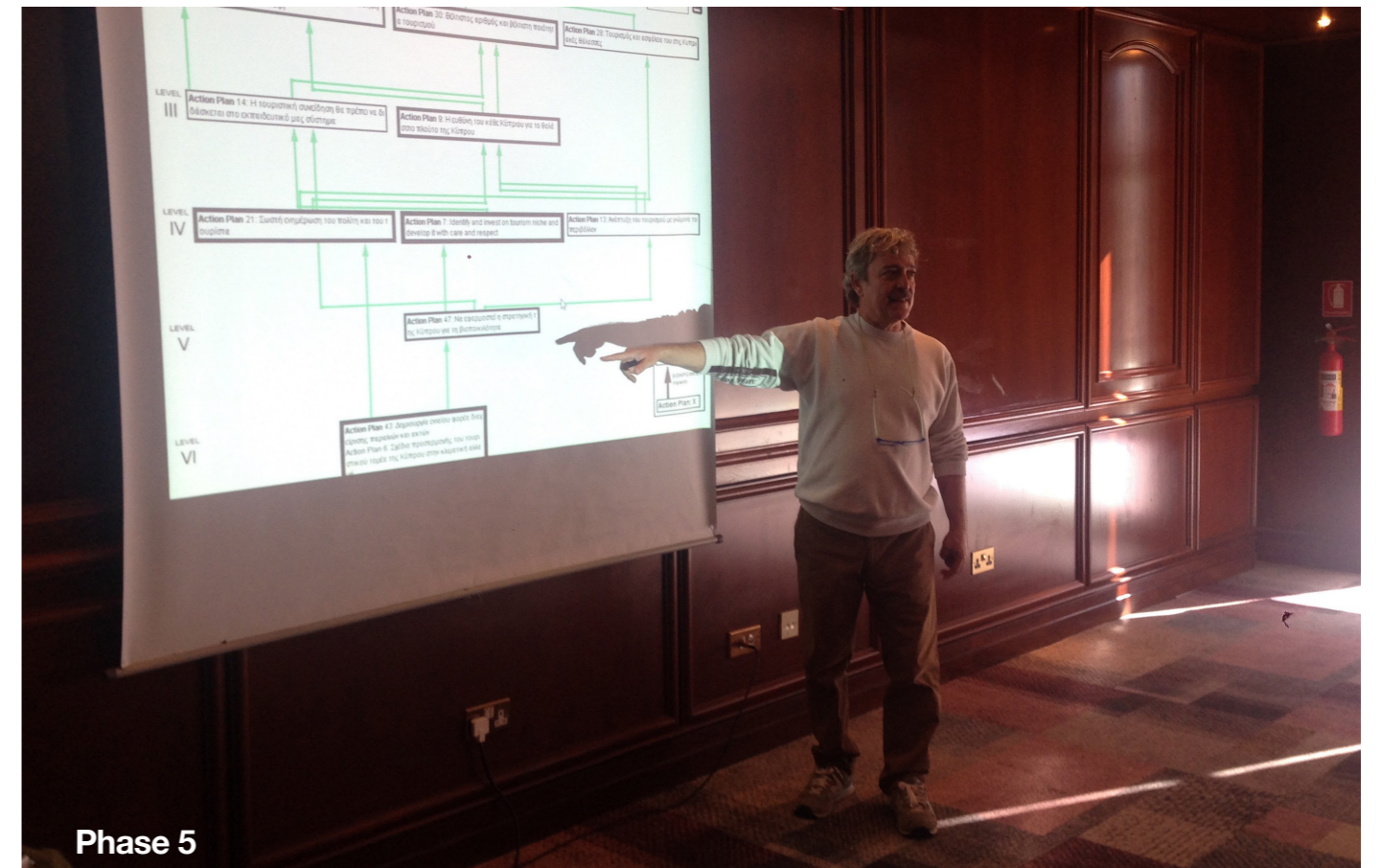
**Phase 4 with steps 7:** All participants have five votes and are asked to choose the actions/ ideas they believe can help solve the hot topic and are the most important for them. Only actions/ideas that receive votes are moving to the next and most important phase.



## DURING THE MML WORKSHOP – DAY 2

**Phase 5 with steps 8 and 9:** This phase collects the actions/ideas that have received votes and the participants collectively are asked to investigate how one action/idea can affect significantly another action/idea. The question asked is “If I execute this action/idea will it significantly affect the execution of that action/idea?” If the answer is ‘yes’ with a 75% majority, the impact is recorded and added to the Roadmap of actions/ideas. When the facilitator asks the participants to vote and the vote is about 50% Yes and 50% No, then the significance is discussed in-depth and the participants are asked to revote. As the exercise progresses a Roadmap is built, shown and discussed. The actions at the bottom of the Roadmap indicate the basic actions that must take place in order to enable the rest of the actions to be executed. Therefore, the Roadmap encourages stakeholders to prioritize causative factors.

**Phase 6 with step 10:** In this phase the Roadmap is discussed in detail. The participants are asked to form teams of two or three members. The actions/ideas of the lowest three levels of the Roadmap must be discussed in greater detail for defining specific activities that are SMART (Specific, Measurable, Achievable, Realistic and Time Specific). In this manner, the Roadmap becomes executable because by executing the lowest levels it allows and enables the actions of the higher levels to be consequently executed.



Phase 5



Phase 6



## EXECUTING THE MOBILIZATION & MUTUAL LEARNING WORKSHOP

The first SDD MML in Cyprus was organized at Hilton Park Hotel on the 22nd and 23rd of November 2016.

### Knowledge Management Team

The successful and efficient implementation of the SDD<sup>SM</sup> methodology is ensured by the Knowledge Management Team (KMT) who is responsible to design, observe, supervise, and report the SDD results. This team should be small and flexible. The Knowledge Management Team consisted of:

- The representative of the “subject” from the MARINA project is Mrs. Xenia Theodotou Schneider from XPRO Consulting.
- The SDD Facilitators for the specific dialogue from CNTI Dr. Yiannis Laouris, Mrs. Elena Aristodemou, Mrs. Eleni Philippou, Mrs. Katerina Fotiou, Mr. Andreas Andreou

### MML Workshop Results

The following sections show all the MML Workshop Results. These results follow the phases discussed in the section above.

#### Phase 2: Participant Actions/Ideas and Ideas Based on the Triggering Question

The participants on the first day of the workshop stated the following actions and ideas based on the Triggering Question:

**What actions (Political, Economic, Social/Cultural, Technological, Legal and Environmental) are necessary to ensure that Cyprus lives in prosperity benefiting from sustainable tourism and at the same time preserving its tangible and intangible marine cultural assets that attract its tourism?**

For each action/ idea an explanation has been recorded. All videos are in the Greek Cypriot Language. All ideas and explanations can be found in Annex 1.

#### Phase 3: Clustering the Actions

The third main phase of the workshop was to cluster the statements based on the similarities and relations between them. This phase allows the participants to discuss and compare the statements to identify possible mutual relationships. This phase allows the participants to create a common vision and language in order to better tackle the Triggering Question. The agreed clusters are shown below:

