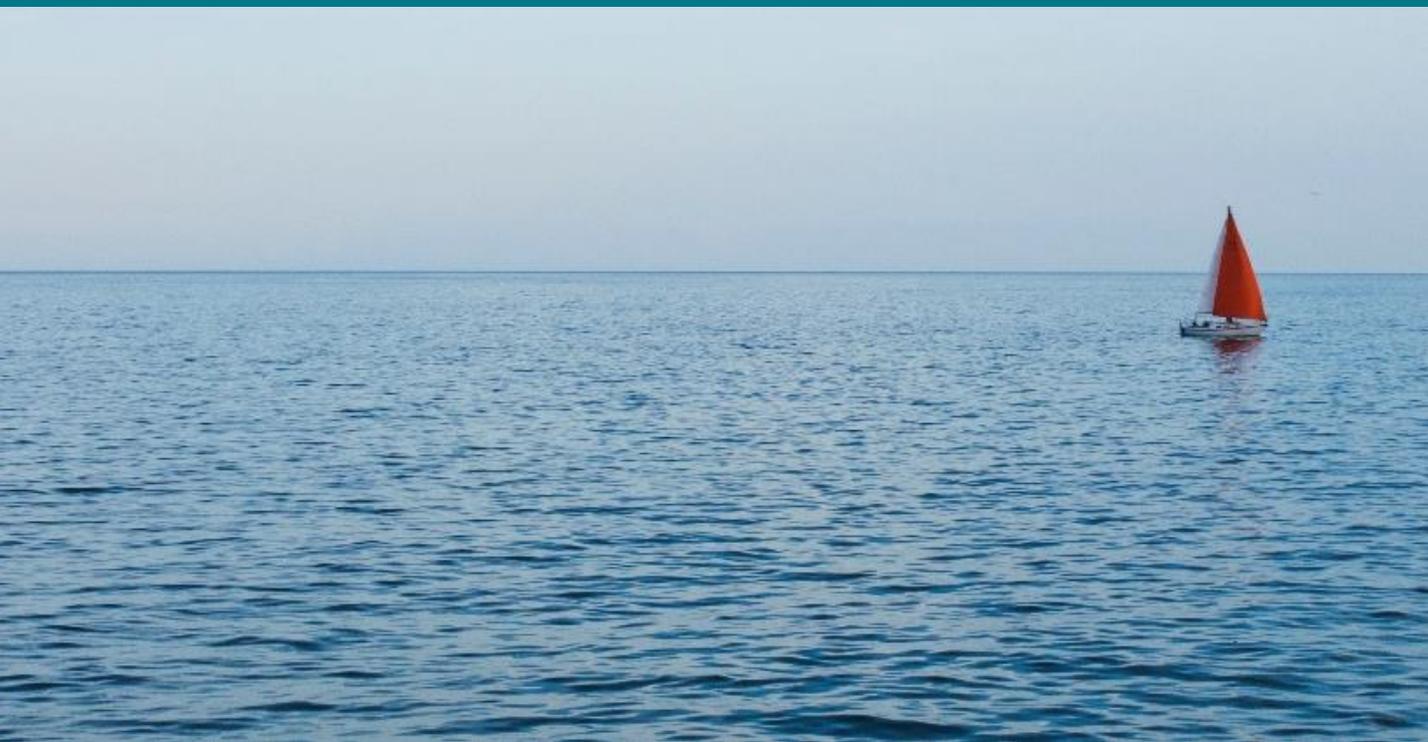


## SUMMARY DOCUMENT

# Tackling marine litter: An inclusive approach

*The Royal Academy of Science and the Arts;  
Palace of the Academy,  
Hertogsstraat 1  
Brussels  
30 January 2017*





# Summary

22 representatives of all sectors participated in a one-day workshop organised by World Ocean Network as part of the Marina project, January 30 2017.

The main objective was to develop together an action plan answering this trigger question: «**How can we build an innovative approach that includes all stakeholders to empower citizens in reducing marine plastic pollution?** ».

All participants agreed that there is still a need for more general public awareness and mobilisation and for better knowledge sharing.

During the workshop, the participants:

- defined priority fields of action,
- expressed proposals and recommendation,
- and worked together on roadmaps for the four top-ranked priorities.

## **Priority 1: Multi-stakeholder Dialogue,**

All stakeholders should work together to reduce plastic pollution, for instance by creating a system of plastic bottles deposit.

