

17th – 18th March 2015, Imperial Hotel Torquay



PANACHE

Protected Area Network Across
the Channel Ecosystem



T H E E N G L I S H C H A N N E L

**one
ecosystem** **two
projects**



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The VALMER and PANACHE projects were selected under the European cross-border cooperation programme INTERREG IV A France (Channel) - England, co-funded by the ERDF.

**VALUING AND PROTECTING
OUR SHARED SEA**



VALMER and PANACHE have been selected in the context of the INTERREG IV A France (Channel) - England European cross-border co-operation programme, which is co-financed by the ERDF.

With thanks to our partners:

PANACHE



VALMER



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About PANACHE

PANACHE is a project in collaboration between France and Britain. It aims at a **better protection** of the Channel marine environment through the **networking** of existing marine protected areas.

The project's five objectives:

- **Assess** the existing marine protected areas network for its ecological coherence.
- **Mutualise** knowledge on monitoring techniques, share positive experiences.
- **Build** greater coherence and foster dialogue for a better management of marine protected areas.
- **Increase** general awareness of marine protected areas: build common ownership and stewardship, through engagement in joint citizen science programmes.
- **Develop** a public GIS database.

France and Great Britain are facing similar challenges to protect the marine biodiversity in their shared marine territory: PANACHE aims at providing a **common, coherent and efficient reaction**.

About VALMER

VALMER is an eleven partner, €4.7 million project co-funded by the INTERREG IV A Channel programme through the European Regional Development Fund. The Western Channel is under increasing pressure from a wide range of competing sectors and interests. Effective and informed management of this shared space is vital to the sustainable use of this valuable resource, and ecosystem service assessment has the potential to contribute to better governance of the area. VALMER therefore aimed to develop and apply methodologies that can be used to quantify and communicate the real value (economic, social and environmental) of marine and coastal ecosystem services, and to improve understanding of the links between ecosystem services, their valuation, and effective marine governance.

Five key work packages focused on:

1. Assessing and valuing marine ecosystem services
2. Visualising and interpreting ecosystem service valuation data
3. Building scenarios to explore possible impacts on marine ecosystem services
4. Applying marine ecosystem service assessments to improve marine planning and management.
5. Communicating to as wide an audience as possible

Conference Venue

The conference will be held at The Imperial Hotel Torquay, a 19th Century Victorian hotel in a stunning cliff-top location on the English Riviera.

The hotel is a short 10 minute walk from Torquay town centre (please see map on page 29).

Breakfast will be served in the Regatta Restaurant from 07:00 – 10:30 during the conference. Lunches will be provided for conference delegates according to the programme. All Delegates are able to dine in the Regatta Restaurant, or Bar and Lounge Area for their evening meals, **please ensure you book evening meals at the hotel reception no later than the afternoon tea and coffee break on the day that you wish to dine.**

Guests staying at the hotel will have full access to the hotels leisure facilities including indoor swimming pool, jacuzzi, sauna and steam room. These facilities are open from 07:00 – 21:00.

Please note that checkout time on your day of departure is 11:00. There will be a storage space on hand for delegates throughout the conference.

There is complimentary internet access to use in the hotel. Information regarding how to connect will be given to you at the registration desk.

Registration Desk – Plymouth University staff will be on hand for registration and information before the conference and designated times during the conference. The registration desk will be situated opposite the main hotel reception desk.

Canapé Reception

Tuesday 17th March, 18:15

Palm Court and Sunlounge, Imperial Hotel

Delegates are invited to attend a canapé and wine reception which will be held in the Palm Court and Sunlounge of the Imperial Hotel. Reception drinks and light refreshments will be provided. Feel free to network and soak in the evening panoramic views of Torbay from the Imperial Sunlounge.

Partners Dinner - Living Coasts, Torquay

Wednesday 18th March, 19:00

Partners of the VALMER and PANACHE projects will attend an invitation only evening dinner at Living Coasts, Torquay on the evening of Wednesday 18th March at 19:00.

The restaurant is a short walk or taxi ride from the hotel, (please see map on page 29). The evening will begin with a drinks reception overlooking the beautiful coastline of Torquay from 19.00 and delegates will be seated at 19.30 for the evening meal. There will be a short performance from Flash Jack, a traditional sea shanty singing group who will sing in both French and English

Field Trip - Livermead, Torquay,

Thursday 19th March

Depart 10:30 from Imperial Hotel reception



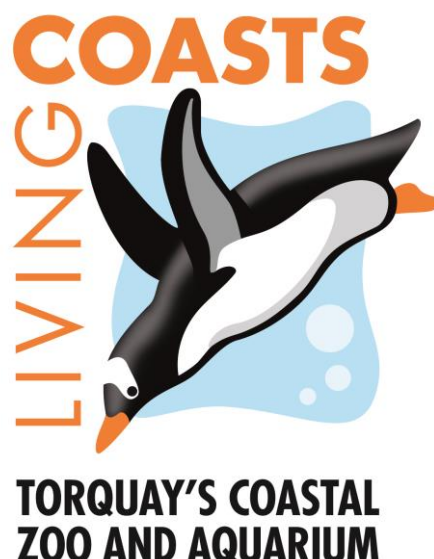
On the shores of Torquay, close to the conference site, we will discover the shore through several monitoring techniques. Biodiversity surveys are key to both projects and can be conducted using a large range of methods, from the most simple to highly technical. We will explore citizen science techniques allowing us to gather information with the public, and gain some altitude with top-level technologies using kites and drones to see everything from “on high”

To book onto the field trip please register your attendance at the registration desk no later than 17:00 on Wednesday 18th March.

Living Coasts

Living Coasts is an all-weather attraction located on Torquay seafront, where there's plenty to do: mingle with the playful penguins, get up close to the otters, octopus and seals and much more.

Visit Penguin Beach to walk with the African and Macaroni penguins and catch the entertaining feeding time talks. Below decks the fun doesn't stop. With more fascinating habitats and creatures there are game, activities and panoramic viewing areas of the stunning species that reside at Living Coasts. Living Coasts is part of the Whitley Wildlife Conservation Trust, both are conservation, research and education charities dedicated to the protection of animals, plants and their environments, locally and internationally.



Wildlife conservation is a concern across the globe. Species and their habitats face a number of threats such as pollution, competition from introduced species, the illegal wildlife trade, habitat destruction and climate change, many of which are related to over-exploitation of natural resources by people. The Zoo and Trust support many conservation projects around the world.

In addition staff at the Zoo play important roles in co-ordinated breeding programmes for endangered species conservation in line with the World Association of Zoos and Aquariums (WAZA) strategy. As part of this, Living Coasts collaborates with other zoos across the world, exchanging animals to prevent inbreeding and ensure that healthy genetic diversity is maintained.