Cluster 1: Fisheries Support

Cluster 2: Vision

Cluster 3: Management

Cluster 4: Prevention and Planning

Cluster 5: Environmental Consciousness

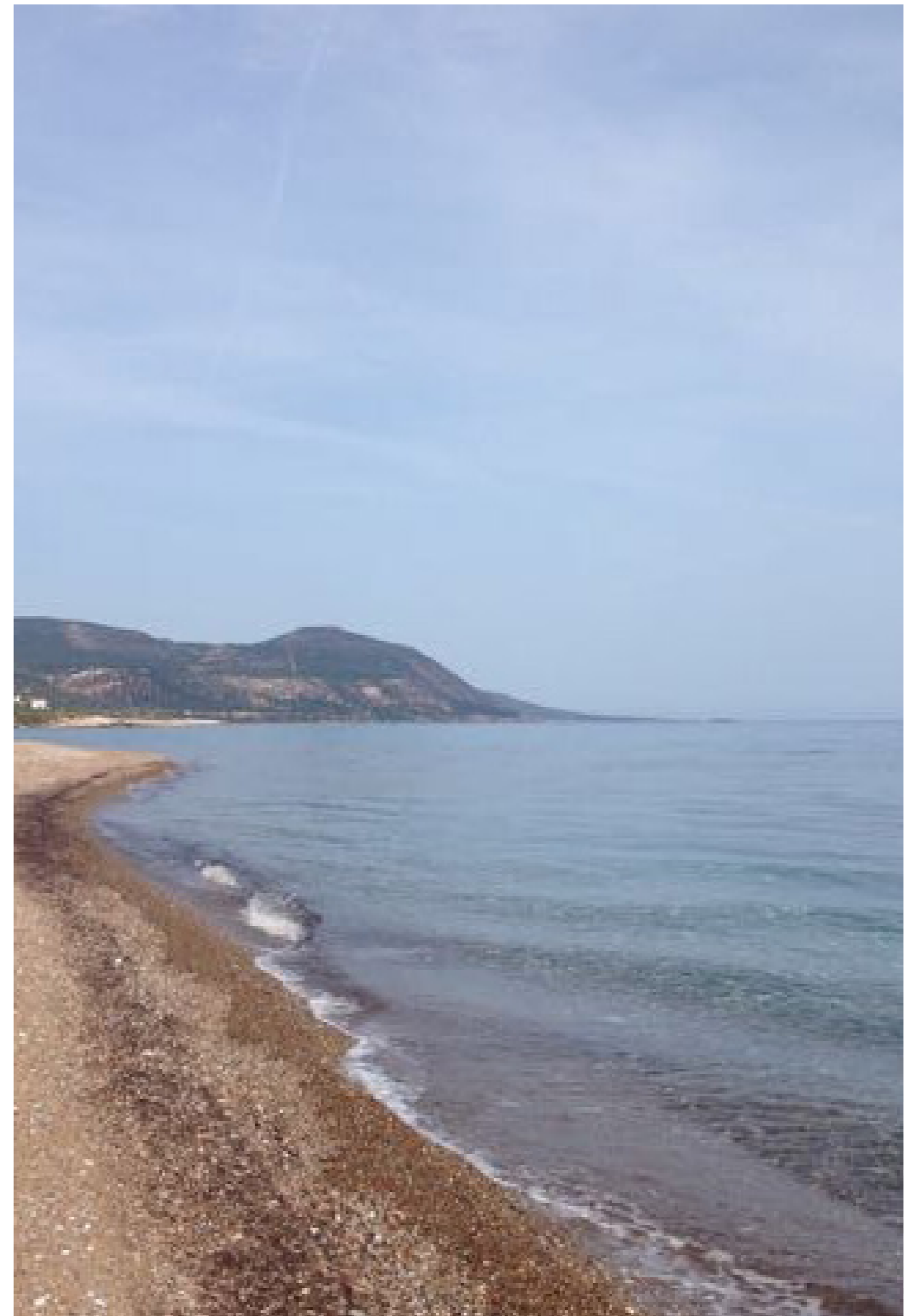
Cluster 6: Education and Awareness Raising

Cluster 7: Best Practices

Cluster 8: Regulative Framework

Cluster 9: Tourism Impact

Cluster 10: Safety



**Cluster 1:  
FISHERIES SUPPORT**

**ACTION 1**  
Financial support to the fisheries sector in order to protect the marine environment

**Cluster 2:  
VISION**

**ACTION 2**  
Tourism - The hen with the golden eggs or the hen that makes always eggs?

**ACTION 3**  
Tourism sustainability, from theory to action

**ACTION 4**  
Cyprus should remain a 'virgin' island continuing to inspire poets and songwriters

**ACTION 7**  
Identify and invest on tourism niche and develop it with care and respect.

**ACTION 8**  
Marine Cultural Heritage promotion by evaluating pros and cons

**ACTION 19**  
Protection and sustainability of the Cyprus marine environment

**ACTION 20**  
A world in an island care.

**ACTION 26**  
Responsible production and savings through tourism

**ACTION 33**  
Attraction of qualitative and not quantitative tourism – What are the benefits?

**ACTION 35**  
Tourism and environment, a mutual, difficult but not impossible relationship

**ACTION 36**  
Provide easy access to the sea for every tourist irrespective of the place he/she stays

**ACTION 45**  
Promotion of maritime and nautical tourism

**Cluster 3:  
MANAGEMENT**

**ACTION 5**  
Diligence by the authorities is required towards the sea

**ACTION 11**  
Sustainable development through law enforcement and fines

**ACTION 23**  
Comprehensive coastal area management for an assured future

**ACTION 25**  
Compliance of discharges of liquid effluents from ships must be ensured by public bodies and legislation

**ACTION 27**  
Free movement of tourists and repealing of monopolistic exploitations by tourism companies

**ACTION 32**  
Proper management of resources for a sustainable future on the island

**ACTION 37**  
People with special needs should have rights on the seas

**ACTION 39**  
Transparent procedures for all marine decisions (evaluation and attribution of responsibility)

**ACTION 42**  
Implementation of the Maritime Spatial Planning and comprehensive management of the coastal zone

**ACTION 48**  
Developed management plans should be implemented and obeyed (i.e. Akamas Management Plan)

**ACTION 50**  
Issue the necessary regulatory measures for protecting the marine environment

**ACTION 51**  
The Maritime Spatial Planning must be implemented and dedicated zones of activities to be developed

**Cluster 4: PREVENTION  
& PLANNING**

**ACTION 6**  
Plan for climate change adaptation by touristic activities is required

**ACTION 31**  
Apply best practices for managing water and energy in the tourism industry

**ACTION 47**  
The Cyprus Biodiversity Strategy needs to be implemented

**ACTION 49**  
Management plans for the rest of the Cypriot coastal areas should be developed

**Cluster 5: ENVIRONMENTAL CONSCIOUSNESS**

**ACTION 9**

Every Cypriot resident is responsible towards the Cypriot marine ecosystems

**ACTION 10**

Cultivation of environmental consciousness for sustainable development

**ACTION 34**

Marine heritage responsibility must be a corporate responsibility

**ACTION 44**

Society demands in publicizing shore and sea offenders and penalties

**Cluster 6: EDUCATION & AWARENESS RAISING**

**ACTION 14**

The tourism awareness must be taught through our educational system

**ACTION 21**

Proper information for citizens and tourists

**ACTION 24**

Education and information for a sustainable Cyprus

**ACTION 29**

Development of school materials for the creation of an island culture for protecting the sea

**Cluster 7: BEST PRACTICES**

**ACTION 15**

Hygienic coastal and marine legislations are needed

**ACTION 17**

Exploitation of new technologies for protecting coasts

**ACTION 18**

Use state of the art technologies for clean seas

**ACTION 38**

Reduction of plastic waste from tourist shelters

**ACTION 40**

Creation of smoking areas in all beaches

**ACTION 52**

Seabed and underground streams' mapping is necessary

**ACTION 36**

Provide easy access to the sea for every tourist irrespective of the place he/she stays

**Cluster 8: REGULATIVE FRAMEWORK**

**ACTION 22**

Obligatory exploitation of expertise in all decisions about marine issues

**ACTION 41**

Involvement of all departments for solving issues created from marine pollution

**ACTION 43**

Creation of a multidisciplinary body responsible for shores and seas

**ACTION 46**

Public services must engage and collaborate with the citizens

**Cluster 9: TOURISM IMPACT**

**ACTION 12**

Identify the real cost of tourism based on environmental, development and resources costs

**ACTION 13**

Tourism development with special focus on the environment

**ACTION 16**

Tourism development benefitting all residents – costs and benefits for the citizen

**ACTION 30**

Optimal number and high quality of tourists

**Cluster 10: SAFETY**

**ACTION 28**

Tourism and safety in Cypriot seas

**ACTION 53**

Minimise exogenous risks for ensuring the continuation of the tourist industry



#### Phase 4: Voting Results of all Actions

In the third phase and after the clustering the participants were asked to read all the actions and vote. Each participant had only 5 votes that she/he could distribute the way she/he thought beneficial to answer the Triggering Question with actions. It should be observed that participants voted not necessarily on their own actions, but instead on actions that would help resolve the triggering question in the best way possible.

In total 25 actions (47%) received one or more votes and 12 actions (22,6%) received more than 2 votes. This shows that the participants converged their opinions towards a common vision and a common action plan. The degree of dispersion of the views of the participants' actions/ideas is in normal range. This shows a sound basis for consensus, which will help in the effective treatment of the hot topic. It also assures that participants are all involved and all views are represented.