## **Priority 2: Legislation awareness,**

Two majors concerns are: overlapping and contradictory legislation –between food safety and plastic reduction for instance – and global lack of awareness of all actors on the environmental legislation and lack of enforcement.

## **Priority 3: Knowledge transfer,**

Imagine, share and test ideas together while answering each other's needs and concerns, through Local Living Labs for instance.

## **Priority 4: What message to spread?,**

Develop messages that make the problem tangible for everybody for instance by translating facts and figures into something simple and impactful.

These results will now be shared with participants of other Marina workshops, including international workshops, so as to exchange ideas and good practices. They will also be used for a policy brief and the participation to thematic days such as European Maritime Day. They also are susceptible of inspiring actions of other partners interested in the plastic pollution issue and in RRI.

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# 1. The Marine litter context

In 2003, on remote islands in the north of Hawaii, Jean-Michel Cousteau filmed the coastline ravaged by plastic litter. Images of albatross choking on plastic waste hit the headlines worldwide and brought the issue of plastic pollution into the spotlight.

Where did this plastic come from? What is the extent of the problem? What are the impacts on marine life and for humans? And what are the hidden issues linked to this pollution?

In fifty years, plastic has taken such an important place in our daily life that life without it seems hardly possible. However, the impact of plastic in the ocean and its degradation into microplastics is raising significant concerns. Alongside climate change and loss of biodiversity, marine litter and plastic pollution are now considered as some of the greatest environmental concerns of our time.

Marine litter is a threat not only to wildlife and ecosystems, but also to human health and livelihoods. Toxic substances leaching from litter can build up in organisms, or pass from one organism to another through the food chain.

Plastic also acts as “sponges” soaking other toxins such as heavy metals, increasing the toxicity if ingested. This litter travels long distances with sea currents, waves, winds and runoff, and is difficult to track.

Diverse communities of microbes have been discovered colonizing and thriving on microplastics at multiple locations in the North Atlantic described as the ‘plastisphere’. SES (Sea Education Society) scientists studied plastics in the Atlantic gyre and calculated there are 580,000 pieces of plastic per square kilometre. One concern about the plastisphere is that it can facilitate the transport of harmful microbes, including disease-causing pathogens and harmful algal species. A single plastic bottle takes hundreds of years to fully biodegrade, if at all. Microlitter is invisible due to its small size, while heavy macrolitter items at the bottom of the sea are out of sight. Both are almost impossible to remove.

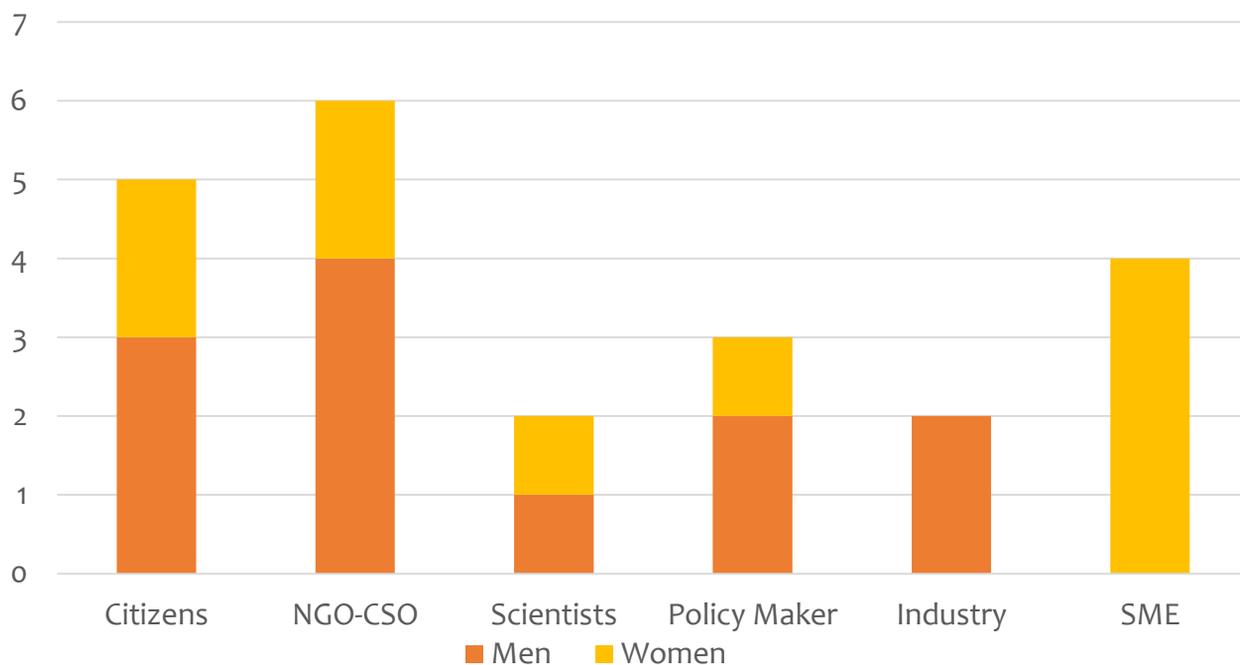
Worldwide, awareness on this issue is growing and all kind of stakeholders, from citizens to industry to policy makers, are trying to make a change and develop solutions. In 2016, the theme of World Ocean Day was “Healthy Ocean, Healthy planet” and a focus was made on plastic pollution. Despite this, there are still many results of projects, pieces of knowledge that are ignored by non-scientific stakeholders.