Living Coasts, Newquay Zoo and Paignton Zoo are also part of the Whitley Wildlife Conservation Trust, together with Slapton Ley National Nature Reserve and two local nature reserves in Paignton. The Field Conservation & Research department co-ordinates the involvement of all the zoos in wildlife conservation projects both in the UK and overseas, as well as managing scientific research projects within the zoos and reserves on topics such as animal behaviour, nutrition, enrichment and ecology.

***Conference Offer ***

**Take this page of Joining Instructions or your delegate name badge to
Living Coasts to gain entry at a discount price of £6.85 per person,
from 17th – 20th March 2015**

Keynote 1:

The challenges and future direction of marine management

Linwood Pendleton

International Chair of Excellence
AMURE/LABEX/IUEM



Biography:

Linwood Pendleton holds the International Chair of Excellence at the European Institute for Marine Studies, in the Institute for Marine Law and Economics, at the University of Brest and Laboratory of Excellence in Brest, France. He is a senior scholar in the Ocean and Coastal Policy Program at Duke University's Nicholas Institute for Environmental Policy Solutions. Pendleton's work focuses on policies that affect human uses and enjoyment of ocean and coastal resources – both living and non-living. He is the Director of the Marine Ecosystem Services Partnership, author of many scholarly articles, and coordinates the Marine Secretariat of the international Ecosystem Services Partnership. Pendleton's current projects include understanding the economic and human impacts of ocean acidification (funded by SESYNC and the Prince Albert II Foundation), Mapping Ocean Wealth (with the Nature Conservancy), the economics of coastal blue carbon (Global Environmental Facility), and efforts to better manage the deep sea. Pendleton served as Acting Chief Economist at NOAA from January 2011 through August 2013.

Keynote 2:

Molly Scott Cato South West Member of European Parliament, Green Party



Biography:

Molly Scott Cato is the first Green MEP to be elected by the South West of England, and joined the European Parliament in May 2014.

She is a member of the European Parliament's Economics and Finance Committee, as well as being a substitute member on the Agriculture Committee. Molly is working on a broad range of economic issues, including tax justice and corporate governance, as well as making banking and finance more transparent. In other areas she has prioritised working on sustainable food systems, marine conservation zones, Latin American issues, and renewable energies.

Prior to being an MEP Molly was a Professor of Economics at Roehampton University, having a PhD in Economics from the University of Wales and an undergraduate degree in Politics, Philosophy and Economics from the University of Oxford. She speaks for the Green Party of England and Wales on finance issues and has spent a lifetime involved with social movements and community activity, including the Transition Towns and Stroud Community Agriculture.

The English Channel; one ecosystem, two projects

Valuing and protecting our shared seas
Imperial Hotel, Torquay, 17th-19th March 2015

Tuesday 17th March

Time	Activity	
08.00	Registration	Opposite hotel main reception
08.00	Coffee	Corridor opposite Palm Court
09.00	Welcome from Plymouth University Representative Chair, Professor Ed Maltby	Torbay Suite
09.15	OPENING KEYNOTE ADDRESS The challenges and future direction of marine management Linwood Pendleton, International Chair of Excellence, AMURE/LABEX/IUEM	Torbay Suite
10.00	Current challenges for government regulators, and significance of VALMER and PANACHE results Aisling Lannin, Marine Management Organisation François Gauthiez, Deputy Director for Public-Policy Development, French Marine Protected Areas Agency	Torbay Suite
10.45	Coffee	Corridor opposite Palm Court
11.15	Ecosystem Service Assessment (ESA) in practice: lessons from six diverse case studies Remi Mongruel (Ifremer) & Nicky Beaumont (PML)	Torbay Suite
11.35	PANACHE key findings / high level conclusions	Torbay Suite
11.55	How Ecosystem Services Assessments can support marine and coastal governance Wendy Dodds (Plymouth University)	Torbay Suite
12.15	Discussion	Torbay Suite
12.30	LUNCH	Regatta Restaurant

14.00	PRESENTATION SESSION 1A Assessing Chair: Eric Thiébaud <i>Torbay Suite</i>	PRESENTATION SESSION 1B Working together Chair: Jens Rasmussen <i>Regency Suite</i>
14.00	Marine Protected Areas (MPA) network coherence analysis Benjamin Ponge (AAMP) & Nicola Foster (MI)	Integrated data management Dan Lear (MBA) & Sonia Carrier (AAMP)
14.30	MPA Ecological connectivity Sandrine Vaz (Ifremer)	Visualisation of ecosystem services Charly Griffiths (MBA)
15.00	Roundtable discussion on MPA coherence and connectivity	Roundtable discussion on data and visualisation
15.20	Coffee	<i>Regatta Restaurant</i>

15.50	PRESENTATION SESSION 1A continued	PRESENTATION SESSION 1B continued
15.50	Will ESA work for me? Using the VALMER triage to define the scope of an assessment Nicky Beaumont (PML) & Remi Mongruel (Ifremer)	Gathering data with the general public Fiona White (Kent Wildlife Trust)/Amy Marsden (Hampshire and Isle of Wight Wildlife Trust)/Lilita Vong (Planète Mer)/Patrick Louisy (Peau Bleue)
16.20	A selection box of ESA methods: describing the approaches used in VALMER Tara Hooper (PML) & Remi Mongruel (Ifremer)	
16.50	Roundtable discussion on ESA approaches	Roundtable discussion on gathering data with the general public
17.10	Exploring the VALMER/PANACHE digital world; time for discovery and talks	<i>Palm Court</i>
18.00	Evening Keynote: Molly Scott Cato, South West Member of European Parliament, Green Party	<i>Palm Court</i>
18.15-20.30	Canapé reception	<i>Palm Court and Sun Lounge</i>

Wednesday 18th March

Time	Activity	Torbay Suite/ Regency Suite
08.30	Coffee	
09.00	PRESENTATION SESSION 2A Improving Management Chair: Laurent Germain <i>Torbay Suite</i>	PRESENTATION SESSION 2B Sharing Experiences Chair: Sian Rees <i>Regency Suite</i>
09.00	Managing MPAs: good practices in the Channel Gwendal Dorel (AAMP), Ruth Williams (Cornwall Wildlife Trust), Helen Booker (RSPB), Gwenola de Roton (AAMP)	Usefulness of scenarios to explore management options for the marine environment Juliette Herry (PNR GM) Socio-ecological models to assess changes in ecosystem services Pedro Cabral (UMR AMURE UBO/Ifremer) & Olivia Langmead (MBA)
10.00	Roundtable discussion on managing MPAs	Roundtable discussion on scenarios and socio-ecological models
10.30	Coffee	<i>Corridor opposite Palm Court</i>
	PRESENTATION SESSION 2A continued	PRESENTATION SESSION 2B continued
11.00	Using ESA within decision making; from theory into practice Wendy Dodds (Plymouth University), Karine Dedieu (AAMP), Juliette Herry (PNR GM), Philippa Hoskin (Cornwall Council)	Monitoring tools and technologies David Rodriguez-Rodriguez (MI); Christine Dobroniak (Grand Port Maritime de Dunkerque); Christophe Aulert (AAMP); Emma Sheehan (MI)/Erin Pettifer (Sussex IFCA)/Sandrine Vaz (Ifremer)
12.00	Roundtable discussion on using ESAs for decision making	Roundtable discussion on monitoring tools and technologies
12.30	LUNCH	<i>Regatta Restaurant</i>

