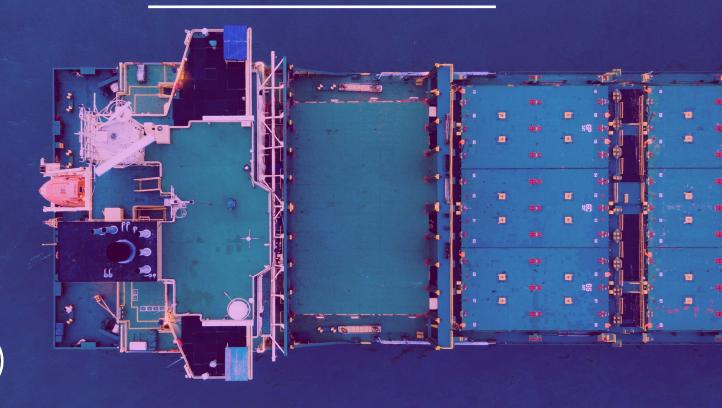


Macaronesian Bulletin of Maritime Spatial Planning









































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The NRP Gago Coutinho hidrographyc Portuguese vessel. source: ma

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Editorial

The MarSP project on stage in the European Maritime Day!

The workshop entitled - MarSP: Innovative tools & transferability in MSP projects launched a joint discussion between EASME MSP projects about the use of innovative tools to improve the support of the implementation of the MSP Directive.

A series of EASME sister projects shared a series of tools & best practices applied or to be applied in their respective basin with the potential of transferability (Read more).

Discover the new MarSP dissemination video presented in the European Maritime Day!







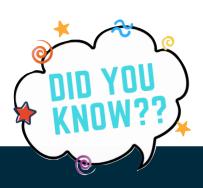
MSP News

Proposal for the creation of a Marine Ecopark in Madeira

The Marine Ecopark, proposed by the local administration of Funchal, would be located between "Pontinha" and "Ponta da Cruz", in the western area of the city. It would be approximately 2 km long and up to 400 m from the coastline (as a maximum distance). "This Ecopark would find a balance between environmental concerns and economic activities such as fishing, diving, and other sports," said Paulo Cofôfo - Chariman of the Local Municipality, highlighting the relevance of the existing "marine spatial framework" (Read more)

The Hydrographic Vessel Gago Coutinho from the Portuguese navy is carrying out research in the Madeira Sea

From May 8th, 2019 until the end of the month, work will be carried out in southern Madeira, to the north of Porto Santo and up to the Savage Islands. The aim is to collect hydrographic, oceanographic and geological information as well as mapping deep-sea ecosystems of the continental shelf and slope of the Madeira archipelago(Read more)



Microalgae have been on earth for more than 2500 million years and are the base of the food chain of the planet? (Read more)

Jellyfish are over 500 million years old making them older than dinosaurs. Jellyfish have been on the menu in China for over 1700 years being a low calorie, high protein food source? (Read more)

The past European Maritime Day (EMD) celebrated in Lisbon (Portugal) from the 16-17 of May of 2019 was the biggest-ever EMD? (Read more)



MSP News

First steps towards a Macaronesian network of Sea Museums

The Canary Maritime Culture Association (Asociación Canaria de Cultura Marítima or ACCOMAR) launched in April 2019 a new initiative to create the first Macaronesian Museums of the Sea network. This initiative counted with the support of other sister entities from the Azores and Madeira (Read more).

Inside of the Whaling Museum in the island of Pico, the Azores (Read more)



Atlantic Museum in the southern coast of Lanzarote, the Canary Islands (Read more)



Apart from the flour and oil obtained from sperm whales, Azores whalers made handicrafts out of whale bones and teeth which were sculpted and engraved. In English, there is a popular artistic expression known as "Scrimshaw" art for this type of handmade tools (Read more)



The whaling industry used to be a significant part of the Azores' economy? Nowadays, the Whaling Industry museum located in Pico Island is based on an old factory that operated between 1946-1984. Boilers, machinery and other equipment used for sperm whales hunting are displayed in the museum, along with tools for use and transformation of cetaceans into byproducts (e.g., oil and flour) (Read more)