Because there will be no one single miracle solution to address the whole marine litter and plastic pollution issue, all stakeholders should be gathered to path the way of a comprehensive and inclusive set of solutions, from reducing the source of the inland plastic production to tackling the microplastic problem in the ocean, taking into account our state-of-art understanding of the issue.

***How can we build an innovative approach that includes all stakeholders to empower citizens in reducing marine plastic pollution?***



## 2. Participants profile



### Organisations represented :

- Ecsite
- European Association of Zoos and Aquaria
- European Parliament
- Federal Public Service Public Health
- JPI Oceans
- Mr.Goodfish programme
- Nausicaa
- Plastics Europe
- Royal Belgium Institute of Natural Science
- SeaMatters
- World Ocean Network
- Zero Plastic Waste

### Others participants :

- Eco-design consultant
- Interested Citizens

# 3. Shape and methodology of the event

The workshop was designed so that everybody could participate in different ways all along the day.

## 09:30 - 10:00 Welcome and introductions

In our first session, we'll get to know each other better with introductions to each of our participants, and hear a bit more about the MARINA project and its knowledge sharing platform for RRI in marine science.

## 10:00 – 11:00 Current issues and recent research

*Round table and whole group discussion*

Next we will move straight into the topic of marine plastic pollution - why this focus, what are the findings of the latest research, where have we made progress and what is holding us back from taking further action? In this first session, we invite each of you to share your thoughts on the following key questions:

**What relevant recent research are you aware of related to the problem of marine plastic pollution?**

**What is your perception of how citizens are currently empowered to work with stakeholders on marine plastic pollution?**

## 11:00 - 11:15 Coffee break

## 11:15 - 12:15 Defining current priorities

*Ranking task in small groups; presenting findings and whole group discussion*

We will work in small groups to look at current priorities - what do we feel should be the key focus in the coming years for our institutions, in order to ensure the problem of marine plastic pollution is addressed?

## 12:15 - 13:15 Lunch

## 13:15 - 14:30 Engaging stakeholders and empowering citizens

*World Café format in small groups*

Each group will take one of the priorities from the previous session and generate ideas for concrete initiatives on how this priority could be achieved in the coming years through citizen empowerment and multi-stakeholder engagement.

## 14:30 - 14:45 Coffee break

## 14:45 - 16:00 Finalising outcomes and next steps

*Group presentation, voting and final discussion*

Outcomes of the World Café will be presented and a round of voting will allow us to prioritise actions. These results will be discussed in a final round in order to define next steps for action on marine plastic pollution in the coming years.

Different methodologies were used during the workshop in order to foster dialogue and the co-creation of solutions and ideas:

- **Roundtable**

To define current issues and recent research, each participant was asked to answer the following questions: *“What important research are you aware of on marine plastic pollution? What is your perception of how citizens are empowered to work with stakeholders on marine plastic pollution?”*

- **Whole group discussion**

Each step results were discussed within the whole group to make sure that everyone agreed with these results.

- **Group discussion – Priority ranking**

The organisers had predefined 5 priorities to answer the trigger question presented at beginning of the workshop. In small groups participants had to rank the priorities, add new ones and/or modify existing ones. Then the ranking was shared with the whole group and a consensus was found.

- **World café – Dotmocracy**

In small groups (one per priority), participants generated and discussed ideas to implement the priority and created “proposals” that will be discussed and voted with the whole group.

Once the proposals were voted by the participants, the outcomes of the world café were discussed.