14.00	WORKSHOP 1A The future of Ecosystem Service Valuation Nicky Beaumont (PML), Tara Hooper (PML), Remi Mongruel (Ifremer) <i>Torbay Suite</i>	WORKSHOP 1B Monitoring MPAs, next steps Sian Rees (MI) <i>Torbay Suite</i>	WORKSHOP 1C Sharing experiences of the VALMER scenario building processes Juliette Herry (PNR GM) & Aidan Winder (Devon County Council) <i>Regency Suite</i>	WORKSHOP 1D Information technology to support data management, monitoring and ESA Dan Lear (MBA) & Sonia Carrier (AAMP) <i>Gold Room</i>	WORKSHOP 1E Assessing ecological coherence across MPAs Benjamin Ponge (AAMP) <i>Sunlounge</i>
15:30	Coffee				
16.00	PLENARY SESSION, Chair: Dr Steve Fletcher Planning for tomorrow <i>Torbay Suite</i>				
16.00	Ecosystem Services Assessment and stakeholder engagement in marine governance Laura Friedrich (Plymouth University)				
16.20	Engaging the general public with the marine environment Matt Slater (Cornwall Wildlife Trust)				
16.40	Challenges and benefits of working across the Channel Gérald Mannaerts (AAMP) & Ness Smith (Plymouth University)				
17.00	Prospects for the Channel region Christophe Lefebvre (French Marine Protected Areas Agency/IUCN)				
17:30	CLOSE of conference				
19.00	Invitation only dinner for VALMER and PANACHE partners				
	<i>Living Coasts Restaurant</i>				

Thursday 19th March

Time	Activity
10.30	Field trip – Surveying the shore at Livermead, including MPA monitoring demonstrations

List of affiliation acronyms

AAMP - Agence des Aires Marines Protégées/ (French) Marine Protected Areas Agency	RSPB – Royal Society for the Protection of Birds / Société Royale pour la Protection des Oiseaux
Ifremer - Institut Français de Recherche pour l'Exploitation de la Mer/French Research Institute for Exploitation of the Sea	UMR AMURE Unité Mixte de Recherche Aménagement des Usages des Ressources et des Espaces marins et littoraux, Centre de droit et d'économie de la mer / Centre for the Law and Economics of the Sea
IFCA – Inshore Fisheries and Conservation Authority / Autorité de Conservation et de Pêche Côtière	
IUCN - International Union for Conservation of Nature/Union Internationale pour la Conservation de la Nature	
IUEM – Institut Universitaire Européen de la Mer/ European Institute for Marine Studies	
LABEX Laboratoire d'excellence/Cluster of Excellence	
MBA – Marine Biological Association / Association de Biologie Marine	
MI – Plymouth University Marine Institute/ Université de Plymouth	
PML –Plymouth Marine Laboratory / Station Marine de Plymouth	
PN RGM: Parc Naturel Régional du Golfe du Morbihan / Regional Natural Park of Golfe du Morbihan	

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17	How Ecosystem Services Assessments can support marine and coastal governance Wendy Dodds, (Plymouth University)
18	PANACHE key findings: Story of an Marine Protected Area network across the English Channel Gérald Mannaerts, (AAMP)
Session 1A	
19	Analysis of the ecological coherence of the Marine Protected Area (MPA) network in the Channel Benjamin Ponge (AAMP) & Nicola Foster (MI)
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20	A selection box of ESA methods: describing the approaches used in VALMER Tara Hooper (PML) & Remi Mongruel (Ifremer)
Session 1B	
21	Integrated data management Dan Lear (MBA), Charly Griffiths(MBA), Sonia Carrier (AAMP) & Catherine Satra Le Bris (AAMP)
21	Visualisation of ecosystem services Charly Griffiths (MBA)
21	Data acquisition with help from the general public Fiona White (Kent Wildlife Trust)/Amy Marsden (Hampshire and Isle of Wight Wildlife Trust)/Lilita Vong (Planète Mer)/Patrick Louisy (Peau Bleue)
Session 2A	
22	Good practice in MPA management Gwendal Dorel (AAMP), Ruth Williams (Cornwall Wildlife Trust)& Helen Booker (RSPB)
22	Using ESA within decision making; from theory into practice Wendy Dodds (Plymouth University), Karine Dedieu (AAMP), Juliette Herry (PNR GM) & Philippa Hoskin (Cornwall Council)

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23	Marine habitats ecosystem service potential: a vulnerability approach in the Normand-Breton (Saint Malo) Gulf, France Pedro Cabral (UMR AMURE UBO/Ifremer)
23	Socio-ecological modelling to assess change in ecosystem services provision under divergent management scenarios: VALMER North Devon case study Olivia Langmead (MBA)
24	Monitoring tools and technologies David Rodriguez-Rodriguez (MI); Christine Dobroniak (Grand Port Maritime de Dunkerque); Christophe Aulert (AAMP); Emma Sheehan (MI)/Erin Pettifer (Sussex IFCA)/Sandrine Vaz (Ifremer)
Final Plenary Session	
25	Ecosystem Services Assessment and stakeholder engagement in marine governance Laura Friedrich (Plymouth University)
25	Engaging the general public with the marine environment Matt Slater (Cornwall Wildlife Trust)
25	Challenges and benefits of working across the Channel Gérald Mannaerts (AAMP) & Ness Smith (Plymouth University)

Opening Plenary Session

Ecosystem Service Assessment (ESA) in practice: lessons from six diverse case studies

Remi Mongruel (Ifremer) & Nicky Beaumont (PML)

Work package 1 of VALMER endeavoured to undertake Ecosystem Service Assessments at 6 case study sites across the channel. The case study sites varied in their ecology, economy, social background and management, and as a result a broad range of ESA approaches were applied. These included both monetary and non-monetary approaches, and qualitative and quantitative methods, depending on the requirement of the case study. The application of such a varied set of methods resulted in a wealth of knowledge and results, but also in many lessons being learned. Such lessons learned included that effective ESA implementation requires a structured approach between end-users and scientists for defining the aim and scope of the assessment. It is crucial to select the right assessment methodology for the right purpose: a one-shot decision may be advised based on quick and easy methods while long-term assessment may justify more accurate but also expensive approaches. It also became apparent that effective ESA depended heavily on good interdisciplinary working relationships between natural and social scientists, which may be better achieved through long-term collaborations. The issues of data gaps and uncertainty were present in all the case study sites, but methods of making progress regardless of such difficulties were developed, and recommendations for the future made, including the use of data gap analysis for further research and the need to communicate on result limitations. In most cases, ESA tend to provide static snapshots of the situation, which may be not always applicable to management use: therefore, dynamic and connective approaches, although more complex, may be required for particular purposes, especially for comparing

management options. A key lesson was that it was always preferable to take an Ecosystem Service approach, and the VALMER research has left a legacy of improved understanding and enthusiasm for ESA across managers and academics alike.