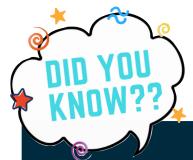
MSP News

The parliaments of the Macaronesia are preparing a "Zero Plastic" campaign

Tons of waste generated on land (including plastics) end up in the marine environment, acting as a large sink daily. For this reason, a "Macaronesia Plastic Zero" campaign was launched on February 26th, 2019 in Cape Verde. This initiative was organised following the first meeting for the '10th Atlantic Parliamentary' conference which will be held in the archipelago in 2020 (Read more)

The Macaronesian Cookery Book is ready and publicly available!

The MARPROF project has developed a Macaronesian Cookery Book that gathers useful information from different points of view (e.g., biological, culinary, fisheries, and nutritional). This book is meant to be used (and enjoyed) by both local residents and visitors of the Azores, Madeira, and Canary Islands Macaronesian archipelagos. (Read more)



Almost 80% of the mackerel fished in the waters off the Canary Islands have in its stomach small fragments of plastic, mostly synthetic fibers from the laundry that thousands of washing machines do every day? (Read more)

Australia's Great Barrier Reef zoning scheme helped to protect tourism revenue worth USD 1.5 billion by creating no-take zones for fisheries? (Jay, S. 2017) (Read more)

Norway's plan for the Barents Sea protected fishing grounds from harmful activities such as seismic exploration increasing their worth up to 1.25 billion USD per annum and generating 11,000 jobs? (Jay, S. 2017) (Read more)

METHOD OF PREPARATION:

• HAKE.

MIX ALL THE INGREDIENTS BUT THE HAKE, BOIL AND LET THEM REST FOR A FEW MINUTES. INCREASE THE WATER TEMPERATURE AGAIN, ADD THE HAKE AND PUT THE FIRE OUT. LEAVE IT COVERED FOR 10 MINUTES.

. MALVASÍA WINE SAUCE.

BOIL MALVASIA WINE AND SUGAR UNTIL THE LIQUID HAS REDUCED 75%, MIX IT WITH FISH BROTH, ADD FLOUR AND SALT.

· FALSE CAVIAR.

BOIL MALVASIA WINE UNTIL THE LIQUID HAS REDUCED 50%, MIX IT WITH FISH BROTH AND AGAR, ADD SALT AND BOIL AGAIN. FILL A SYRINGE WITH THE MIX AND ADD IT TO COLD OIL DROP BY DROP, COPING THE CAVIAR EGGS SHAPE.







• SALT, PEPPER AND LAUREL

Key concepts to understand each other



Reduction of cumulative impacts derived from anthropogenic uses and activities on marine ecosystems



Decreasing uncertainty in the private sector when it comes to planning new investments



Incorporation of biodiversity objectives to marine spatial planning and management



Identification of areas of biological or ecological importance



Identification of compatible uses within the same area for development



Development of a legal framework for a network of Marine Protected Areas (MPAs)



Ecological



Allocation of suitable space for biodiversity and nature conservation



Simplified access to authorised licenses



SOURCE: IOC-UNESCO

Improved opportunities for community and citizen participation



Promotion of the efficient use of both resources and space



Social



Identification and improved protection of cultural heritage



Reduction of conflicts among incompatible uses and between them and Nature



Identification of decisionmaking process' linkages on the allocation of marine space for specific use (or non-use) for coastal communities and their economies



Identification and preservation of social and spiritual values related to ocean use