## 4. Detailed results

The 5 predefined “Priority Cards” were:

1. Making citizens voices heard among policymakers to ensure they implement change
2. Stakeholders working with citizens to reduce the plastic waste citizens produce
3. Mobilising plastic producers and manufacturers to work with citizens
4. Schools and biologists working together to raise young people’s awareness of the environment impact
5. Bring policymakers into multistakeholder dialogue involving citizens alongside with researchers, industry and civil society

4 priorities have been top-ranked:

- 1 Multistakeholder Dialogue**
- 2 Focus on environmental legislation**
- 3 Knowledge transfer**
- 4 Focus on the message**

Considering the Triggering Question, during the workshop four roadmaps, one per priority, were generated.

In each roadmap, we can find:

- ✓ General objectives
- ✓ Proposals (ranked according to votes)
- ✓ Target groups related to each proposal
- ✓ RRI principal related to each proposal

**WHY** - overall objectives for making a roadmap and a common vision

Build an innovative approach that includes all stakeholders to empower citizens in reducing marine plastic litter.

WHERE - where to go	WHAT - what to produce?	HOW - how this will be achieved PROPOSED ACTIONS (ranked according to votes)	WHO - target groups and/or user groups, and their roles	To which RRI principle is it related?
<p><b>Multistakeholder Dialogue</b></p>	<ul style="list-style-type: none"> <li>Industry, research, citizens, policymakers working together to reduce waste.</li> <li>Multilevel initiatives: local, national, European.</li> <li>Consulting the right stakeholder at the right level.</li> <li>Inviting different stakeholders to brainstorm and perspectives to the project implementation.</li> </ul>	<p><b>Return to sender! Deposits on bottles.</b></p> <p>Apply glass deposit scheme to plastics, use already existing schemes as a model, as well as support them.</p> <p>Message on a bottle</p> <p>Display information on plastic bottles: where it comes from, health, warning (time needed for degradation), re-utilisation incentive (with inspiring examples), customized for the region (local dimension).</p> <p>Plastic leaks</p> <p>Identify largest sources of plastic leakage and search for highest impact solution.</p> <p>Fatal attraction</p> <p>Develop and promote original and stunning ideas for plastic alternatives.</p>	<ul style="list-style-type: none"> <li>Industry/Business representatives: development of such schemes and users of the deposit</li> <li>Policymakers: supporting schemes, Citizens: users.</li> <li>Industry/Business representatives: development, Policymakers: implementation, Research and scientist: source of the information, Citizens: users.</li> <li>Research and scientists: source of the information available, CSO: transfer of the information, Policymakers, industry and citizens: be informed of this knowledge</li> <li>Policymakers and implementers: foster the development of such ideas, Research and scientists and industry: development of the idea.</li> </ul>	<ul style="list-style-type: none"> <li>Science education</li> <li>Open Access</li> <li>Public engagement</li> <li>Science education</li> <li>Environment</li> <li>Science and education</li> </ul>

WHY - overall objectives for making a roadmap and a common vision		Build an innovative approach that includes all stakeholders to empower citizens in reducing marine plastic litter.			
WHERE - where to go	WHAT - what to produce?	HOW - how this will be achieved PROPOSED ACTIONS (ranked according to votes)	WHO - target groups and/or user groups, and their roles	To which RRI principle is it related?	
Focus on environmental legislation	<ul style="list-style-type: none"> <li>• <b>Adjust food safety, eco-design, and environmental legislation</b></li> <li>• <b>Raise awareness on legislation</b></li> <li>• <b>Eliminate constraints of enforcement</b></li> </ul>	<p><b>Inform citizens on legislation</b> so that they can make informed choices when consuming and inform them of their legal right to participate in environmental decision-making processes.</p>	<ul style="list-style-type: none"> <li>- Policymakers and implementers: inform citizens on actual and new law, and their right to participate,</li> <li>- CSO : keep inform and empower citizens, raise awareness on public consultation, Citizens: target.</li> </ul>	<ul style="list-style-type: none"> <li>- Governance</li> <li>- Public engagement</li> </ul>	
		<p>Provide an overview of waste management processes (at all levels) and legislation, identification of challenges and constraints to implement this legislation and find resources to face this challenges.</p>	<ul style="list-style-type: none"> <li>- Research and scientists: overview of management processes and legislation, highlight constraint,</li> <li>- Policymakers: find resources to address constraint,</li> <li>- Industry: participate to the overview.</li> </ul>	<ul style="list-style-type: none"> <li>- Governance</li> <li>- Environment</li> </ul>	
		<p>Inform, make legislation more accessible/readable and provide SMEs with resources to comply with this legislation</p>	<ul style="list-style-type: none"> <li>- Policymakers and implementers: make legislation more readable and accessible, provide resources to SMEs to comply with the rules,</li> <li>- CSO : keep SMEs aware of the legislation they have to comply with and their rights,</li> <li>- Industry/Business representatives: target.</li> </ul>	<ul style="list-style-type: none"> <li>- Governance</li> <li>- Public engagement</li> </ul>	