How Ecosystem Services Assessments can support marine and coastal governance

Wendy Dodds (Plymouth University)

This talk presents evidence-based reflections from the VALMER project on the application of ecosystem services assessments in six pilot studies within the Western Channel. Over fifty interviews were conducted with stakeholders and managers engaged at the sites to gather views on their experiences with ecosystem service assessment, generating crucial insight and evidence into how this approach can be used to support marine and coastal governance.

Using examples and lessons learned from the sites and their stakeholders, we demonstrate there are many benefits to managers in incorporating ecosystem services considerations into existing and ongoing marine and coastal management activities such as planning, implementation and monitoring and evaluation. In doing so, good marine governance is supported, principally through improving the evidence base for decision making and supporting improved stakeholder engagement. Based on feedback from stakeholders and managers, we have identified that a process of co-production of ecosystem service assessments with stakeholders can be extremely valuable in addition to the technical outputs and results, the process itself can generate considerable benefits. It can build trust and faith in the ecosystem service assessment process and results. The process can also create an ecosystem view of the site, bypassing sectoral positions and helping to re-frame contentious management discussions.

The six VALMER pilot sites mirror the diversity of coastal and marine environments and the varying governance contexts that exist within the Western Channel. Application of ecosystem services

assessments in this busy cross-border shared sea represents positive momentum towards an ecosystem-based approach. This approach is required by the EU Marine Strategy Framework Directive and the recent Maritime Spatial Planning Directive, and is ultimately needed for enabling integrated management of marine and coastal environments and their resources.

PANACHE key findings: Story of a Marine Protected Area network across the English Channel

Gérald Mannaerts (AAMP)

The PANACHE project aims to improve protection of the Channel marine environment by establishing a network among existing marine protected areas, incorporating geographical, biological and human considerations.

In order to be “effective”, a network must be well managed and cohesive. This involves taking into account several factors which have been studied within the context of the project, including representation, connectivity and replication. Our evaluation has demonstrated that this network has experienced considerable development in recent years: it covers 10% of English waters, 3% of Channel Island waters, 31% of French waters and 20% of the PANACHE study area, and has achieved a certain degree of coherence.

However, several gaps remain and analyses carried out as part of the PANACHE project highlight the need to create new MPAs, particularly in the deep sea, in order to ensure the conservation of associated ecosystems.

In addition to the creation of new MPAs, the project highlights the need to develop a more cohesive and efficient system for managing existing MPAs. There is a need for better coordination of monitoring systems, not only in the United Kingdom and France but also between these two countries, as well as a common data-sharing platform to support assessment of the effectiveness of MPAs on a local and cross-border level, thus enabling the implementation of dynamic management systems and the establishment of action plans on these various levels. With a view to this objective, the project’s partners have also

been working on methods for monitoring and managing marine protected areas.

The PANACHE project has enabled the organisation of exchanges between experts in order to identify means of sharing the results of monitoring programmes. But this cooperation has been most tangible through 4 specific methods, which bring together high-tech approaches (sonar, mobile cameras) with innovative ones (socio-economic monitoring), as well as traditional monitoring methods (“the Channel seabird observatory”). The project “data management” department’s support of this work has enabled, amongst other things, the creation of a database of all Channel marine protected areas, in cooperation with the Atlantic network and the OSPAR Secretariat.

The establishment of “good management” within the network took a great deal of discussion and has led to the emergence of many good practices, through methods used on both sides of the Channel. This includes the protection of highly mobile species such as cetaceans, vulnerable beach-nesting birds and marine habitats. It has also been reinforced by the production of an “instruction guide” designed to aid environmental managers in drafting management documents for their marine protected area.

As well as building a network between specialists it was essential to consider the general public in this project, by means of several awareness-raising events and citizen science. Many associations and bodies have organised public beach or diving trips, which not only allow people to discover these ecosystems, but also provide extremely valuable observational data.

Session 1A

Analysis of the ecological coherence of the Marine Protected Area (MPA) network in the Channel

Benjamin Ponge (French Marine Protected Areas Agency) & Nicola Foster (Plymouth University, Marine Institute)

Marine Protected Areas (MPAs) can be designated individually, or sometimes following a systematic process. International conventions call for the creation of coherent, representative and well managed MPA networks, both on a national level and a regional one, crossing administrative borders. The main question tackled here is this: from an ecological point of view, what do the Channel MPAs represent when they are considered as a whole?

Ecological coherence is a necessary prerequisite for the establishment of an effective MPA network, but is not enough on its own; adequate management is also needed. The evaluation presented here demonstrates that the Channel MPA network has made considerable progress in recent years, and has achieved a certain degree of coherence. However, several gaps remain and this report highlights the need to create new MPAs, particularly offshore, in order to ensure the conservation of associated ecosystems.

As well as designating new MPAs, this report highlights the need to develop a more cohesive and efficient system for managing existing MPAs. There is a need to establish better coordination between monitoring systems, not only in the United Kingdom and France, but also between these two countries, as well as a common data-sharing platform to support assessment of the effectiveness of MPAs on a local and cross-border level, thus enabling the implementation of dynamic management systems and the establishment of action plans on these various levels.

Ecological connectivity between MPAs Sandrine Vaz (Ifremer)

As part of the study on the cohesion of the Channel marine protected area network, we have carried out detailed research on plankton connectivity by simulating larval drift.

The PANACHE project uses two complementary approaches: the first looks at as many species as possible, but gives only a basic representation of the underlying biological processes, while the second focuses on the connectivity of marine protected areas by looking at the transport of larvae in a well-known sole species, whose biological processes and associated factors are well documented.

The results presented in this session will enable us to identify the cluster of marine protected areas which are interconnected and, conversely, those where management on a local level alone is sufficient.

Will ESA work for me? Using the VALMER triage to define the scope of an assessment

Nicky Beaumont (PML) & Remi Mongrue, (Ifremer)

Ecosystem service assessments (ESA) are being used increasingly to inform marine policy and planning. These ecosystem service assessments, however, can require significant time, effort, and expertise. Such assessments must determine which of the numerous ecosystem services should be quantified and which measures of ecological output, economic impact, or value should be assessed. Furthermore, the literature shows that in practice such ecosystem services approaches are unevenly applied and rarely used effectively in decision-making processes.

