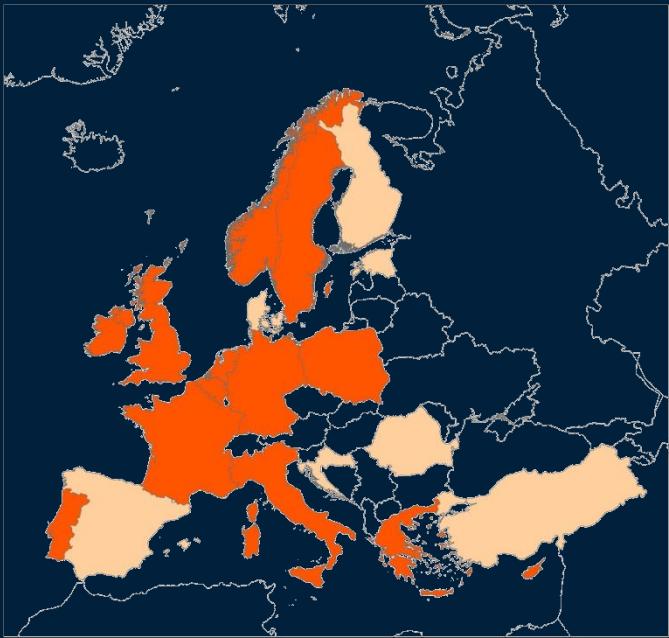


Sharing Marine Science with the Public



European Marine Board Communications Panel (EMBCP)

*...an open-ended
operational
pan-European network
of science
communicators
focused on marine
science
communication,
education and
outreach, and
facilitated by the
European Marine
Board Secretariat.*



12 countries
16 representatives



European Marine Board Communications Panel (EMBCP)

Main objectives & activities

- Mutually assist its members in promoting and communicating marine science across Europe and **exchanging ideas on events, communication methods and best practices = shared with many others...**
- Be (re)present(ed) at major **European (marine) science events**
- Communicate **MB-products & activities** at the **national level**
- Popularize marine science by advocating more **Ocean Literacy**



European seas - connecting people

Portugal & Flanders?