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<p><b>Knowledge transfer</b></p>	<ul style="list-style-type: none"> <li>• <b>Share, imagine, test new ideas, answering consumers' needs/concerns, implementing them where possible and scaling them up</b></li> <li>• <b>Create new more efficient products and packages</b></li> <li>• <b>Foster more sustainable behaviors in marine related leisure and tourism activities</b></li> <li>• <b>Highlight innovation and local best practices</b></li> <li>• <b>Campaign to engage citizens in research outcomes</b></li> </ul>	<p><b>Local Living Labs</b>            Researchers, industry, policymakers working at local level to share ideas and look for solutions with citizens.</p> <p>Contest for designers to encourage them to imagine and develop more efficient products</p> <p>Public relation effort using :</p> <ul style="list-style-type: none"> <li>- Leisure/tourism activities, signaling risks and impact on our lives/health, or highlighting innovation and best practices,</li> <li>- Educational tools for teachers,</li> <li>- TED or events in link with scientific conferences to engage citizens in research outcomes,</li> <li>- Broadcast scientific, technological and user breakthroughs on TV, if possible as often as weather forecast programmes.</li> </ul>	<ul style="list-style-type: none"> <li>- Citizens: share their questions and ideas,</li> <li>- Researchers and Industry: analyse these questions and ideas,</li> <li>- Students and Industry: common workshop, learn while contributing, generate ideas</li> <li>- Local media: raise the activity profile and work on solutions,</li> <li>- Policymakers, analyse and search solutions with the others.</li> <li>- Industry and researchers: target of the contest,</li> <li>- CSOs and/or policymakers: organizers of the contest.</li> <li>- Policymakers and implementers: reinforce public relations efforts,</li> <li>- CSO: help policymakers, create the tools and organize the talks and TV breakthrough,</li> <li>- Research and scientists: source of the information and potential speakers,</li> <li>- Teachers and educators: target,</li> <li>- Citizens: targeted audience for talks and breakthroughs.</li> <li>- Medias: broadcasts channel and TEDs</li> </ul>	<ul style="list-style-type: none"> <li>- Science education</li> <li>- Public engagement</li> <li>- Environment</li> <li>- Science and education</li> <li>- Open access</li> <li>- Public engagement</li> </ul>

WHY - overall objectives for making a roadmap and a common vision	Build an innovative approach that includes all stakeholders to empower citizens in reducing marine plastic litter.			
WHERE - where to go	WHAT - what to produce?	HOW - how this will be achieved PROPOSED ACTIONS (ranked according to votes)	WHO - target groups and/or user groups, and their roles	To which RRI principle is it related?
<p style="text-align: center;"><b>Focus on the message</b></p>	<p><b>Coordinate actions with clear messages in order to translate facts and figures into something simple and impactful, digested data</b></p>	<p><b>Visualize the damage, make problem tangible and easy to quantify</b> (ex: use the image of a fish mouth filled by cigarette butts)</p>	<ul style="list-style-type: none"> <li>- Researchers and scientists: knowledge initiator,</li> <li>- CSO: designers of the campaign,</li> <li>- Policymakers: campaign endorsers,</li> <li>- Industry: campaign vector,</li> <li>- Media: channel of the message.</li> </ul>	<ul style="list-style-type: none"> <li>- Public engagement</li> <li>- Environment</li> </ul>
		<p>Proposed messages:</p> <ul style="list-style-type: none"> <li>- It has an impact on me and my children "disease of the ocean" and "what are the benefits for me"</li> <li>- Your ocean is my mountain (the plastic pollution in the mountain will end up in the Ocean)</li> <li>- Don't drown the ocean with plastic</li> </ul>	<ul style="list-style-type: none"> <li>- Researchers and scientists: knowledge initiator,</li> <li>- CSO: designers of the campaign,</li> <li>- Policymakers: campaign endorsers,</li> <li>- Industry: campaign vector,</li> <li>- Media: channel of the message.</li> </ul>	<ul style="list-style-type: none"> <li>- Science and education</li> <li>- Public engagement</li> </ul>
		<p>Mobilize ambassadors with good and bad examples (encourage a positive approach like Mr.GooFish)</p>	<ul style="list-style-type: none"> <li>- Researchers and scientists: knowledge initiator,</li> <li>- CSO: designers of the campaign,</li> <li>- Policymakers: campaign endorsers,</li> <li>- Industry: possible ambassadors and campaign vector,</li> <li>- Media: channel of the message.</li> </ul>	<ul style="list-style-type: none"> <li>- Public engagement</li> </ul>