The VALMER project developed a strategic decision-making approach, called a triage, to assess what types of ecosystem services should be assessed to improve the uptake and usefulness of such information in marine planning. The first stage in the triage process is to determine transparently why an

assessment is being undertaken and what its general scope should be. In this stage, it is important to determine whether a proposed policy process involves trade-offs that include ecosystem services, why decision-makers are willing to consider ES information, and what are the geographic and temporal scales of the proposed management area. The second stage reduces the number of ecosystem services to be assessed according to three criteria: the potential for the service availability to change, the ability of local management to cope with this change and the influence of external factors. The third stage consists in deciding how exactly to quantify selected ecosystem services (e.g. measures of ecological output, economic impact, economic value, etc.).

The workshop will provide some examples of the implementation of the triage process in the VALMER study sites. Discussions will focus on the reasons why it is important for operational uses to consider not only the content and outputs of an ESA, but also the aim, scope and more broadly the general social process leading to the assessment.

A selection box of ESA methods: describing the approaches used in VALMER

Tara Hooper (PML) & Remi Mongruel (Ifremer)

A wide range of ES assessment methods have been used in the 6 VALMER study sites. Methods were chosen taking into account the particular needs of each study sites. They include ecological assessment methods (sensitivity assessment, ecological function qualitative assessment), social sciences methods (interviews, surveys), multi-criteria analysis (indicators), economic methods (transport costs, choice experiment, ecosystem accounting, Bayesian belief networks) and cross-methods (INVEST, system dynamic modelling). Most case study sites used a combination of methods to achieve the aim of the assessment. The French study sites used ecological assessment to improve the knowledge of habitats and their relationships with functions and services, but also to analyse factors of change.

Interviews and surveys provided a better view of the issue at stake and the social perceptions. INVEST models and ecosystem accounting contributed to an initial diagnosis in the Normand-Breton Gulf, while tools like choice experiment (Gulf of Morbihan) or system dynamic modelling (Iroise Marine Natural Park) were used to compare management options.

Using ecological knowledge to link habitats to services, mapping the results and modelling the implications of management actions were techniques that were also used at the UK case study sites. In addition, the travel cost method was used to obtain a monetary value for recreation in Poole Harbour. This study also used multicriteria analysis to understand the relative importance users placed on different characteristics of the area, which demonstrated the importance of wildlife and the environment to people's enjoyment of recreational activities. Survey methods were again used for the Plymouth Sound to Fowey case study in order to investigate the cultural services provided by this part of South East Cornwall. The responses showed a clear link between reported wellbeing and the frequency of visits to the coast, and also provided insights into why people feel particular places are important or under threat.

Session 1B

Integrated data management

Dan Lear (MBA), Charly Griffiths(MBA),
Sonia Carrier (AAMP) & Catherine Satra Le
Bris (AAMP)

The PANACHE and VALMER projects exemplified how technology can be harnessed to collate and manage disparate datasets in support of the valuation and management of the marine environment. Drawing from extensive UK and French expertise this presentation will outline the historical perspective, technical solutions and future challenges faced in the management of the wide range of data available to marine scientists. We will demonstrate the importance and benefits of integrating data management at the earliest stage of the projects, illustrate how the work carried out within PANACHE and VALMER fits into the wider European marine data landscape and identify areas where further future work is required.

Visualisation of ecosystem services

Charly Griffiths (MBA)

The presentation of environmental information and data is fundamental to any research with a spatial remit. GIS technologies provide an ideal platform for presenting spatial distributions and location of issues, activities and governance options within a given location. Increasingly, GIS specialists find themselves in a new role of engaging stakeholders; working with the public to collect, depict, and interpret new information that assists in coastal resource decision making.

Here we present the technical GIS methodology undertaken in the VALMER North Devon UNESCO Biosphere Reserve (NDBR) case study. We describe how GIS was utilised to engage stakeholders and to present changing ecosystem service values under four commercial development scenarios impacting the subtidal sediment habitats within the NDBR.

Data acquisition with help from the general public

Fiona White (Kent Wildlife Trust)/Amy Marsden (Hampshire and Isle of Wight Wildlife Trust)/Lilita Vong (Planète Mer)/Patrick Louisy (Peau Bleue)

As part of our innovative scientific culture, citizen science brings together associations, researchers and the general public in a project for acquiring knowledge. In order to do so, the PANACHE project has brought together several partners, working both on the foreshore and underwater.

The involvement of such a large number of individuals and the collection of data from non-specialists means that special tools and methods are needed. Through 4 presentations, this session will illustrate the methods used both in France and in England, for involving and collecting data from divers and walkers.

Session 2A

Good practice in MPA management

Gwendal Dorel (AAMP), Ruth Williams (Cornwall Wildlife Trust), Helen Booker (RSPB), Gwenola de Roton (AAMP)

The implementation of measures for managing a marine protected area is not straightforward, and must depend both on natural challenges and on the local socio-economic context. As part of the PANACHE project, studies have been carried out of experiments illustrating “good management practices”.

This session will use the example of 3 crucial challenges in the Channel: protection of cetaceans, protection of habitats, and protection of vulnerable birds, as well as the methods which have been developed for facing them. The session will conclude with a fourth presentation looking at a guide developed with environmental managers in mind, which aims to help them draft the management plan for their site.

Using ESA within decision making; from theory into practice

Wendy Dodds (Plymouth University), Karine Dedieu (AAMP), Juliette Herry (PNR GM) & Philippa Hoskin (Cornwall Council)

The Interreg VALMER project has seen the application of marine Ecosystem Service Assessments (ESAs) at pilot study sites in the Western Channel, six across South West England and North West France. Led by site coordinators, interdisciplinary case study teams of economists, social scientists, ecologists and managers worked collaboratively to bring together groups of stakeholders to develop site-specific marine ESAs. Each had a different scope, for example, assessments looking at the ecosystem services provided by specific habitats such as kelp forests, through to more broad-scale assessments covering, for example, all intertidal and subtidal habitats within a certain marine and coastal area. This session will explore how the sites have

applied marine ecosystem service thinking to improve understanding of the links between ecosystem services, their value, and effective marine governance, including Marine Protected Areas. In doing so, case study coordinators will reflect on their experiences of the VALMER process in trying to integrate their site-based ESA into various aspects of governance, from stakeholder engagement through to decision making. It will also include a critical discussion and debate concerning the benefits and challenges of undertaking and applying ecosystem service valuation frameworks to support marine governance in practical terms.

Session 2B

Usefulness of scenarios to explore management options for the marine environment

Juliette Herry (PNR GM) & Aidan Winder (Devon County Council)

This session proposes to introduce the two major deliverables from scenarios perspectives produced during the VALMER project. The first one is the technical scenarios guidelines “Building site based scenarios: tools and approaches for implementation in the VALMER project”. These guidelines set out how to build scenarios in five complementary phases. A toolbox of twelve tools is also given to help managers involve stakeholders. The second one is a transnational scenario synthesis that gathers the scenarios approaches developed in the VALMER project. The usefulness and limits of scenarios, the lessons learned and recommendations identified through VALMER experiences will be presented during this session.