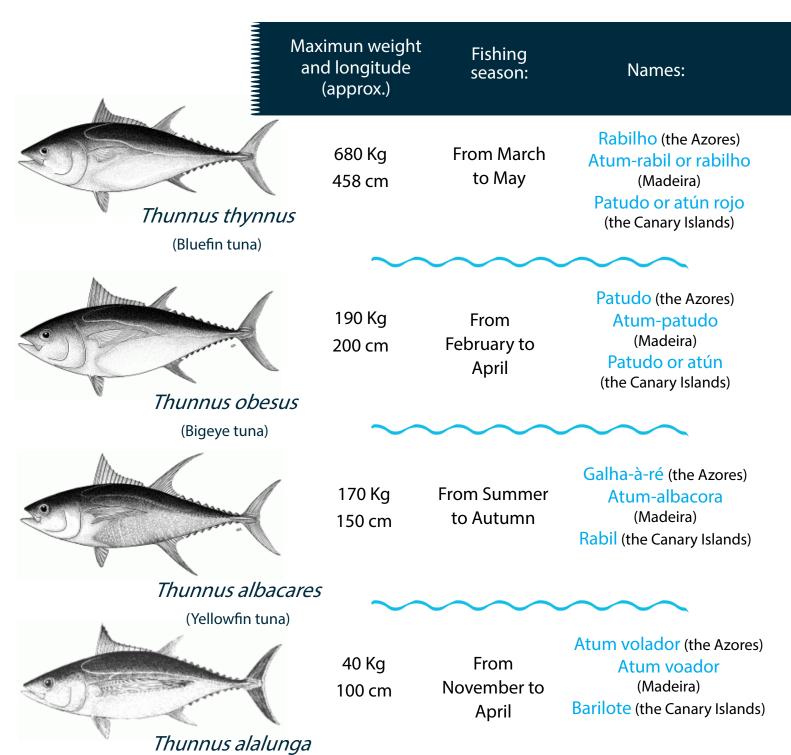


Key concepts to understand each other

(Albacore)

Which tuna is which in each archipelago?

Tuna is known for its massive oceanic migrations, is a common fishery resource shared in the European Macaronesian and is one of the species more studied and regulated in the Atlantic Ocean by international bodies such as the International Commission for the Conservation of Atlantic Tunas, but...which is which in each archipelago? (Read more)



The administration manages...

New Sustainable Fishing Partnership Agreement between EU and Cape Verde

The new protocol covers 5 years providing fishing opportunities for 69 EU vessels to fish in Cape Verde waters. Therefore, it, as of today, contains a yearly EU financial contribution of 750.000 €, including 350.000€ annually earmarked to promote the sustainable management of fisheries in Cape Verde, notably through measures aiming at reinforcing control and surveillance capacities and supporting local fishing communities (Read more).

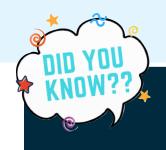
EU launches a new IT tool to fight illegal, unreported and unregulated fishery

This tool, called "CATCH", has been designed to streamline control of seafood products entering the EU market (Read more).

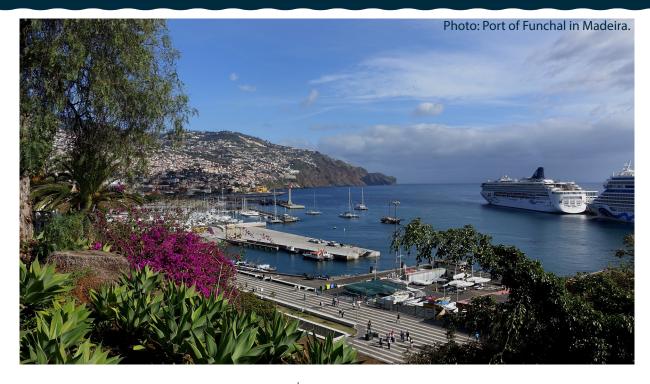
"The EU is leading the fight against illegal fishing. Access to the EU - the world's biggest seafood market - is an important asset in persuading governments and exporters around the world to follow European legislation against illegal, unreported and unregulated fishery fishing"

Karmenu Vella

European Commissioner for Environment, Maritime Affairs and Fisheries



From January 2019, according to the <u>EU Regulation</u> for ship recycling, the recycling of all large sea-going vessels sailing under an EU flag can only take place in yards included on the <u>European list</u> of ship recycling facilities and that this regulation will be the only legally binding instrument on ship recycling in force in the world today? (<u>Read more</u>)







Source: EMD2019 at www.flickr.com.