Only the actions/ ideas that receive at least one vote continue to the next phase. The voting results are listed in descending order based on the votes that each action received:

- Action 7:** Identify and invest on tourism niche and develop it with care and respect (7 Votes)
- Action 43:** Creation of a multidisciplinary body responsible for shores and seas (7 Votes)
- Action 21:** Proper information for citizens and tourists (6 Votes)
- Action 9:** Every Cypriot resident is responsible towards the Cypriot marine ecosystems (5 Votes)
- Action 30:** Optimal number and high quality of tourists (5 Votes)
- Action 6:** Plan for climate change adaptation by touristic activities is required (4 Votes)
- Action 10:** Cultivation of environmental consciousness for sustainable development (4 Votes)

**Action 33:** Attraction of qualitative and not quantitative tourism – What are the benefits? (4 Votes)

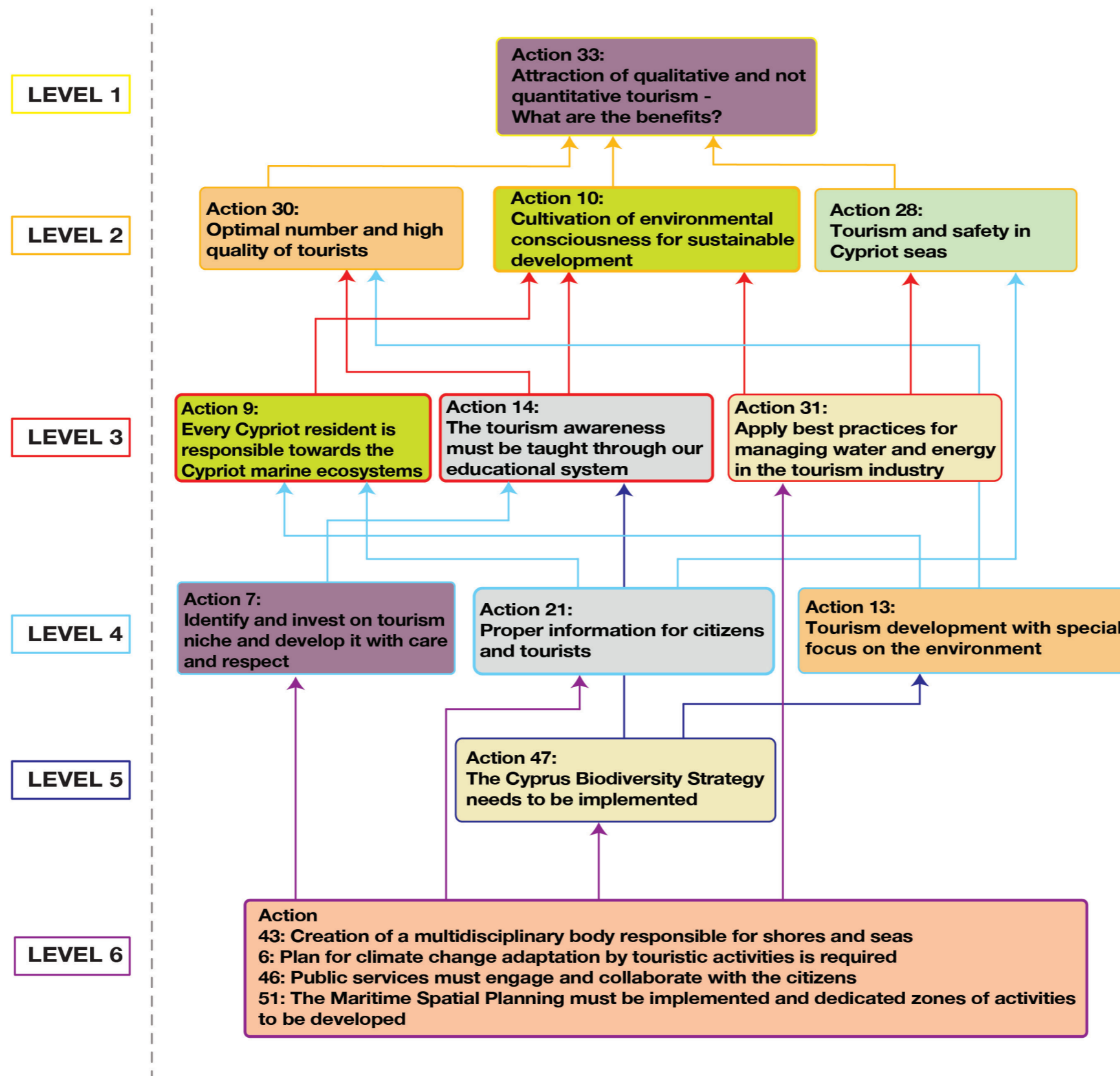
- Action 47:** The Cyprus Biodiversity Strategy needs to be implemented (4 Votes)
- Action 13:** Tourism development with special focus on the environment (2 Votes)
- Action 14:** The tourism awareness must be taught through our educational system (2 Votes)
- Action 28:** Tourism and safety in Cypriot seas (2 Votes)
- Action 15:** Hygienic coastal and marine legislations are needed (1 Votes)
- Action 19:** Protection and sustainability of the Cyprus marine environment (1 Votes)
- Action 22:** Obligatory exploitation of expertise in all decisions about marine issues (1 Votes)
- Action 27:** Free movement of tourists and repealing of monopolistic exploitations by tourism companies (1 Votes)
- Action 29:** Development of school materials for the creation of an island culture for protecting of the sea (1 Votes)
- Action 32:** Proper management of resources for a sustainable future on the island (1 Votes)
- Action 36:** Provide easy access to the sea for every tourist irrespective of the place he/she stays (1 Votes)
- Action 38:** Reduction of plastic waste from tourist shelters (1 Votes)
- Action 39:** Transparent procedures for all marine decisions (evaluation and attribution of responsibility) (1 Votes)
- Action 40:** Creation of smoking areas in all beaches (1 Votes)
- Action 46:** Public services must engage and collaborate with citizens (1 Votes)
- Action 48:** Developed management plans should be implemented and obeyed (i.e. Akamas Management Plan) (1 Votes)
- Action 51:** The Maritime Spatial Planning must be implemented and dedicated zones of activity need to be developed (1 Votes)

## TREE OF INFLUENCES

The voting results were further used to define the Action Roadmap, meaning which actions are the most important and influential in order to answer the Triggering Question and to achieve Sustainable Tourism in Cyprus.

The process for defining the Road Map is as follows:

Two actions are randomly selected and presented in question form: “Assuming we execute the first action, could this significantly influence the execution of the second action?” Participants thoroughly discuss the influence of the two actions and if 2/3 of the votes are positive, then the relative influence of the first action on the second action is determined. Gradually after evaluating all actions in this manner, an influence action tree is created resulting in the Action Roadmap as shown below.





The Cyprus Sustainable Tourism Action Roadmap consists of six different levels. The ideas that are most influential are considered the root actions and those must be executed first, because the subsequent actions are depending on these as it is shown in the Action Roadmap. These root actions can be seen in the lower levels of the Action Roadmap (levels 6, 5 and 4 in order of execution) in the above figure. As already mentioned, these root actions have the greatest influence. Improving the conditions or achieving progress on these root actions, enables the achievement of the actions at the higher levels (levels 3-1 in order of execution).

All participants, without exception, agreed that the root actions are those with the greatest influence for solving marine issues related to Tourism in Cyprus. Thus, it can be concluded that the following actions must be executed first to enable Sustainable Tourism in Cyprus:

**Level 6:**

Action 43: (7 votes) Creation of a multidisciplinary body responsible for shores and seas.

Action 6: (4 votes) It is necessary to create a concise plan for adaptation of the tourism sector and industry to climate change.

Action 46: (1 vote) Public services must involve and collaborate with citizens

Action 51: (1 vote) It is necessary that the Maritime Spatial Planning is implemented and dedicated zones of activity are developed.

**Level 5:**

Action 47: (4 votes) The Cyprus Biodiversity Strategy needs to be implemented and applied; to be followed by actions of

**Level 4:**

Action 7: (7 votes) Identify and invest on tourism niche and develop it with care and respect for the marine environment.

Action 21: (6 votes) Proper information for citizens and tourists; and

Action 13: (2 votes) Tourism development with special focus on the environment.

What should be noted is that the above actions #43, #6, #46 and #51 of level 6 at the base of the Action Roadmap are connected in a cycle. This means that these actions are equally influencing each other and these actions are influencing all the rest of the actions at the higher levels. This is indicated in the above figure by having them all together in the same box at Level 6.

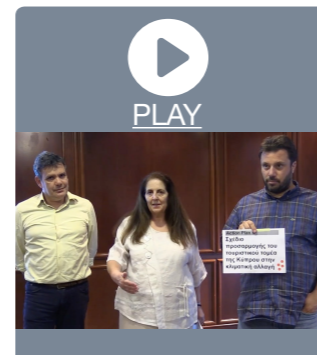
The complexity index of a Roadmap (Situational Complexity Index) offers comparisons between dialogues of participants. In this case the ratio stands at 7.76, which indicates that the complexity of the hot topic, as perceived by the participants, is not very high (the average Situational Complexity Index is usually about 30) and that the hot topic can be managed by taking the right measures and actions.

## PHASE 6: SPECIFIC ACTIVITIES FOR ADDRESSING THE TRIGGERING QUESTION OF SUSTAINABLE TOURISM IN CYPRUS

In this phase the participants were asked to form teams and to define specific activities for realising the base and most important actions of the Roadmap. The activities were defined based on the SMART principle meaning: Specific activities must be Measurable, Achievable, Realistic and Time-specific. Each team had to present its specific activities and explain them to the rest of the participant teams. Their explanation has been videotaped (by clicking on the picture, the video will start in Youtube). All videos are in Greek Cypriot. Two teams were facilitated by Xenia Schneider (XPRO) and Elena Aristodemou (CNTI) to enable the teams to reach concrete and measurable actions.