## 5. Participants feedbacks

Participants shared interesting points of view concerning the Hot Topic. Among other:

One of the key challenges is to know how to translate technical risk assessments into language people can understand.

Focus should be on prevention rather than managing plastics already in the ocean.

It is challenging to address citizens inland on this issue.

Health impacts, the relationship with food are a key concern. We have to understand the citizen's motivations.

The key for citizens is that "How we feel matters more than what we know". We have to focus on health, food and wellbeing of citizens.

As science centres, museums, we should facilitate responsible consumption with all stakeholders working together.

Participants general feedbacks on the workshop were globally positive: all participants that gave us their feedbacks thought that the Hot Topic was clear and all were satisfied in the way the introduction and facilitation of the workshop were made.

The Marina community Platform appeared to have limited success on the participants. The participants will need more time to look into the Marina community.

## 6. Follow up actions in detail

As part of the Marina project, World Ocean Network will invite all participants and possibly interested persons to continue the discussion on the Marina community Platform. And it will assure the bridge between this workshop and other Marina workshops related to the subject.

World Ocean Network will keep on working on the marine litter subject including by its participation in events and thematic activities. The participants of the workshop will be conveyed, when relevant, to these activities.

- [18-19 May, European Maritime Day](#)

World Ocean Network will merge its proposition of workshop with the one of Southampton SOLENT University (UK) and Instituto di Scienze del CNR (Italy) for a session on Marine plastics “a review of impacts and solutions”.

- [15-17 June, Ecsite Conference](#)

World Ocean Network is the coconvenor, with Ciência Viva, of a workshop on Ocean plastic, “how can science centres contribute to solutions?”. And Manuel Cira will be a session speaker in the “Sea in the city” pre-conference workshop.

WON is also engaged in coordinating the actions of its partners during the [8 June, World Ocean Day](#). WON will suggest activities and actions to its partners - Sea Change consortium, World Ocean Day working group, among others - , to coordinate efforts towards the empowering of citizens and multi-stakeholders action.

WON will also take part in the [5-9 June, UN Ocean Conference](#) and other international decision making meeting, so as to represent civil society and advocate for a sustainable use of the Ocean. It will also be an occasion to present the results of its activities, such as Marina’s workshop.

# 7. Presentation of WON and Marina

## World Ocean Network

The World Ocean Network represents more than 450 participating organisations from 80 countries worldwide, welcoming over 250 million visitors every year.

Stimulated by the International Secretariat and regional antennas, the participants regularly communicate, share their experience and convene regional meetings to implement new actions in common. These actions are locally tailored and adapted to the culture of each network participant.

World Ocean Network activities are placed under the aegis of the Intergovernmental Oceanographic Commission of UNESCO. By informing the general public, the Network commits to better ocean governance as part of the Global Ocean Forum.

World Ocean Network is part of the Sea Chang project, on marine science education, and of the Marina project.

## MARINA project

The MARINA project will engage all stakeholders in order to share knowledge, include the citizens' vision and societal needs, create a synergy between research & innovation and the environmental safeguard.

The Responsible Research and Innovation (RRI) process is a new approach to science whereby all actors engaged can effectively make their voice heard in the whole research process and share their ideas with those who develop new solutions.

MARINA project will include stakeholders engagement actions in order to ease actors cooperation: the MARINA Knowledge Platform, the organization of Mobilisation and Mutual Learning Workshops, exhibitions and more.

The **Mobilisation and Mutual Learning** (MML) workshop brings together everyone who is interested in developing successful innovations, useful solutions and effective policies in the marine field.

It is a unique environment enabling the integration of citizens' needs, expectations and opinions into the marine Responsible Research and Innovation (RRI) process.

By using participatory and interactive methods we create a forum for exchanging knowledge, sharing best practices and co-creating RRI-driven solutions to marine challenges and hot topics.

MARINA project will organise two rounds of connected local and international MML workshops in 14 countries across Europe from November 2016 till June 2018.





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## MARINA consortium partners



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