" ···Narrow the gaps· Bridge the divides· Rebuild trust by bringing people together around common goals· Unity is our path· Our future depends on it"

António Guterres

Ninth Secretary-General of the United Nations



Through implementing the Paris Agreement to combat climate change global fishers' revenues could increase by \$4.6 billion annually, seafood workers' income by \$3.7 billion, and the household seafood expenditures could be reduced by \$5.4 billion? (Read more)

The 192 countries with a coast bordering the Atlantic, Pacific, and Indian oceans, and the Mediterranean and Black seas produced a total of 2,5 billion metric tons of solid waste. Of that, 275 million metric tons was plastic, and an estimated 8 million metric tons of mismanaged plastic waste entered the ocean in 2010? (Read more)

European ship owners own 35% of the world fleet and that a large percentage of these is being dismantled on beaches in South Asia, under conditions harmful to workers' health and the environment? (Read more)

Initiatives of interest

Clean Atlantic project

The Spanish Oceanographic Institute (Instituto Español de Oceanografía or IEO) along with the Madeira archipelago aim through this initiative to protect biodiversity and ecosystem services by enhancing prevention, monitoring and disposal of marine litter in the Atlantic Area. The project will also help to raise awareness among the general public as well as different industrial sectors and improving marine litter systems management (Read more).

Initiatives of interest

The MUSES Project shows synergies and opportunities between maritime sectors in the Azores

The Multi-Use European Seas (MUSES) Project, already finished, has provided an understanding of the environmental, spatial, economic and societal benefits of maritime sectors co-location and synergies among them across five EU sea basins. See all its results (here), including the project's case study for the Southern coast of mainland Portugal and the Azores Archipelago (Read more).

Watch the video!



A clearer picture of MSP crossborder cooperation in the Northern European Atlantic: SIMNORAT project

SIMNORAT, a sister project of MarSP recently concluded, promoted implementation of the MSP Directive and specific cross-border cooperation between France, Portugal and Spain. See all its results (here), including a case study for a cross-border marine protected area on the northern limit of the Portuguese marine jurisdictional area (Read more).

" All the islands, even those known, are unknown until we disembark in them"

José Saramago

Portuguese writer and Nobel Prize of literature in 1998 Cited book: The Tale of the Unknown Island (1997)





Undergoing research...

A common problem for the Macaronesia: ocean acidification produced by the absorption of CO2

The <u>Canbio project</u> has already obtained its first results of CO2 absorption by the ocean. These data are, then, critical for climate change prediction models. A steady increase in ocean acidity could eventually dissolve mollusc's shells and coral skeletons, as well as planktonic microorganisms found at the base of marine ecosystems. Differences between the carbon dioxide content dissolved in the ocean and that of the atmosphere in February 2019 are shown. All values (negative) indicate that the ocean in February was absorbing the CO2 excess from the atmosphere. The range of observed values is directly linked to changes in temperature and an upwelling current rich in CO2 (Read more).

ΔfCO₂ (μatm)

-20

-40

-50

-80

-100

-120

"Well-being may be enhanced today by depleting some of the capital stocks essential for maintaining future production and future wellbeing"

Organisation for Economic Co-operation and Development (OECD), 2018

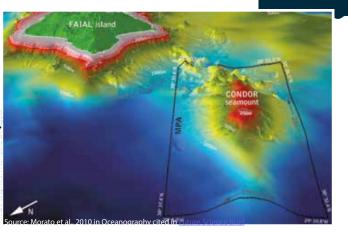
Cited in report: Valuing Marine Ecosystems (2019)



The ocean has absorbed about 90% of the excess heat we have generated by burning fossil fuels and around 40% of the carbon we have released into the atmosphere? This is leading to ocean acidification, i.e. changing the pH of the entire ocean! (Read more)

According to a scientific report, after the Condor seamount was declared as a marine protected area in the Azores in 2009, demersal fisheries were banned opening the way to other non-extractive uses that generated more economic benefit and were alternative income-generating opportunities for local communities? (Read more)

Perspective of Condor Seamount (Faial, Azores) showing the limits of the fishing closure.