Marine habitats ecosystem service potential: a vulnerability approach in the Normand-Breton (Saint Malo) Gulf, France

Pedro Cabral (UMR AMURE UBO/Ifremer)

We assessed the vulnerability of the benthic habitats potential to deliver ES caused by physical, chemical and biological pressures identified by the Marine Strategy Framework Directive (MSFD) in the Normand-Breton (Saint Malo) Gulf (GNB), in France. The InVEST Habitat Risk Assessment (HRA) model provides useful information for identifying the regions on the seascape where the impacts of human activities are the highest. Additionally, and because the HRA does not address any ES in particular but the whole set of services offered by marine and coastal ecosystems, we analyze the habitats potential to deliver different types of ES (provisioning, regulating and maintenance, and cultural) using habitats vulnerability as a proxy. Concept-driven scenarios are

presented to enable the understanding of existing trade-offs as a consequence of different management options.

Results provide relevant ES-based information for managers to communicate with stakeholders and prioritize actions for risk mitigation.

Socio-ecological modelling to assess change in ecosystem services provision under divergent management scenarios: VALMER North Devon case study

Olivia Langmead (MBA)

Subtidal sedimentary habitats dominate the marine area of the North Devon Biosphere Reserve (NDBR), but their role in delivering ecosystem services, and how management may mediate this delivery, is poorly understood. This case study integrated: 1) ecosystem services assessment (ESA), 2) data collation and mapping; and 3) stakeholder led scenario building process within a socioecological modelling framework. We focused on three ecosystem services: nursery habitat for key commercial fish species, carbon sequestration and waste remediation.

A socio-ecological model (Bayesian belief network, BBN) was developed to represent relationships between human activities, subtidal seabed habitats and their ecosystem services. This framework incorporated various types of knowledge including literature reviews of habitat sensitivities and likely pressures arising from activities, relationships between habitats and their ecosystem services from the ESA, and expert opinion. The model was run for each 1km² of the NDBR using geospatial data from habitat maps, depth and fishing activity to generate service provision maps representative of current provision of ecosystem services. Pressure maps elaborated for three scenarios, MPA designation, aggregate extraction and aquaculture development (build in collaboration with stakeholders) were used to condition the model. Changes in ecosystem service delivery varied for each scenario and each service considered. Spatial representation of socio-ecological model

results allowed visualisation of the benefits and trade-offs associated with each management scenario, together with the magnitude of change in ecosystem service provision by type to be represented. In addition secondary effects of management interventions such as fisheries displacement were explicit, together with their implications for service provision.

The BBN socio-ecological modelling framework linked with a geospatial database constitutes an innovative way to incorporate information from the ESA with scenarios developed with stakeholders and elaborate spatially representative changes in service provision with real world application to management.

Monitoring tools and technologies

David Rodriguez-Rodriguez (MI); Christine Dobroniak (Grand Port Maritime de Dunkerque); Christophe Aulert (AAMP); Emma Sheehan (MI)/Erin Pettifer (Sussex IFCA)/Sandrine Vaz (Ifremer)

One of the core objectives of the PANACHE project was to undertake a Work Package that could potentially build greater coherence in the way that MPAs are monitored in the Channel region. It was recognised that monitoring the ecological change in response to MPA management alongside the associated socio-economic impacts of MPAs is important to underpin decision support mechanisms for resource use and to ensure that the MPA is successful in protecting the conservation features for which the site was originally designated. At the time of the project initiation England and France were both developing ways to effectively monitor MPAs, but there was little transnational coherence. It was recognised that in order to work towards a network of MPAs that is activity supporting biodiversity and the associated provision of ecosystem services in the Channel then it was imperative that monitoring techniques could be transferable and designed so that they are able to adequately inform management and policy review at a national level and are efficient,

sustainable and comparable across the region.

To work towards this common objective the PANACHE project facilitated scientific exchanges of experts to determine how the results and techniques of existing monitoring programmes can be shared to give a greater overall indication of how MPAs in the Channel are impacting humans and biodiversity. Specifically, four MPA monitoring approaches were trialled under this framework between French and English partner organisations and will be presented in this session. These monitoring studies include 1) a comparative study of towed video methodology to monitor benthic habitats in MPAs; 2) methods to monitor seabird colonies in the Channel; 3) The use of socio-economic indicators to monitor the effects of MPAs and 4) The use of multibeam echo sounder as a tool for MPA selection and management.

Final plenary session

Ecosystem Services Assessment and stakeholder engagement in marine governance

Laura Friedrich (Plymouth University)

One of the aims of the VALMER project was to explore how ecosystem service assessment can support better stakeholder engagement in marine management. Stakeholder engagement was a key element of VALMER. In each of the six case studies different stakeholder groups were engaged in discussions and exercises to explore potential future management options for their sites based on ecosystem service assessment. At the end of the case studies, 39 in-depth interviews were conducted across the six sites with a range of different stakeholders, from government authorities and local managers to commercial fisheries representatives and recreational users, to capture their views on the engagement process. This talk will present key findings from the VALMER stakeholder experience with ecosystem service assessment.

Feedback from VALMER stakeholders revealed that ecosystem service assessment can enhance stakeholder engagement by providing a neutral, objective and inclusive setting in which the stakeholders feel involved and encouraged to share their knowledge and views. The findings also provide useful guidance on what should be considered by practitioners when using ecosystem service assessment as an engagement tool. Evidence from the VALMER case studies suggests that ecosystem service assessment provides a useful tool for effectively engaging stakeholders in marine management. Involving stakeholders in an ecosystem service assessment process not only ensures more effective incorporation of relevant local knowledge into marine plans and management decisions. It can also support better dialogue between managers and their stakeholders, as well as improved relations among different stakeholders. ESA can

therefore contribute to reducing user conflicts and increasing stakeholder buy-in to management measures and regulations, thus facilitating the implementation of integrated ecosystem based marine management.

Engaging the general public with the marine environment

Matt Slater (Cornwall Wildlife Trust)

Marine Protected Areas are a vital tool in marine biodiversity conservation but by their very nature they can be difficult for the public to understand and creating support is difficult without quality engagement and education of the public.

The PANACHE project enabled partner organisations on both sides of the Channel to share their experiences in this field, and to deliver public awareness work, the effectiveness of which was analysed and will be discussed in this presentation. Four Wildlife Trusts on the English Coast and two organisations on the French Coast delivered a total of 119 public awareness events during the two years of the PANACHE project, engaging with approximately 13,000 people. Additionally networks of citizen science volunteers have added to the effects of the PANACHE programme and a groundswell of public support for marine conservation and the need for Marine Protected Areas is now in full swing.

Challenges and benefits of working across the Channel

Gérald Mannaerts (AAMP) & Ness Smith (Plymouth University)

One of the main aims of Interreg programmes is to encourage cross-border collaboration within the EU and beyond. Our countries face many common challenges in managing the marine environment, but there is much to learn from each other's' different approaches in tackling these. This presentation will highlight the many benefits of working together across the Channel, as well as the sometimes surprising challenges met along the way.