Two actions are randomly selected and presented in question form: “Assuming we execute the first action, could this significantly influence the execution of the second action?” Participants thoroughly discuss the influence of the two actions and if 2/3 of the votes are positive, then the relative influence of the first action on the second action is determined. Gradually after evaluating all actions in this manner,

### ACTION 6: PLAN FOR CLIMATE CHANGE ADAPTATION BY TOURISTIC ACTIVITIES IS REQUIRED



#### SPECIFIC ACTIONS:

- Governmental measures are already defined in the Cyprus Strategy for Adapting to Climate Change, which can be easily followed. For example: Our target is to reduce the water consumption. How can we achieve this? By avoiding water losses through the water networks and we can achieve it by taken measures in maintaining the water networks or by improving them.

#### MEASURABLE:

- Governmental measures are already defined in the Cyprus Strategy for Adapting to Climate Change, which can be easily followed. For example: Our target is to reduce the water consumption. How can we achieve this? By avoiding water losses through the water networks and we can achieve it by taken measures in maintaining the water networks or by improving them.

#### ACHIEVABLE:

- Is it achievable? Yes it is because technologies and equipment is readily available in the market.

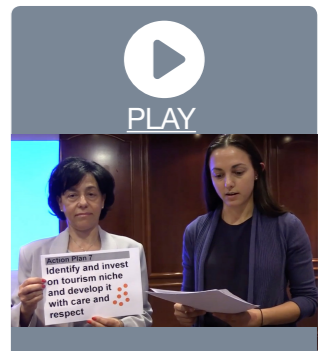
#### REALISTIC:

- It is realistic because the cost can be estimated and define a budget, which must be managed correctly so that Cyprus pays over several installments.

#### TIMELY:

- It starts from now because the procedure for sustainability and adaptation has begun based on the models of climate change, we know the effects on drought, rainfall and how much water shortage we will experience. This means what can we manage to execute and prepare within the next 10 years? We will need a new desalination plant.

### ACTION 7: IDENTIFY AND INVEST ON TOURISM NICHE AN DEVELOP IT WITH CARE AND RESPECT



This action is complex and multidisciplinary, thus the activities are political, policy, social, economic, ecological and environmental. It will become specific by creating the Sub-ministry of Tourism.

#### SPECIFIC ACTIONS:

- Execute surveys for pinpointing the sources of tourism and trends of the tourism industry
- Perform Business Analytics in order to identify how and where tourists spent, how tourist activities make profit
- Benchmark Cyprus through data from UNESCO and the WTO to identify countries that have followed a similar path as for example Australia, Malta with the medical tourism,
- Based on the surveys identify the needed infrastructures, which must be eco-friendly and up-to-date.
- Create a regulatory and policy framework to develop the once identified nice tourism.

#### MEASURABLE:

- It will be quantifiable through the surveys

#### ACHIEVABLE:

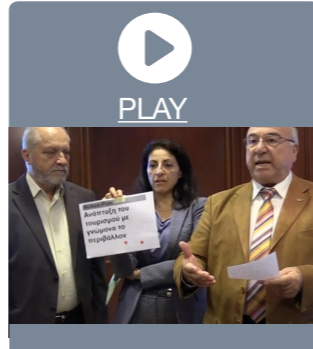
- Involve universities and public services together with Cypriots and Tourists to define the touristic niche.

#### REALISTIC:

- It is s realistic if business models are developed based on best practices and examples of similar business models.
- Get funding from EU like similar projects of Blue Tourism

#### TIMELY:

- It should be developed within 10 years.



### ACTION 13: TOURISM DEVELOPMENT WITH SPECIAL FOCUS ON THE ENVIRONMENT

3 activities have been specified under this action:

- Education of children and students
- Recycling on the beach
- Green Accounting

For the activity Education of children and students:

#### SPECIFIC ACTIONS:

- Educate students from 3 years old to 25 years old, meaning from pre-school, primary school, Gymnasium, Lyceum and University educations.

#### MEASURABLE:

- This will involve 1500 teachers and professors and they will teach for 5 hours the 13.000 new students that will start every year. This is estimated that will cost the country 130.000 Euros per year.

#### ACHIEVABLE:

- We believe that by educating the children and the young population will help Cyprus in the future to achieve sustainable tourism. This action will be put forward at the ministry council, it will continue to the parliament and from there the law will be voted to give the order to the Minister of Education to execute the action.

#### REALISTIC:

- Yes it is.

#### TIMELY:

- It will start September 2017 and each future year at the beginning of every school year.

For the activity of recycling at the beaches:

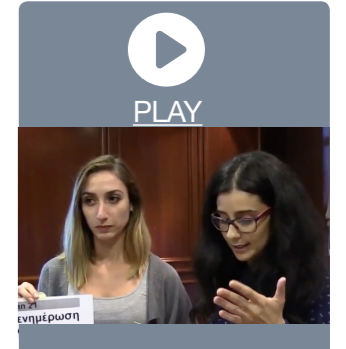
Specific activities:

- Install garbage cans with different colors for the different types of garbage.
- Inform tourists and citizens.

Green Accounting:

Specific activities:

- Require green accounting by all touristic structures and especially hotels to supplement their financial accounting meaning water is their carbon footprint, water footprint etc. and provide the incentive of a tax break when they apply green accounting.
- Provide reasonable incentives so that the laws and regulations are followed.



### ACTION 21: PROPER INFORMATION FOR CITIZENS AND TOURISTS

#### SPECIFIC ACTIONS:

- Create organized Awareness and to be found on one site
- School
- On TV
- Hotel managers and staff
- Travel agencies
- At the airport and in other relevant popular by tourists points

#### MEASURABLE:

- First create a baseline through a survey at the airports of Larnaca and Paphos
- Collect and analyse feedback from tourists and citizens

#### ACHIEVABLE:

- It depends on Government, if it will allocate a specific budget to execute this action or to leave it to the hands of the private industry through a tender.

#### REALISTIC:

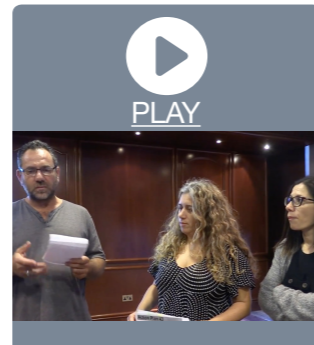
- Yes it is.

#### TIMELY:

- Within 8 months it can be executed.



### **ACTION 43: CREATION OF AN INDEPENDENT AND HOLISTIC BODY RESPONSIBLE FOR SHORES AND SEAS**



#### **SPECIFIC ACTIONS:**

- This action is specific once is defined which public authorities, local government and non governmental organization should be involved

#### **MEASURABLE:**

- It will have specific procedures based laws and roadmaps of action, visibility of their actions and evaluations of these.
- To be measured through indicators based on the meetings and the reports.

#### **ACHIEVABLE:**

- This action is under discussion at the government to create such a body, thus it is assumed that it is achievable.

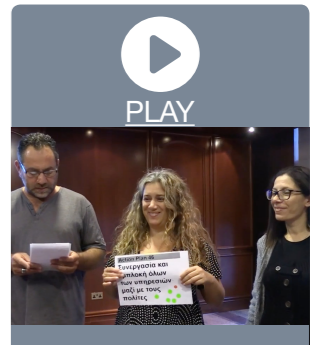
#### **REALISTIC:**

- The action is realistic because of the governmental initiative to create such a body and because it does not require a special budget by using the already allocated budget of the persons that will be involved.

#### **TIMELY:**

- In 2 years it should be executed.

### **ACTION 46: PUBLIC SERVICES MUST ENGAGE AND COLLABORATE WITH THE CITIZENS**



#### **SPECIFIC ACTIONS:**

- Identify which stakeholders must collaborate. These are public authorities involved in marine issues, governmental agencies as well as private organizations dealing with social marine issues.
- Create a web platform where the responsibilities of the organizations are listed as well as the opinions of the citizens are captured. The Web-platform must allow public authorities to comment and provide explanations to citizens.

#### **MEASURABLE:**

- Define the number of meetings among stakeholders and citizens

#### **ACHIEVABLE:**

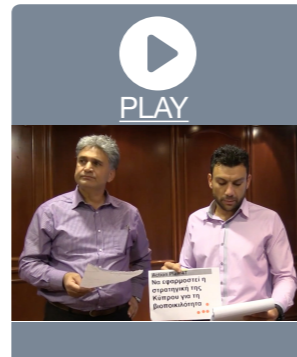
- It will be achievable once the coastal management authority is created

#### **REALISTIC:**

- It will be realistic once the citizens and the society are demanding that the shores are regulated and protected and collaboration exists among citizens and authorities. Some funding will be needed in order to achieve this action.