MARINE ACTIVITY	TIME PERIOD	DOI(€)
Demersal fisheries	1998 - 2009	431 723
Scientific research	2009 - 2014	290 435
Shark diving	2011 - 2014	173 701
Big-game fishing	2009 - 2014	80 847
Tuna-fisheries	1998 - 2014	51 867

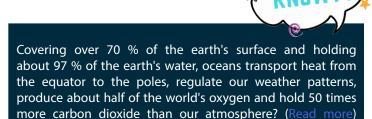
Mean annual direct outputs impacts of marine activities operating at Condor seamount



Undergoing research...

FORWARD – unlocking the research & innovation potential of EU outermost regions

The FORWARD project was launched as part of the EU's strategy for outermost regions (ORs). The participating countries comprehend regional governments from the nine ORs (the Azores, Canary Islands, Guadalupe, Guyane, Madeira, Martinique, Mayotte, la Reunión, and Saint-Martin), as well as the primary Research and Innovation (R&I) actors from each region. FORWARD will perform an initial R&I ecosystem analysis and, based on these results, will put in place tailored actions (e.g., the definition of a joint strategy and thematic action plans, capacity building and networking activities, and approaches for connecting research and policy-making) (Read more).



Sea creatures, especially those that live in shallower water near the coasts, are much more vulnerable to global warming than land animals because there are fewer places to hide from extreme heat in the ocean? (Read more)

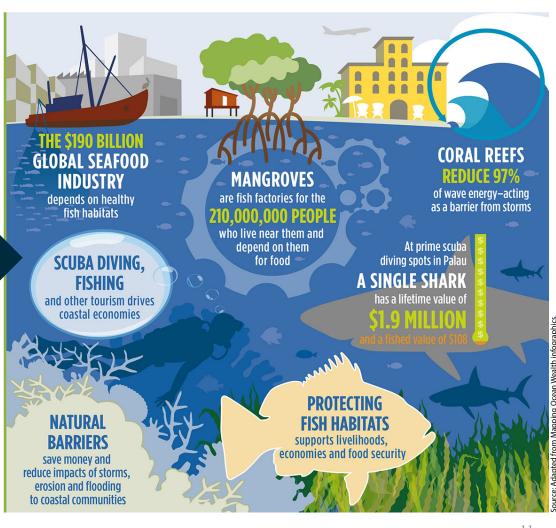


MAPPING

Coastal communities receive multiple benefits from ocean hábitats.

By valuing nature in decisions, for example, governments can develop better management plans and development agencies can invest in nature to actively reduce poverty and increase our resilience to climate change.

oceanwealth.org @ocean wealth The Nature Conservancy





Undergoing research...

The most endangered marine areas and the main threats for their conservation have been identified

Greenpeace and the Universities of York and Oxford have <u>published a joint study</u> to establish a global network of Marine Protected Areas (MPAs). Negotiations held at the UN Assembly towards a Global Ocean Treaty could lead to the protection of Areas Beyond National Jurisdiction (ABNJ). These marine regions located in high sea cover approximately 230 million square kilometres. Nowadays, less than 3% of these international waters are protected. This research was based on the possible outcomes of protecting 30% and 50% of the world's oceans. (Read more).

Visit their interactive map and discover the main biodiversity hotspots, current threats and play with the different scenarios!