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27	C: Sharing experiences of the VALMER scenario building processes Juliette Herry (PNR GM) & Aidan Winder (Devon County Council)
28	D: Information technology to support data management, monitoring and ESA Dan Lear (MBA) & Sonia Carrier (AAMP)
28	E: Assessing ecological coherence across MPAs Benjamin Ponge (AAMP)

Workshop A:

The future of Ecosystem Service Valuation

Nicky Beaumont (PML), Tara Hooper (PML),
Remi Mongrue (Ifremer)

This will be a participatory workshop requiring active engagement, and providing an opportunity to influence the future of Ecosystem Service Assessment. Building on the earlier presentations we will provide a brief overview of ESA experiences and lessons learned to date. The discussion will then be opened to capture aspirations, opinions and requirements for ESA into the future. Specifically attendees will be asked to share the aspects of the VALMER ESA they could use, what they would have liked to have seen done differently, and how they expect they could use ESA in the future.

Participants will then be divided into small working groups to partake in structured discussions regarding specific issues relating to ESA including: which methods of ES valuation are most appropriate, and how best to compare the outcomes of different methods; how to handle gaps in data, including how to proactively address these gaps; methods of addressing connectivity and interdependence of ecosystem services, including the distance between ecosystem production (generally at sea) and ecosystem beneficiaries (generally on land); most effective means of communication of ecosystem service information, including uncertainty. Any other key issues which are raised in the initial group session will also be included here.

The participants will then regroup to compare findings and share outcomes. The findings of this workshop will be used in accompaniment with the Lessons Learned document to produce a high level Opinion piece on the Future of Ecosystem Valuation.

Workshop B:

Monitoring MPAs, next steps

Sian Rees (MI)

This workshop will conclude the PANACHE MPA monitoring trials. We will then 'look forward' to consider how we may develop a common approach to profiling, modelling, and monitoring MPAs from a social, ecological and economic perspective via developing ideas for specific case study MPAs in the Channel region.

Workshop C:

Sharing experiences of the VALMER scenario building processes

Juliette Herry (PNR GM) & Aidan Winder
(Devon County Council)

This workshop aims to present different scenarios methodologies and approaches. The idea is to share knowledge from VALMER experiences and to open discussions with the attendees that already have experimented scenarios exercises or would like to develop scenarios in the future. This workshop will also be an opportunity to:

- Discuss on the advantages and disadvantages of scenarios tools used in VALMER
- Analyse the usefulness of scenarios processes in terms of local stakeholders engagement in connection with ecosystem services approach.

Workshop D:

Information technology to support data management, monitoring and ESA

Dan Lear (MBA) & Sonia Carrier (AAMP)

A workshop for technical specialists, practitioners and policy makers. The European marine data landscape can at first appear unfocussed, disparate and difficult to navigate. How can you find the data you need? What tools exist to facilitate data discovery and access? What standards exist and how can they benefit your use of the data? In this workshop we bring together expertise from the VALMER and PANACHE projects to provide training in the collation, management and dissemination of the wide variety of marine data currently in the public domain.

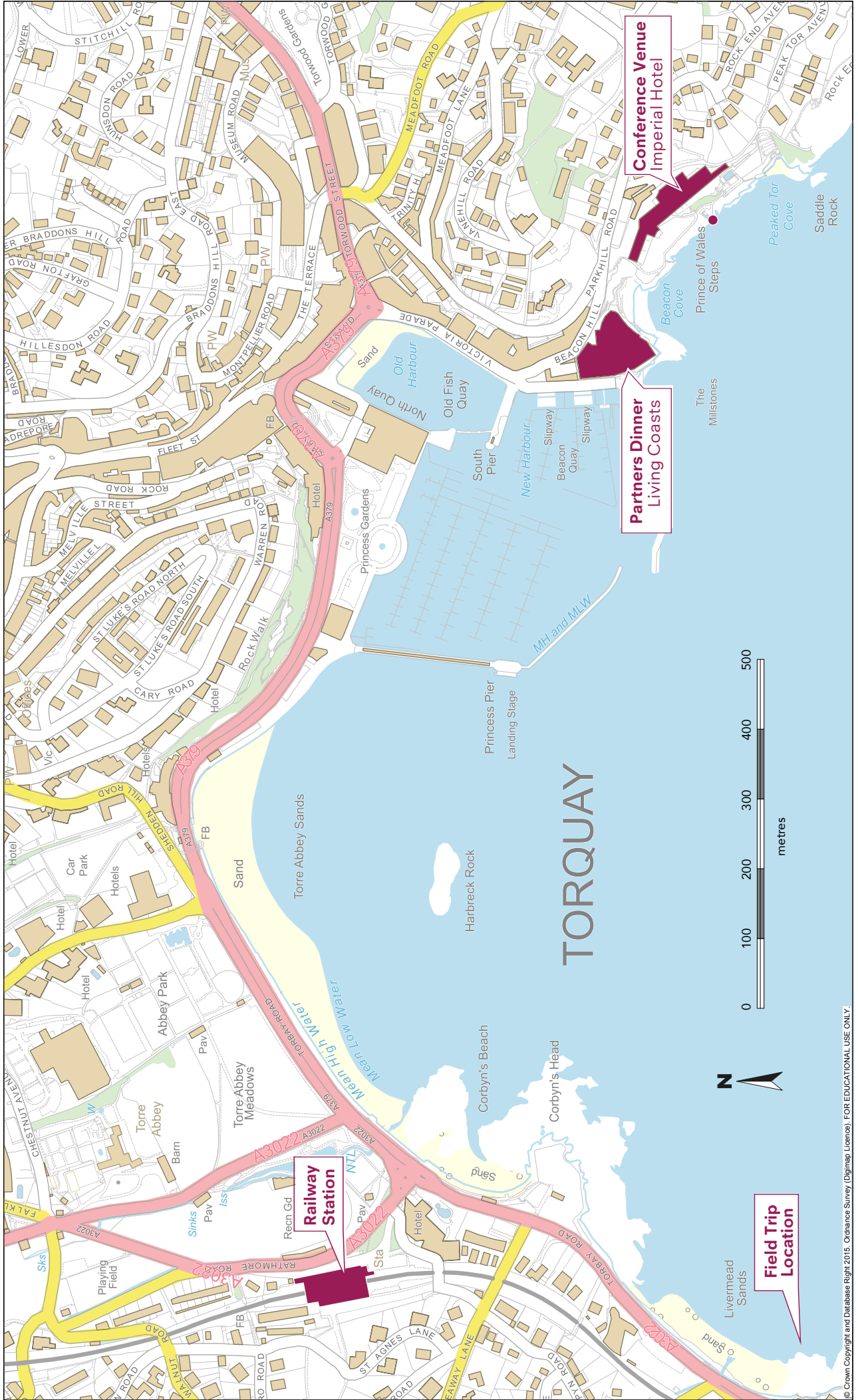
The workshop will follow two tracks; one for IT specialists which will focus on the technical challenges, the other track will provide non-technical participants with the knowledge and understanding of how technology and data facilitate the planning and policy agenda.