#### **TIMELY:**

- It can be achieved between 4 and 5 years.



## **ACTION 47: THE CYPRUS BIODIVERSITY STRATEGY NEEDS TO BE IMPLEMENTED**

### **S**PECIFIC ACTIONS:

- The action is specific.
- Update the surface of the protected areas so that they cover all the endangered species of flora and fauna as well as the important biotopes.
- Create a multidisciplinary committee with members from all the necessary regulatory bodies.
- Apply a plan for information to raise the local society's awareness on issues regarding the protected marine areas, NATURA 2000 as well as how these areas are managed and how they can be managed better. This can be achieved with events, happenings such as beach cleaning.
- Detailed awareness and information programs for tourists concerning the marine and coastal environments such as leaflets

### **M**EASURABLE:

- It is measurable by using indicators from measurements such as number of species of fauna and flora; reporting new species and invading species that come to the Cypriot seas.
- Spatial planning for the flora and fauna.
- Recording of the physical and chemical parameters as well as of the follow-up indicators that are required by EC and their comparison in order to identify specific actions for improvement.
- Initiate strategic studies for large-scale touristic compounds as for example for the golf courses studies that did not take place and their effect on the environment.
- Take action against arbitrarily built touristic compounds of all nature so that they are removed.

### **A**CHIEVABLE:

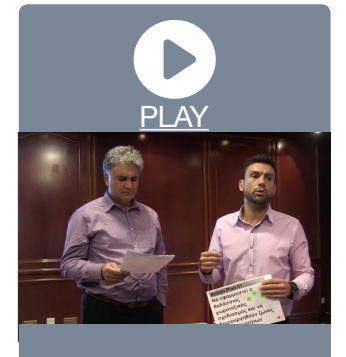
- The above actions are achievable either through the public authorities or through private initiative.
- It is also economically possible.
- Investments are needed in measurement equipment and teams.

### **R**EALISTIC:

- The above measures are realistic.

### **T**IMELY:

- It should be achieved by 2020.



## **ACTION 51: THE MARITIME SPATIAL PLANNING MUST BE IMPLEMENTED AND DEVELOP DEDICATED ZONES OF ACTIVITY**

### **S**PECIFIC ACTIONS:

- It is specific because is based on the ISPIRED directive of Cyprus as for example a plan has been created from the gulf of Limassol until the gulf of Zygi.
- Communication campaigns for citizens, investors, hotel owners, public services and authorities.

### **M**EASURABLE:

- A website exists for informing about the status and what has been measured. Webgis.
- KPIs exist for which areas have been already mapped and which ones are still missing.
- It must be checked of how much the necessary controls do take place and if they are applied as they should in the predefined time periods.

### **A**CHIEVABLE:

- It is already achieved because it has been already applied.
- All future development must be studied from a maritime spatial plan perspective in order to avoid arbitrary buildings and other developments. This can be achieved by using the available technological measurement tools for the application of regulations.

### **R**EALISTIC:

- Yes it is.

### **T**IMELY:

- By 2020 it must be finalized according to the EU timetable.

## ANALYSIS OF THE RESULTS

The Cyprus MML workshop focused on preservation of the marine and coastal environment while developing tourism, it succeeded to create a concrete Roadmap and to define specific and measurable activities for all the actions that are the basis for the higher levels of the Roadmap. The Roadmap was created by a small group of multidisciplinary stakeholders, tourism actors, scientists, governmental personnel and citizens.

### Eight actions that need implementation first

According to the Action Roadmap, the immediate actions that must be executed to ensure sustainable tourism on the island are eight. By planning and executing these 8 actions the island will be better equipped to the tourism influx, without the simultaneous deterioration of the marine and coastal resources of Cyprus. Moreover, it is necessary to create awareness and build capacity at all levels: from the small hotel to the big hotel complex, from the local municipality workers to the mayors, from the child to the elderly.

#### These 8 actions in order to execution are:

- Simultaneous:
  - o Action 43: Creation of an independent body responsible for shores and seas
  - o Action 6: Plan for the adaptation of tourism to the climatic changes
  - o Action 46: Collaboration and involvement of all public services with the citizens
  - o Action 51: The Maritime Spatial Planning needs to be implemented and activity areas to be developed
- Followed by actions to be executed in parallel:
  - o Action 47: The Cyprus Biodiversity Strategy needs to be implemented
  - o Action 7: Identify and invest on tourism niche and develop it with care and respect
  - o Action 21: Proper information for citizens and tourists
  - o Action 13: Tourism development with special focus on the environment

**Action 43:** Creation of an independent body responsible for shores and seas  
One of the root actions flagged, Action 43, is to create one single multidisciplinary body to be responsible for the management of beaches and coastlines. Action 43 launches a holistic approach. During the workshop, it was indicated several times that various governmental bodies as well as municipality departments may have related responsibilities, which are directly connected with powers and responsibilities of other entities. However, it was shown with concrete examples that there is lack or insufficient communication and synergy between these bodies. Still, this is counter-productive resulting in significant, but disperse and asynchronous actions implemented by different bodies that do not give the expected improvements in the overall picture of sustainable tourism. Thus, with the consent of all participants and with the help of the Structured Democratic Dialogue, the need was recognized for creating a single entity, which includes individuals from all the relevant departments and ministries of state, as well as representatives from organized civil organisations. Furthermore, is important that this independent body entity includes scientists as well as business representatives and citizen representatives.

► **The Action 43 applies well to the RRI-Criteria of Public Engagement and Governance.**

**Action 6:** Plan for the adaptation of tourism to the climatic changes and Action 51: The Maritime Spatial Planning needs to be implemented and activity areas to be developed  
In continuation with the above raised points, Action 51 and Action 6 must be widely implemented and all bodies must become aware of the maritime spatial plans that have been already created. It was evident during the workshop that the scientists were well aware of the marine and maritime spatial plans, but for example the participants of the Municipality were not aware that they existed. A website exists with these plans, however it is not visible and known to all. More open information and communication is needed to increase awareness and collaboration among governmental bodies, local administrations and scientists. Furthermore, scientists must “translate” their messages in layman’s terms illustrating cause-effect relationships of marine issues in order to raise the understanding and awareness of citizens, policy makers and implementers as well as tourist operators and businesses.

► **Actions 6 and 51 apply well to the RRI-Criterion of Open Science.**

**Action 46:** Collaboration and involvement of all public services with the citizens  
Likewise Action 46 calls for collaboration among citizens and public services. Participants suggested creating an open website where public bodies will openly inform citizens about marine matters and sustainable tourism requirements and implementation actions and where citizens will have the possibility to express their opinion. This action can be further strengthening by creating “Citizens’ Observatories”. Citizens’ Observatories are community-based environmental monitoring and information systems. They build on innovative and novel Earth observation applications embedded in portable or mobile personal devices. This means that citizens can help and be engaged in observing our environment . These observatories are proven tools for involving the citizen to survey and report environmental observations and anomalies. Thus, the citizens become aware and caring about the environment and in this case the marine and coastal environments. Action 46 can enable the successful implementation of Action 43: Creation of an independent body responsible for shores and seas. Furthermore, citizens can spot violations and can enable the execution of actions that received 1 or less votes but are related to action 46. These are actions 5, 8, 15, 19, 23, 25, 38, 41, 44 and 50.

► **Action 46 applies well to the RRI-Criterion of Multi-actor, Public Engagement and Ethics.**

**Action 47:** The Cyprus Biodiversity Strategy needs to be implemented  
This root action relates closely to action 43 “Creation of an independent body responsible for shores and seas”. The participants suggested that greater protection and expansion of the protected areas, to raise society’s awareness through events and information campaigns. Moreover, the participants discussed the fact that the authorities not always apply the rules envision over the protected areas. This action relates also to Action 34: “Marine heritage responsibility must be a corporate responsibility” and root action 10: “Cultivation of environmental consciousness for sustainable development”. Furthermore, Action 47 relates closely and it can enable actions 2, 4, 8, 9, 19, 34, 48 and 50.

► **Action 47 applies well to the RRI-Criterion of Harmonious Governance Models and Ethics.**

**Action 7:** Identify and invest on tourism niche and develop it with care and respect  
Cyprus until now did not create niche markets for its tourism industry, even though its has many possibilities. The participants characterized this action of level 4 as complex and multidisciplinary requiring the attention and involvement of political, policy, social, economic, ecological and environmental actors. Moreover it was pointed out that this action should be one of many responsibilities of the under-establishment Sub-ministry of Tourism. Action 7 calls for specific survey and benchmarking activities as well as a thorough analysis of niche tourism sources. Lastly, the action points out the need for a regulatory and policy framework for applying the identified nice tourism. This action 7 relates to the following actions apart from the actions shown in the Action Roadmap: 12, 16, 26, 32 and 45.