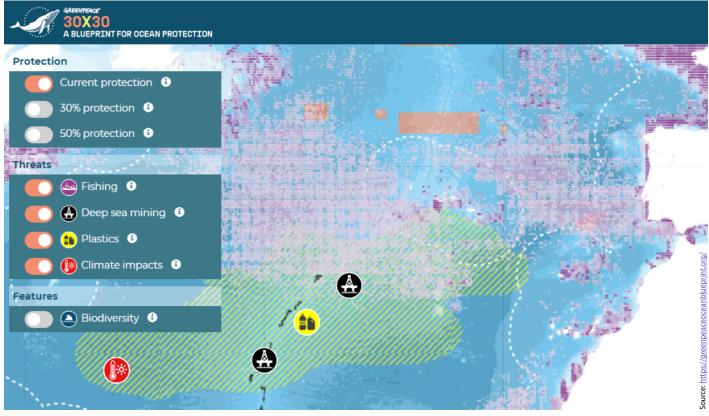


Over 7,59% of the entire Earth's ocean is covered by marine protected areas (14.830 MPAs) comprising more than 27 million Km2? (Read more)

The annual value of flood risk reduction provided by the U.S. coral reefs is more than 18,000 lives and \$1.805 billion in 2010? (Read more)

> RebuiltWetlandsCanProtectShorelines Better Than Walls? (Read more)

The third assessment of FAO's global marine fisheries discards estimated that the annual discards from global marine capture fisheries between 2010 and 2014 was 9.1 million tonnes being about 46% (4.2 million tonnes) of total annual discards from bottom trawls? (Read more)





Blue Growth in the Macaronesia

The first Spanish offshore wind park might be constructed in the Canary Islands

ESTEYCO has built, through the ELISA project, the world's first offshore wind turbine installed without using big vessels or marine cranes. Thus, the Canary Islands might host the first Spanish offshore wind park investing more than 860 million euros. It will be a floating offshore wind park of 200 MW equivalent to one third of the total renewable capacity currently installed in the Canaries. This wind park could be operated by 2024 and it would generate between 120-200 new jobs during the 20 years life time of the park (Read more).

These archipelagos "started to be called Macaronesia from the 19th century, when the botanist Philip Barker Webb (...) began to use this term (...). The etymology of Macaronesia is Greek. It comes from 'makáron', which means happiness or bliss; and 'nesoi', which refers to islands. Thus, Polynesia means many islands, Micronesia means small islands and so on"

Francisco García Talavera
Canarian geologist, palaeontologist and explorer

Watch its construction!





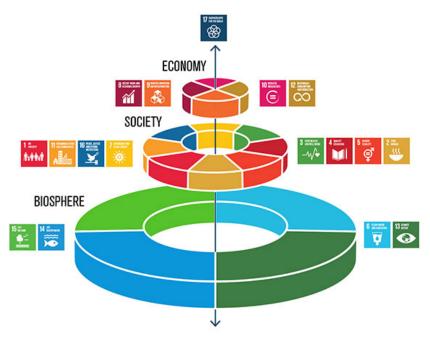
Over 65% of the biomass in the ocean is made of plankton. Marine microbes bring services to our ecosystem and their genetic diversity is remarkable. Moreover, marine genetic resources (MGR) have enormous potential in fields such as pharmaceutical, bioremediation, cosmetics, nutraceutical, or biomedical innovation? (Read more)



Blue Growth in the Macaronesia

The Azores has a new capacity building centre for its maritime sector joining the Macaronesian marine scientific centres network

The Escola do Mar dos Açores (EMA), located on the island of Faial, will start offering in 2019 training courses for professionals of the fishing sector, the merchant shipping, ports, maritime tourism and scuba diving among others. Thus, the Regional Government is investing more than 4 million euros in capitalizing one of the most important regional assets, the sea, through the creation of new economic opportunities and promoting research and entrepreneurship. This centre will add to the existing network of centres of excellence and capacity building on the marine sciences of the Macaronesia region like the ECOAQUA centre in the Canary Islands or the Portuguese institution MARE based in Madeira (Read more).



Author: Maria Luisa Villa at www.onTREEbute.com







67 projects have been approved in the 2° call of the Territorial Cooperation Program

Consult the list of the approved projects here!

(Read more).



"I call Agenda 2030
our 'declaration of
interdependence." The world
is coming to recognize more
and more that problems
in one country reverberate
in another. A crash in one
market can drive a crisis
around the world. That
is why it is so important
to make the most of our
collective strengths"

Ban Ki-moon

Eighth Secretary-General of the United Nations



Interview with...

