MARINA

Get started in Responsible Research and Innovation

MARINE CHANGE CAUSED BY CLIMATE & TOURISM AND COASTAL CITIES

Sun, Sand…and Safety! How long will we have beaches?

MARINA Project

21st January 2017 | Mobilisation and Mutual Learning Workshop | Portugal

eurocean

The European Centre for Information on Marine Science and Technology

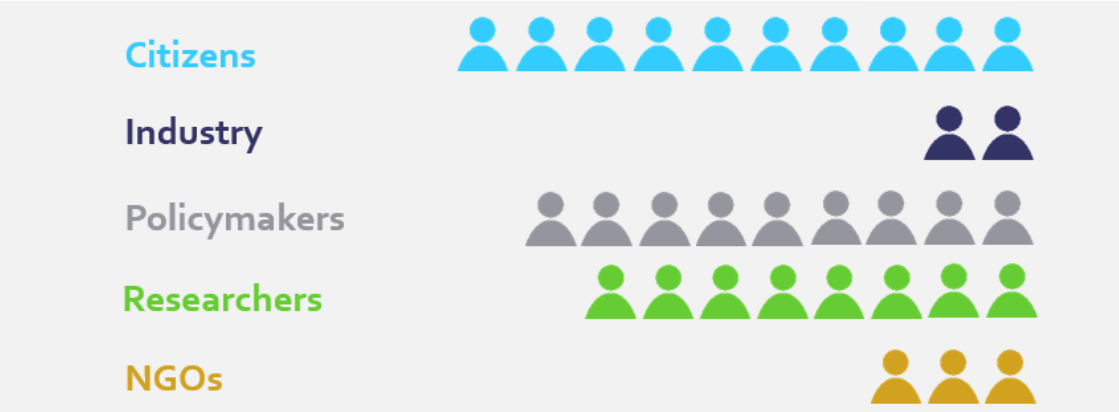
www.marinaproject.eu www.eurocean.org eurocean@fct.pt

Marine Change Caused By Climate and Tourism and Coastal Cities

Monday, 6th January 2014. Storm Hercules is on its way to the coasts of Europe. Potential record-size waves, gale-force winds and huge storm-surge are forecasted. The morning after shows once again how serious coastal erosion is in Portugal.

Nearly 85% of the country's GDP is generated within 60 km from the coast. Tourism is one of the most important economic activities. In 2013, nearly 14 million tourists came to Portugal mostly for its Sun & Sand offer. As beaches shrink and tourism increases, a new vision for the coast is needed. Safe beaches must be assured for those who live, work or spend leisure time by the coast in a sea level rise context.

32 stakeholders from different groups expressed their opinion in this workshop:



Responsible Research and Innovation

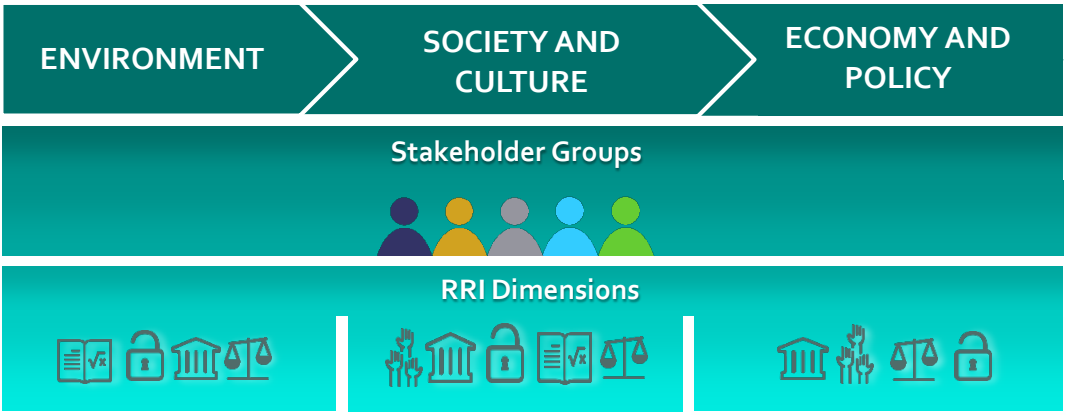
Responsible Research and Innovation (RRI) engages and brings together all stakeholders, creates dialogue and facilitates knowledge-sharing. It ensures the sustainable use of natural resources and makes sure that the needs of citizens and society are integrated into research and innovation. Participants put forth proposals of collective solutions based on the six RRI dimensions:

Pictograms by www.rri-tools.eu

Workshop Outcomes

Participating stakeholders identified three main challenges. The resulting groups of actions relate differently to the six RRI dimensions. Therefore the strategies are transversal and able to benefit from RRI in various manners. Each of them will involve different stakeholders' groups.

Governance and **Science Education** were the most important dimensions in the strategies developed in this workshop by the stakeholders.



Implement the best technical solutions to manage coastal erosion and sea level rise.	Simplify science language and adapt it to specific audiences.	Include key local stakeholders in the planning and implementation of local strategies.
Demolish human occupation and relocate in coastal areas at risk.	Use internet and social media for science outreach actions.	Promote alternative tourism focusing experiences away from beach and sea.
Opt for "build-with-nature" soft engineering instead of hard engineering actions.	Improve scientific culture by motivating children to learn science at all school levels.	Plan actions according to local circumstances instead of promoting larger-scale policies.
Evaluate the carrying capacity of beaches to define policies for the use of the coast and beaches.	Build a more civic, sustainability-concerned and risk-aware society.	Create a fund for environmental protection.
	Convert risk into knowledge including economic and social dimensions.	Define clear priorities and integrate sectorial policies accordingly.

Actions suggested by the participants

The MARINA Project is funded by the EU Programme Horizon 2020. 14 partners across Europe are joining forces for a period of 36 months to bring together stakeholders around marine issues and societal challenges and propose RRI driven roadmaps of actions to respond to them.

45 workshops on marine issues in the European Union

- Marine biotechnologies
- Renewable energy
- Climate change
- Fishing and aquaculture
- Deep-sea mining
- Sea transportation
- Tourism and coastal cities
- Pollution caused by human, land and sea pressures

Do you want to learn more ? Register now on www.marinaproject.eu

Consiglio Nazionale delle Ricerche

Coordinator :
Fernando Ferri : fernando.ferri@irpps.cnr.it; marina.pro@irpps.cnr.it

The MARINA project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under GA No. 710566.