► **Action 7 applies well to the RRI-Criterion of Harmonious Governance Models.**

### Action 21: Proper information for citizens and tourists

Action 21 calls for increasing public awareness through mass-media campaigns but also through specific awareness campaigns targeting touristic sites, schools, the general public, hotel personnel, travel agencies and tourist operators. The action requires that governmental and semi-governmental bodies such as the Cyprus Tourism Organization takes an active role in informing Cypriot citizens and visitors about the marine and coastal environment, fragile ecosystems, Cyprus marine cultural heritage, the environment in general and the effects of tourism on the marine environment. Citizens and tourists must be understanding and thoughtful in protecting the environment that attracts them to visit, use and enjoy. Action 21 relates to the following actions apart from the actions shown in the Action Roadmap: 1, 3, 4, 5, 8, 12,20, 23, 24, 35, 49, 53.

► **Action 21 applies well to the RRI-Criterion of Multi-actor and public engagement and Science Education in simple terms.**

### Action 13: Tourism development with special focus on the environment

This action calls for three sets of activities: Education of children and students; Recycling on the beach; and Green Accounting for all touristic structures and tourist operators. The first set of activities aims in educating the young population of Cyprus from small pre-school children all the way to university students. Such thorough educational activity was estimated to only 130.000 Euros per year, which is a small amount compared to the benefits that it would bring to the island. The second set of activities of recycling on the beach is a necessary for reducing pollution and initiate green solutions of garbage recycling. This activity has a potential of using SMEs to handle the positioning of recycling points on the beaches, collection and recycling of the collected materials. It would be beneficial not only to the marine environment but also to the economy of the island. The third and last set of activities was to introduce Green Accounting in line with the financial accounting to measure the environmental impact of the tourism operations. The major purpose of green accounting is to help tourism businesses understand and manage their financial goals as well as environmental goals and to ensure that the environment that helps attract the tourists is sustainable. Green accounting enables also policy makers analyse often overlooked environmental issues such to guide investment to environmentally sound production processes; help to specify and monitor policies of natural wealth conservation, distribution and management. The team suggested that green accounting is enforced through possible tax breaks as an incentive of adoption by the tourism businesses. This action 13 relates to the following actions apart from the actions shown in the Action Roadmap: 3,4,5,11,12,19,23,26,32,38,29 and 40.

► **Action 13 applies well to the RRI-Criteria of Ethics: 'Do the right "think" and do it right' and Science Education.**



## THE RRI EFFECT ON SUSTAINABLE TOURISM IN CYPRUS

The above section highlighted how specific actions and activities suggested by the participants will enable actions towards sustainable tourism and how these actions relate to Responsible Research and Innovation, which consists of 6 main dimensions. The following illustration highlights the RRI effect of the suggested actions for achieving sustainable tourism in Cyprus. discuss the influence of the two actions and if 2/3 of the votes are positive, then the relative influence of the first action on the second action is determined. Gradually after evaluating all actions in this manner,

### GOVERNANCE

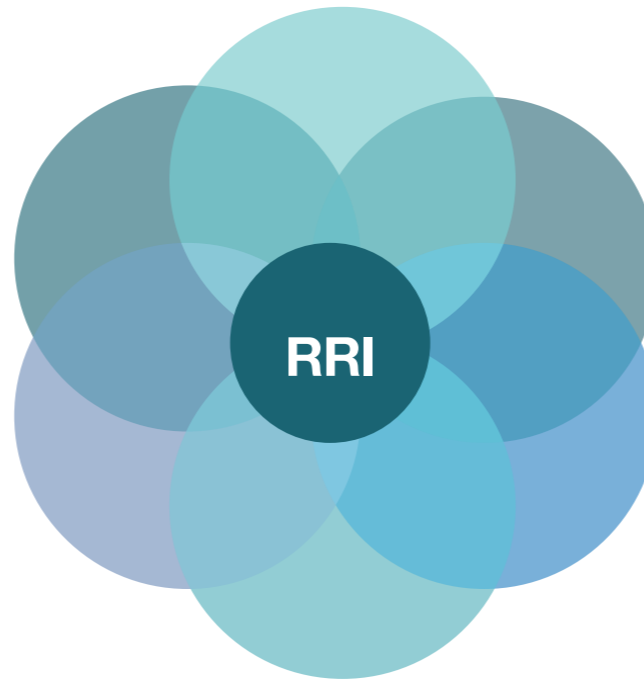
- **Action 43:** Creation of an independent body responsible for shores and seas
- **Action 47:** The Cyprus Biodiversity Strategy needs to be implemented

### PUBLIC ENGAGEMENT

- **Action 21:** Proper information for citizens and tourists
- **Action 43:** Creation of an independent body responsible for shores and seas
- **Action 46:** Collaboration and involvement of all public services with the citizens

### GENDER

- Nothing to report



### OPEN ACCESS

- **Action 6:** Plan for the adaptation of tourism to the climatic changes
- **Action 51:** The Maritime Spatial Planning needs to be implemented and activity areas to be developed

### SCIENCE EDUCATION

- **Action 13:** Tourism development with special focus on the environment
- **Action 21:** Proper information for citizens and tourists

### ETHICS

- **Action 13:** Tourism development with special focus on the environment
- **Action 46:** Collaboration and involvement of all public services with the citizens
- **Action 47:** The Cyprus Biodiversity Strategy needs to be implemented



## CYPRUS POLICY WINDOW OF OPPORTUNITY

In October 2016, the Cypriot government took the decision to create the Tourism and the Maritime sub-ministries. The sub-ministries will be independent and the President will appoint their sub-ministers. The proposal to change the law has been already been submitted to the parliament.

The Cyprus Tourism Organization (CTO) will be part of the Tourism sub-ministry. These actions have been taken because the government has created a strategic plan to create niche Tourism and at the same time to increase the number of tourists visiting Cyprus above 3 million per year.

This increase is very big considering the size of the island. This increase of tourists will pressure even more the already fragile and over-developed coastal development. However, there are still many decisions to be taken about the future Tourism Strategy of Cyprus, which requires capacity building, environmental understanding and climate change adaptation considering the scarcity of fresh water, which today is provided through desalination, and energy, which is mainly based on oil, which is imported. Cyprus is currently in the process of extracting natural gas from its seabed, but this gas is not yet commercialized.

To conclude, the results of the Cyprus MML workshop are even more relevant to ministries and to CTO, which needs to build-capacity for undertaking its responsibilities as the Tourism sub-ministry.

## PLANNED FOLLOW-UP

CNTI (Elena Aristodemou) and XPRO (Xenia Schneider) have already planned the below follow-up actions in order to benefit from the “Policy Window”, which is clearly a window of opportunity for the MARINA project to make a real effect on Sustainable Tourism in Cyprus.

1. The Cyprus MML Report will be issued in the form of a booklet that will be commented by all participants.
2. The Cyprus MML Report will be finalized and will be sent to all relevant Governmental bodies such as ministries, semi-private organizations, coastal municipalities, Cyprus hotel association, NGOS and CSOs as well as private touristic establishments and marine research centers.
3. In 2017, an event for presenting the results will be organized in Cyprus with the help of the participants that expressed the interest and the willingness to assist and facilitate. All of the above organizations will be invited.
4. The event will be covered by local press (newspapers, social media and radio).

## ANNEX 1 – IDEAS & CLARIFICATIONS

1: Financial support to the fisheries sector in order to protect the marine environment

**Clarification:** <https://www.youtube.com/watch?v=5tq1EovJvUo>

2: Tourism – The hen with the golden eggs or the hen that makes always eggs?

**Clarification:** [https://www.youtube.com/watch?v=kzd\\_RDZQc30](https://www.youtube.com/watch?v=kzd_RDZQc30)

3: Tourism sustainability, from theory to action

**Clarification:** <https://www.youtube.com/watch?v=YpR912rBrA0>

4: Cyprus should remain a ‘virgin’ island continuing to inspire poets and songwriters

**Clarification:** [https://www.youtube.com/watch?v=Nb2mq-HNJ\\_w](https://www.youtube.com/watch?v=Nb2mq-HNJ_w)

5: Diligence by the authorities is required towards the sea

**Clarification:** <https://www.youtube.com/watch?v=JjwoRflbkrl>

6: Plan for climate change adaptation by touristic activities is required

**Clarification:** <https://www.youtube.com/watch?v=3WKyuchK7mo>

7: Identify, invest and develop touristic niche markets with care and respect for the marine environment

**Clarification:** <https://www.youtube.com/watch?v=EO5V5812HOM>

8: Marine Cultural Heritage promotion by evaluating pros and cons

**Clarification:** <https://www.youtube.com/watch?v=ZrA6W0232Rc>

9: Every Cypriot resident is responsible towards the Cypriot marine ecosystems

**Clarification:** <https://www.youtube.com/watch?v=TfoM3KrRudY>

10: Cultivation of environmental consciousness for sustainable development

**Clarification:** <https://www.youtube.com/watch?v=BRmyizTx9cs>

11: Sustainable development through law enforcement and fines

**Clarification:** <https://www.youtube.com/watch?v=gl4ExL9vUTM>

12: Identify the real cost of tourism based on environmental, development and resources costs