Where are we right now in terms of MSP in Portugal?

When I started working on MSP, the first Portuguese marine spatial plan (the POEM) was being finalized. However, shortly after, following a government change it was published as a study (that is, with no legal strength). Then, at the same time that the EU MSP Directive was being developed, Portugal was preparing a national framework law on MSP (the LBOGEM), that aimed at establishing not only the baselines for MSP but also a licensing system for the use of the ocean space (permits basically). To implement this law and transpose the EU MSP Directive into national legislation, a set of complementary regulations was developed, and a new Portuguese

"The PSOEM covers the entire marine waters of the Portuguese exclusive economic zone (EEZ) (...) and subsoil of the extended continental shelf (ECS)"

"

marine spatial plan (the PSOEM) was envisioned. This was in 2015, and the PSOEM was supposed to be finalized in less than a year, but 3-years later it is actually still pending approval.

One big difference however is that while the POEM was focused only on the continental part of the Portuguese maritime space, the <u>PSOEM</u> covers the entire marine waters of the Portuguese exclusive economic zone (EEZ) – the Azores, Madeira and continental parts – plus the seabed and subsoil of the extended continental shelf (ECS). As far

as I know, the continental, Madeira and ECS parts are to be approved by the government very soon, while the Azores part of the plan is still being developed.

What are the challenges ahead in the Portuguese MSP process?

Well, the first challenge is to actually approve a marine spatial plan for Portugal - one decade later, we still don't have one. In my opinion, the change of government during the POEM process (meaning different people wanting different things) together with some limitations of the plan itself, caused a process that was almost finished to start all over again from scratch. In this way, despite all good intentions, you never get the chance to evaluate the work that was developed,

learn from it and improve it.

I know this is a tricky question, because would it be good to approve a "bad" plan? Obviously not. But several people worked hard on the first plan for four years, so something good had to come out of it. Also, some people that were involved and participated in the process lost their trust and became reluctant to participate next time. I learn

"Sometimes people are not aware of each other's sides, problems and efforts"

"



"The three archipelagos must be alighted and try to reach the same overarching goals"

Catarina Frazão Santos

Researcher and lecturer at the University of Lisbon, Faculty of Sciences (MARE-FCUL), and an Invited Researcher at the NOVA School of Business and Economics (Environmental Economics KC). Her research focuses on ocean planning, management and policy, with the goal of contributing to a sustainable use of the ocean. She is currently leading a 3-year project (OCEANPLAN) on how marine spatial planning can be affected by, and adapt to global climate change. Catarina also works as an expert assisting the European Commission on the H2020 Program, and as a reviewer in international journals

this from a set of interviews carried during my PhD. Some interviewees said that sometimes people do not get involved because they feel their opinions are not considered. On the other hand, planners and policymakers argued that many times the input they get is not "useful".

The above leads to another important challenge, the lack of proper communication. For example, regarding the first plan, the perception of many people was that there was no stakeholder involvement before the public consultation phase. However, those in charge of the process said that there were a lot of previous workshops and thematic sessions. Thereby, I believe that sometimes people are not aware of each other's sides, problems and efforts. And this pertains to the lack of effective communication.



The third problem is the sustainability and conservation of the marine environment. In Portugal, marine conservation was not at the basis of MSP. Conservation was treated as any other maritime sector, such as tourism or aquaculture. But, indeed, there was an important gap regarding biophysical information, especially biological and ecological information about what goods and services exist, and where. Without this type of information it is very

"I would definitely recommend that communication is on the table. This is key"

"

difficult to build a plan that is focused on ensuring the protection of marine ecosystems. Because how can you ensure the protection of something if you don't know where it is located? I am not referring to marine protected areas, those are well mapped and included in both, the POEM and the PSOEM. I am talking about marine ecosystem goods and services; the things upon which maritime activities build and on which they depend. For me, this is key for the long-term sustainability of MSP. We need to ensure a healthy, sustainable ocean. But this is not a problem of Portugal alone, it is frequent in MSP initiatives in general.