Workshop E:

Assessing ecological coherence across MPAs

Benjamin Ponge (AAMP)

This workshop will detail the steps taken to analyse the ecological cohesion of marine protected areas in the Channel. It will be based on workshops carried out prior to the study. The factors, methods and data used will be analysed in order to make the results more transparent. In the second part, further avenues of study, both in the Channel and elsewhere, will be discussed.



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www.torquaysdinosaurworld.co.uk
Alight outside Debenhams, then approx 1 minute walk.
- 2 Living Coasts**
T: 0844 474 3366 P: TQ1 2BG
www.livingcoasts.org.uk
Alight outside Debenhams, then approx 5 minute walk.
- 3 Greenway Ferry Pleasure Cruises**
T: 01803 882811 P: TQ2 5EZ
www.greenwayferry.co.uk
Alight Torquay Seafront or outside Debenhams.
- 4 Torquay Museum**
T: 01803 293975 P: TQ1 1HG
www.torquaymuseum.org
Alight outside Debenhams, then approx 10 minute walk.
- 5 Princess Theatre**
T: 0844 871 3023 P: TQ2 5EZ
www.watgickets.com/venues/princess-theatre-torquay/
Alight Torquay Seafront.

- 6 Agatha Christie Mile**
(Begins at Grand Hotel)
T: 0844 474 22 33 P: TQ2 6NT
www.englishriviera.co.uk/agathachristie
Alight outside the Grand Hotel, Torquay seafront.

- 7 Waves Leisure Pool**
T: 01803 299992 P: TQ2 5LZ
www.rivieracentre.co.uk/leisure-pool
Alight Torquay Seafront, then approx 10 minute walk.

- 8 Poppins Pottery**
T: 01803 295456 P: TQ2 5QU
www.poppinspottery.co.uk
Alight Castle Circus then approx 5 minute walk.

- 9 Torre Abbey** reopening July 2013
T: 01803 293593 P: TQ2 5JE
Alight on Torquay seafront, then approx 2 minute walk.

Paignton

- 10 Palace Theatre**
T: 01803 665800 P: TQ3 3HF
www.palacetheatrepaignton.co.uk
Alight Paignton Bus Station then approximately 10 minutes walk.

- 11 Paignton Pier**
T: 01803 522139 P: TQ4 6BW
www.paigntonpier.co.uk
Alight Paignton Bus Station then approximately 15 minutes walk.

- 12 Dartmouth Steam Railway and Riverboat Company**
T: 01803 555872 P: TQ4 6AF
www.dartmouthrailriver.co.uk/
Alight Paignton Bus Station, approx 3 minute walk.

- 13 Splashdown@Quaywest**
T: 01803 555550 P: TQ4 6LN
www.splashdownwaterparks.co.uk
Alight Dartmouth Road, opposite Torbay Leisure Centre, approx 5 minute walk.

- 14 Seashore Centre**
T: 01803 528841 P: TQ4 6LP
www.countryside-trust.org.uk
Alight Dartmouth Road, opposite Torbay Leisure Centre, approx 5 minute walk.

Brixham

- 15 Greenway Ferry Pleasure Cruises**
T: 01803 882811 P: TQ5 8AV
www.greenwayferry.co.uk
Alight Town Square then approx 5 minute walk.

- 16 The Golden Hind**
T: 01803 856223 P: TQ5 8AV
www.goldenhind.co.uk
Alight Town Square then approx 5 minute walk.

- 17 Smugglers Story**
T: 01803 856558 P: TQ5 9TF
www.smugglersstory.co.uk
Alight Town Square then approx 5 minute walk.

- 18 Brixham Heritage Museum**
T: 01803 856267 P: TQ5 8LZ
Alight at Bolton Street, then museum found opposite.

off the Hop 12 route

Babbacombe Bay

- 19 Babbacombe Cliff Railway**
T: 01803 328750 P: TQ1 3LF
www.babbacombecliff railway.co.uk
Alight Debenhams for connections to Babbacombe Road, Babbacombe.

- 20 Babbacombe Model Village**
T: 01803 315315 P: TQ1 3LA
www.babbacombe model village.co.uk
Alight Debenhams for connections to Babbacombe Road, Babbacombe.

- 21 Babbacombe Theatre**
T: 01803 328385 P: TQ1 3LU
www.babbacombe-theatre.com
Alight Debenhams for connections to Babbacombe Road, Babbacombe.

- 22 Bygones**
T: 01803 326108 P: TQ1 4PR
www.bygones.co.uk
Alight Debenhams for connections to Babbacombe Road, Babbacombe.

Torquay

- 23 Kents Cavern Gateway to the English Riviera Global Geopark**
T: 01803 215136 P: TQ1 2JF
www.kents-cavern.co.uk
Alight Debenhams for connections to the Isham Road junction of Babbacombe Road, then approx 10 minute walk.

- 24 The Little Theatre**
T: 01803 299330 P: TQ1 2EL
www.toadslittletheatre.co.uk
Alight Debenhams, then 15-20 minute walk.

- 25 Cockington Court and Village**
T: 01803 607230 P: TQ2 6XA
www.cockingtoncourt.org
Alight Torquay Seafront or Debenhams for connection to Cockington.

Paignton

- 26 Parkfield Activity Centre**
T: 01803 698900 P: TQ3 2NR
www.parkfieldtorbay.co.uk
Alight Torquay Road or Paignton Bus Station, then approximately 15 minute walk.

- 27 Paignton Zoo**
T: 0844 474 2222 P: TQ4 7EU
www.paigntonzoo.org.uk
Alight Paignton Bus Station for connections to Paignton Zoo.

- 28 Occombe Farm**
T: 01803 520022 P: TQ3 1RN
www.occombe.org.uk
Alight Paignton Bus Station or Debenhams Torquay for connections to Occombe Farm.

Brixham

- 29 Berry Head National Nature Reserve Gateway to the English Riviera Global Geopark**
T: 01803 882619 P: TQ5 9AP
www.berryhead.org.uk
Alight Brixham Town Square for connection to Victoria Road then approx 10 minute walk.

- 30 National Trust at Greenway**
T: 01803 842382 P: TQ5 0ES
www.nationaltrust.org.uk/greenway
Alight Brixham Park and Ride for connection to Greenway House (bookings advisable) or approximately 1 1/2 mile walk.

- 31 National Trust at Coleton Fishacre**
T: 01803 842382 P: TQ6 0EQ
www.nationaltrust.org.uk/coletonfishacre
Alight at Brixham Town Square for connections to Kingswear, then approximately 40 minute walk from Nethway Cross, Slappers Hill.

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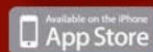
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