**Clarification:** <https://www.youtube.com/watch?v=ho08bwd0FSA>

13: Tourism development with special focus on the environment

**Clarification:** <https://www.youtube.com/watch?v=mlnVeQ6CmKQ>

14: The tourism awareness must be taught through our educational system

**Clarification:** <https://www.youtube.com/watch?v=MtFRH1qemdc>

15: Hygienic coastal and marine legislations are needed

**Clarification:** <https://www.youtube.com/watch?v=f0YOrU1RaYU>

16: Tourism development benefitting all residents – cost and benefits for the citizen

**Clarification:** <https://www.youtube.com/watch?v=PJ4hGe9Vx0Q>

17: Exploitation of new technologies for protecting coasts

**Clarification:** <https://www.youtube.com/watch?v=57LkKZgaU0U>

18: Use state-of-the-art technologies for clean seas

**Clarification:** [https://www.youtube.com/watch?v=a0VPUm\\_qilM](https://www.youtube.com/watch?v=a0VPUm_qilM)

19: Protection and sustainability of the Cyprus marine environment

**Clarification:** <https://www.youtube.com/watch?v=YO3nW3Zd-uA>

20: A world in an island care

**Clarification:** <https://www.youtube.com/watch?v=EO5V5812HOM>

21: Proper information for citizens and tourists

**Clarification:** <https://www.youtube.com/watch?v=m8SMndyQmlM>

22: Obligatory exploitation of expertise in all decisions about marine issues

**Clarification:** <https://www.youtube.com/watch?v=9ZMjIci97gQ>

23: Comprehensive coastal area management for an assured future

**Clarification:** <https://www.youtube.com/watch?v=tleyM7YMBaU>

24: Education and information for a sustainable Cyprus

**Clarification:** [https://www.youtube.com/watch?v=kAm34\\_wXPbw](https://www.youtube.com/watch?v=kAm34_wXPbw)

25: Compliance of discharges of liquid effluents from ships must be ensured by public bodies and legislation

**Clarification:** <https://www.youtube.com/watch?v=4a6jDtQ-cN8>

26: Responsible production and savings through tourism

**Clarification:** [https://www.youtube.com/watch?v=6OaOSVVA\\_I0](https://www.youtube.com/watch?v=6OaOSVVA_I0)

27: Free movement of tourists and repealing of monopolistic exploitations by tourism companies

**Clarification:** <https://www.youtube.com/watch?v=a1cGy9a3lc>

28: Tourism and safety in Cypriot seas

**Clarification:** <https://www.youtube.com/watch?v=a9RwPkkqrqXI>

29: Development of school materials for the creation of an island culture for protecting of the sea

**Clarification:** N/A

30: Optimal number and high quality of tourists

**Clarification:** <https://www.youtube.com/watch?v=PJ4hGe9Vx0Q>

31: Apply best practices for managing water and energy in the tourism industry

**Clarification:** <https://www.youtube.com/watch?v=4PMLk7GC-14>

32: Proper management of resources for a sustainable future on the island

**Clarification:** <https://www.youtube.com/watch?v=J3HxVCOANhE>

33: Attraction of qualitative and not quantitative tourism – What are the benefits?

**Clarification:** <https://www.youtube.com/watch?v=wpsGEVl8dNM>

34: Marine heritage responsibility must be a corporate responsibility

**Clarification:** <https://www.youtube.com/watch?v=IfxodDRPIbA>

35: Tourism and environment, a mutual difficult but not impossible relationship

**Clarification:** <https://www.youtube.com/watch?v=PDVCrcZJWE4>

36: Provide easy access to the sea for every tourist irrespective of the place he/she stays

**Clarification:** [https://www.youtube.com/watch?v=PZm\\_uQjWBNY](https://www.youtube.com/watch?v=PZm_uQjWBNY)

37: People with special needs should have rights on the seas

**Clarification:** <https://www.youtube.com/watch?v=4aER0yro-MU>

38: Reduction of plastic waste from tourist shelters

**Clarification:** <https://www.youtube.com/watch?v=0qoCSQTV6Wc>

39: Transparent procedures for all marine decisions (evaluation and attribution of responsibility)

**Clarification:** <https://www.youtube.com/watch?v=sohMh3CPGJE>

40: Creation of smoking areas in all beaches

**Clarification:** N/A

41: Involvement of all departments for solving issues created from marine pollution

**Clarification:** <https://www.youtube.com/watch?v=JjwoRflbkrl>

42: Implementation of the Maritime Spatial Planning and comprehensive management of the coastal zone

**Clarification:** <https://www.youtube.com/watch?v=-aEptpWrw40>

43: Creation of a multidisciplinary body responsible for shores and seas

**Clarification:** <https://www.youtube.com/watch?v=7b5dFSoUUdk>

44: Society demands in publicizing shore and sea offenders and penalties

**Clarification:** <https://www.youtube.com/watch?v=DZEvFV-0INK>

45: Promotion of maritime and nautical tourism

**Clarification:** <https://www.youtube.com/watch?v=rnQYxivllog>

46: Public services must engage and collaborate citizens

**Clarification:** <https://www.youtube.com/watch?v=zB8z5qNtRDs>

47: The Cyprus Biodiversity Strategy needs to be implemented

**Clarification:** <https://www.youtube.com/watch?v=Zf1YdsyFsjU>

48: Developed management plans should be implemented and obeyed (i.e. Akamas Management Plan)

**Clarification:** <https://www.youtube.com/watch?v=YLDDEPVR6fs>

49: Management plans for the rest of the Cypriot coastal areas should be developed

**Clarification:** <https://www.youtube.com/watch?v=at09MU0aexc>

50: Issue the necessary regulatory measures for protecting the marine environment

**Clarification:** <https://www.youtube.com/watch?v=wOEQFAosB-A>

51: The Maritime Spatial Planning must be implemented and dedicated zones of activity to be developed

**Clarification:** <https://www.youtube.com/watch?v=hmJzlOWzeL4>

52: Seabed and underground streams’ mapping is necessary

**Clarification:** <https://www.youtube.com/watch?v=Qla1rFmgIGg>

53: Minimise exogenous risks for ensuring the continuation of the tourist industry