How different is the MSP process of the Azores and Madeira compared to the continent and how they cooperate or coordinate among them and with the mainland?

I think this is a key topic. So the first plan (the POEM) was just about the continental part of the Portuguese EEZ, although regional government representatives from the Azores and Madeira were included in the main working team. At that time, the Azores was developing its own marine spatial plan, the <u>POEMA</u>, which was never published as far as I know, and Madeira didn't have any initiative.

Then, when the EU MSP Directive had to be transposed into national legislation, there were a lot of issues because it was going to apply to all Portuguese maritime spaces. I am not familiar with the details, but some people advocated that there was clearly a problem about competencies and interests between the Regions and the central government. Nevertheless, the Portuguese framework law on MSP (LBOGEM) and subsequent regulations were approved, and we now have one big marine spatial plan divided into four main areas.

Although the Madeira part of the plan is already finished and pending

"How can you ensure the protection of something if you don't know where it is located?"

"

approval, and the Azores part (OEMA) is still underway, I do believe that there has to be some alignment between them, and that responsible entities are trying to make one big coherent plan.

What would you recommend to implement an adequate MSP in the European Macaronesia?

I would definitely recommend that communication is on the table. This is key. You need to be able to get a common strategy. Of course that the social, political, cultural realities vary, even between Madeira and the Azores, but the vision, the strategy to be followed must be the same. The three archipelagos must be alighted and try to reach the same overarching goals. And to do that, for sure they need to communicate. Not only the responsible institutions, but the maritime sectors among these regions as well.

There is actually a key, cross-cutting challenge that makes this need for consistency among regions very clear: climate change. Due to climate change, we will have spatial and temporal changes in marine ecosystem goods and services. For example, some existing species will move from one place to the other, and new species will come to our marine areas. Fisheries that operate in one fishing ground will need to relocate to other areas or change their focus. There will be more storms, and marine circulation patterns may change. Which marine areas should we protect if ecosystems will shift in space and time? I believe climate change makes it even more clear how important it is to have an effective cooperation among regions. Collaboration, communication and a common vision thus need to be in place. Moreover, the Macaronesian sea-basin is a really big marine area that does not yet have a very intense utilization from maritime sectors. Only some "small" areas are being used, so now we do have the chance to get it right. As Charles Ehler says, "Planning for the future begins today".



Past and upcoming MSP events



The MarSP project has been active! Consult its latest participatory workshops and capacity building sessions and results (here)





The II and III edition of the MSPforum took place, respectively, in March in the island of La Réunion and in May in Vigo. (II edition), (III edition).

Final reports of both events already available!









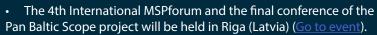
Experts gathered in Seville from the 10-12 of April 2019 around the International Forum on Circular economy and Marine Litter (MARLICE).



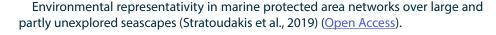
The third session of the Intergovernmental Conference on an international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction will be convened from 19 to 30 August 2019. The fourth session will take place in the first half of 2020.



• Workshop on Spatial Strategies at the Land-Sea Interface. Rethinking Maritime Spatial Planning (Hamburg) (<u>Go to event</u>).



• The next Sustainable Ocean Summit (SOS) – the annual gathering of the global ocean business community (Paris) (<u>Go to event</u>).



A new signal of marine tropicalization in the Macaronesia region: First record of the mesophotic macroalga *Avrainvillea canariensis* A. Gepp & E.S. Gepp in the Madeira archipelago (Ribeiro et al., 2019) (Full reference).

European Commission launches the Blue Economy Report of 2019 at European Maritime Day in Lisbon (Full report).

Report on: Valuing marine ecosystem services – taking into account the value of ecosystem benefits in the Blue Economy (<u>Full report</u>).

Discover the progress made on the ocean governance European agenda since the adoption of the Joint Communication on International Ocean Governance (Full report).