**Clarification:** <https://www.youtube.com/watch?v=PJ4hGe9Vx0Q>

## ANNEX 2 – VOTING RESULTS

Action 7: (7 Votes) Identify and invest on tourism niche and develop it with care and respect for the marine environment  
Action 43: (7 Votes) Creation of an independent and holistic body responsible for shores and seas  
Action 21: (6 Votes) Proper information for citizens and tourists  
Action 9: (5 Votes) Every Cypriot resident is responsible towards the Cypriot marine ecosystems  
Action 30: (5 Votes) Optimal number and high quality of tourists  
Action 6: (4 Votes) Plan for climate change adaptation by touristic activities is required  
Action 10: (4 Votes) Cultivation of environmental consciousness for sustainable development  
Action 33: (4 Votes) Attraction of qualitative and not quantitative tourism – What are the benefits?  
Action 47: (4 Votes) The Cyprus Biodiversity Strategy needs to be implemented  
Action 13: (2 Votes) Tourism development with special focus on the environment  
Action 14: (2 Votes) The tourism awareness must be taught through our educational system.  
Action 28: (2 Votes) Tourism and safety in Cypriot seas  
Action 15: (1 Votes) Hygienic coastal and marine legislations are needed  
Action 19: (1 Votes) Protection and sustainability of the Cyprus marine environment  
Action 22: (1 Votes) Obligatory exploitation of expertise in all decisions about marine issues  
Action 27: (1 Votes) Free movement of tourists and repealing of monopolistic exploitations by tourism companies  
Action 29: (1 Votes) Development of school materials for the creation of an island culture for protecting of the sea  
Action 32: (1 Votes) Proper management of resources for a sustainable future on the island  
Action 36: (1 Votes) Provide easy access to the sea for every tourist irrespective of the place he/she stays  
Action 38: (1 Votes) Reduction of plastic waste from tourist shelters  
Action 39: (1 Votes) Transparent procedures for all marine decisions (evaluation and attribution of responsibility)  
Action 40: (1 Votes) Creation of smoking areas in all beaches  
Action 46: (1 Votes) Public services must collaborate and involve with citizens  
Action 48: (1 Votes) Developed management plans should be implemented and obeyed (i.e. Akamas Management Plan)  
Action 51: (1 Votes) The Maritime Spatial Planning must be implemented and develop dedicated zones of activity  
Action 1: (0 Votes) Financial support to the fisheries sector in order to protect the marine environment  
Action 2: (0 Votes) Tourism – The hen with the golden eggs or the hen that makes always eggs?  
Action 3: (0 Votes) Tourism sustainability, from theory to action  
Action 4: (0 Votes) Cyprus should remain a ‘virgin’ island continuing to inspire poets and songwriters  
Action 5: (0 Votes) Diligence by the authorities is required towards the sea  
Action 8: (0 Votes) Marine Cultural Heritage promotion by evaluating pros and cons  
Action 11: (0 Votes) Sustainable development through law enforcement and fines  
Action 12: (0 Votes) Identify the real cost of tourism based on environmental, development and resources costs  
Action 16: (0 Votes) Tourism development benefitting all residents – cost and benefits for the citizen  
Action 17: (0 Votes) Exploitation of new technologies for protecting coasts  
Action 18: (0 Votes) Use new technologies for clean seas  
Action 20: (0 Votes) A world in an island care  
Action 23: (0 Votes) Comprehensive coastal area management for an assured future  
Action 24: (0 Votes) Education and information for a sustainable Cyprus  
Action 25: (0 Votes) Compliance of discharges of liquid effluents from ships must be ensured by public bodies and legislation  
Action 26: (0 Votes) Responsible production and savings through tourism  
Action 31: (0 Votes) Apply best practices for managing water and energy in the tourism industry  
Action 34: (0 Votes) Marine heritage responsibility must be a corporate responsibility  
Action 35: (0 Votes) Tourism and environment, a mutual difficult but not impossible relationship  
Action 37: (0 Votes) People with special needs should have rights on the seas  
Action 41: (0 Votes) Involvement of all departments for solving issues created from marine pollution  
Action 42: (0 Votes) Implementation of the Maritime Spatial Planning and comprehensive management of the coastal zone  
Action 44: (0 Votes) Society demands in publicizing shore and sea offenders and penalties  
Action 45: (0 Votes) Promotion of maritime and nautical tourism  
Action 49: (0 Votes) Management plans for the rest of the Cypriot coastal areas should be developed  
Action 50: (0 Votes) Issue the necessary regulatory measures for protecting the marine environment  
Action 52: (0 Votes) Seabed and underground streams’ mapping is necessary  
Action 53: (0 Votes) Minimise exogenous risks for ensuring the continuation of the tourist industry

## ANNEX 3 – PARTICIPANTS

### **Christina Nikolaidou**

Office of the Environment Commissioner

<https://www.youtube.com/watch?v=w7vuNR4ukio>

### **Michalis Demosthenous**

Cyprus Green Party

### **George Payiatis**

Department of Fisheries and Marine Research

### **Demetris Theoti**

Limassol Municipality

### **Andreas Shoshilos**

Future Worlds Center

<https://www.youtube.com/watch?v=WCjwqq-uo3Q>

### **Vakis Loizides**

Cyprus Tourism Organization

<https://www.youtube.com/watch?v=vtuwxqpPVKY>

### **George Demetriou**

Nicosia Waterboard

<https://www.youtube.com/watch?v=n46KMyCHMuA>

### **Iacovos Papaicovou**

Sewerage Board of Limassol - Amathus

### **Antonis Petrou**

AP Marine Environmental Consultancy Ltd

<https://www.youtube.com/watch?v=rFkzZSun28c>



**Iacovos Iacovides**

NIREAS International Water Research Center

<https://www.youtube.com/watch?v=eu-zZQ-dlGY>

**Popi Karaolia**

NIREAS International Water Research Center

<https://www.youtube.com/watch?v=m0d5tz2VYds>

**Pavlos Diplaros**

Oceanography Center – University of Cyprus

<https://www.youtube.com/watch?v=F-tcFYI-WWU>

**Maria Vilanidou**

Citizen

**Elena Tanou**

Top Kinisis Manager

**Kyriaki Ioannou**

Water Development Department –

Ministry of Agriculture, Natural Resources and Environment

<https://www.youtube.com/watch?v=uuUIY6IPBdQ>

**Marios Aristotelous**

Limassol Municipality

**Orthodoxia Mina**

Politeia NGO

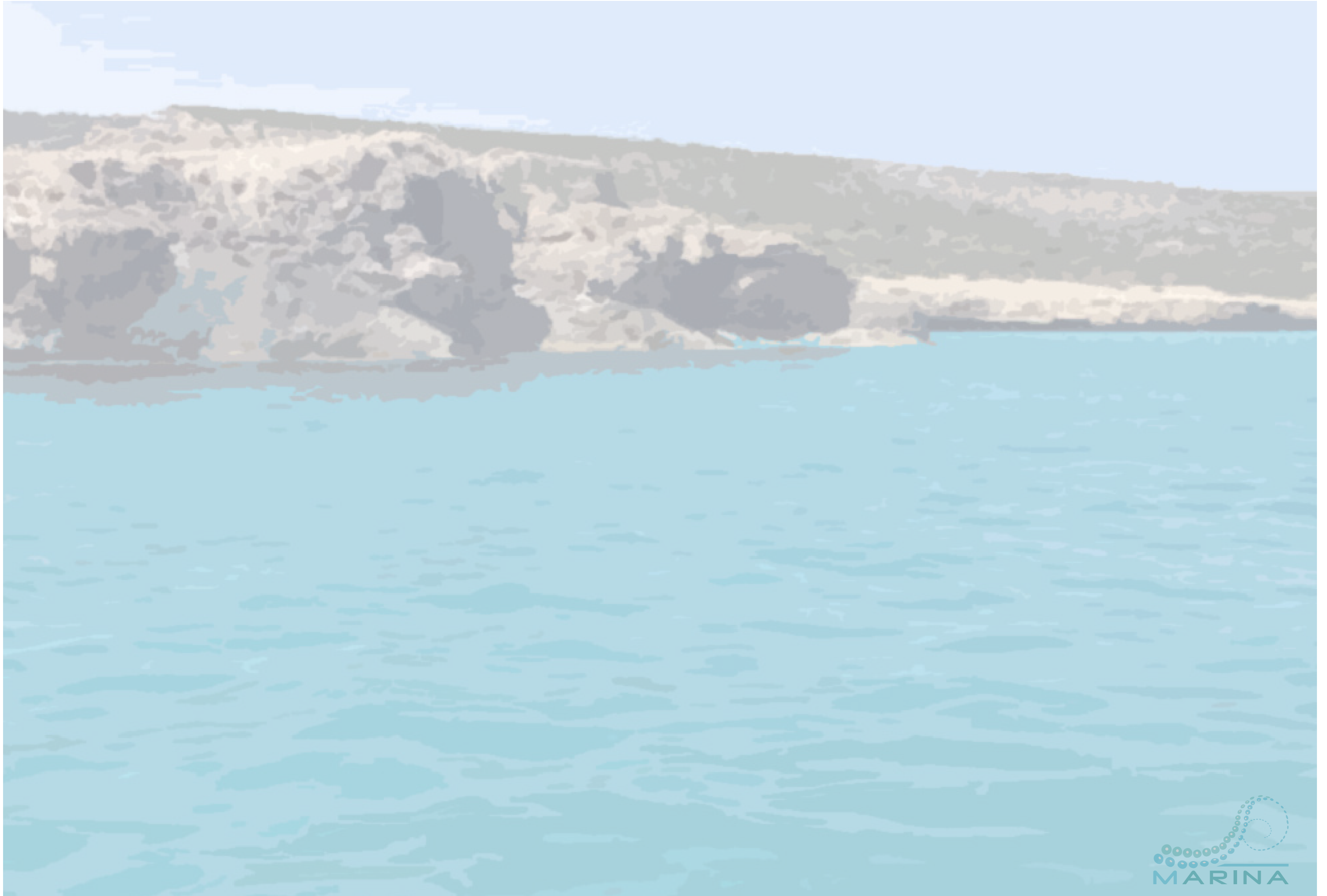
<https://www.youtube.com/watch?v=UtR1rNySL3c>

**ANNEX 4 – ORGANIZERS****CYPRUS NEUROSCIENCE AND TECHNOLOGY INSTITUTE (CNTI), CYPRUS**

CNTI is a research, non-profit, non-governmental, independent organization with expertise in knowledge management. The scope of activities of the organization involve the application of technology towards social transformation as well as bridging literacy, economic, and digital divides. It is also a world-pioneer in the development and application of the science of Structured Democratic Dialogue (SDD).

**XPRO XPRO CONSULTING LIMITED (XPRO), CYPRUS**

XPRO Consulting is an independent SME with expertise in business strategy formulation, innovation processes, knowledge management systems, knowledge dissemination, change management and executive training. XPRO consults innovative SMEs and educates graduate business students in the above subjects. XPRO Consulting mainly focuses on environmental, pharmaceutical and biotechnology innovation actions. XPRO Consulting was one of the pivotal partners for the inception of the MARINA project and framework.





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