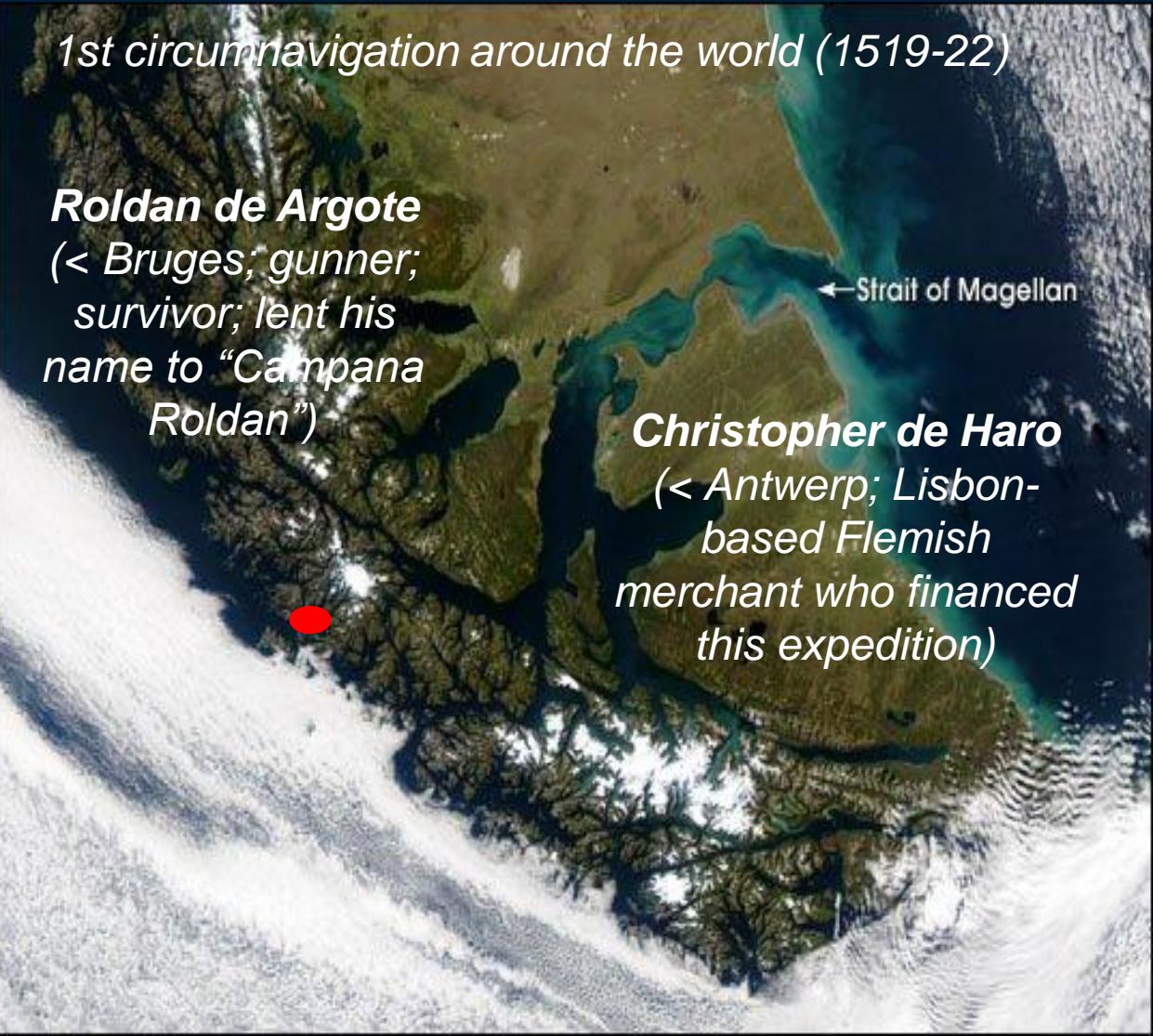
Ferdinand Magellan



1st circumnavigation around the world (1519-22)

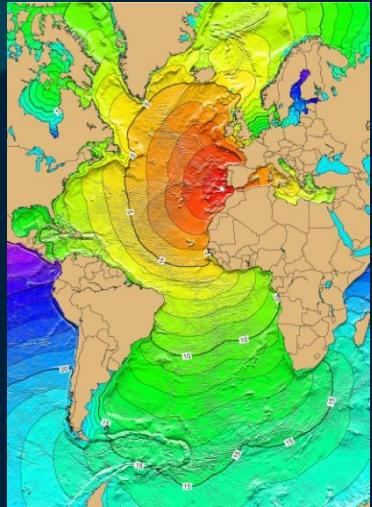
Roldan de Argote
(*< Bruges; gunner;
survivor; lent his
name to “Campana
Roldan”*)

Christopher de Haro
(*< Antwerp; Lisbon-
based Flemish
merchant who financed
this expedition*)



European seas - connecting people

Portugal & Flanders?



Lisbon tsunami (1755)

Théodore-Augustin Mann (1735-1809)

= “Flemish” pioneer in marine sciences

* “European avant-la-lette” [°England; Paris; Barcelona (*military engineer*); Flanders (*abbot/self-teaching + advisor* British government & count of Brabant & Austrian empress Maria Theresa); Prague]

* “sustainable fisheries” + ***mentions*** ***Lisbon tsunami as one possible cause of the impoverished fish-stocks...***

SHaring OCean Knowledge

- therapy

A public that is more informed/aware of the importance of the seas and ocean for human health and well-being

is essential to advance global ocean stewardship and for the successful implementation of international conventions on sustainable development



**SHaring
OCean
Knowledge**

Diversity in languages,
educational systems & ways of
living with the sea across
Europe ("Vasco", Norway,
"Cousteau-effect",..)

**THE NETHERLANDS
LEAST WORRIED
ABOUT SEA-LEVEL RISE**

FP7-CLAMER survey (CEFAS)

SHaring
OCean
Knowledge

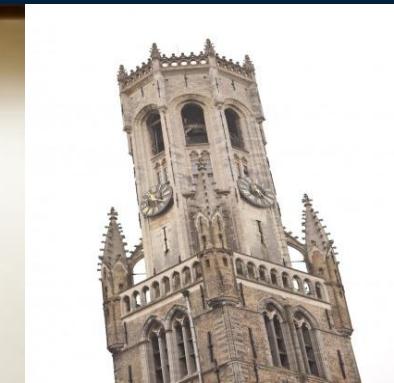
First Conference on OCEAN LITERACY in Europe

(12 October 2012, Bruges):



110 participants (13 countries)

timely event (Horizon 2020)



www.emsea.eu/conference-2012-bruges

SHaring OCean Knowledge

Is “OCEAN LITERACY” a new concept?

Some best practices in Europe



Black Sea cruise (Bulgaria)



PLANEET ZEE
HOMEPAGE
-intro
-reisroute
-competitie
-opdrachten
-contact
-credits
-vorige edities



E-learning (Belgium)



'Real map' (Ireland)



SHaring OCean Knowledge

Is “OCEAN LITERACY” a new concept?

Some best practices in Europe

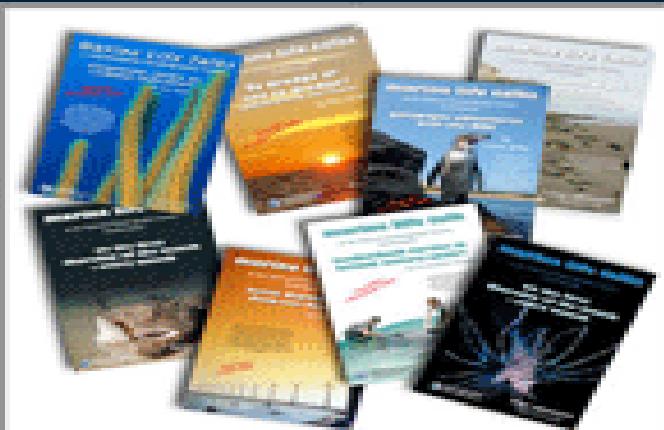
Marine newspaper (Belgium)



“Science-to-public” houses (Portugal)



Marine life Talks (UK)

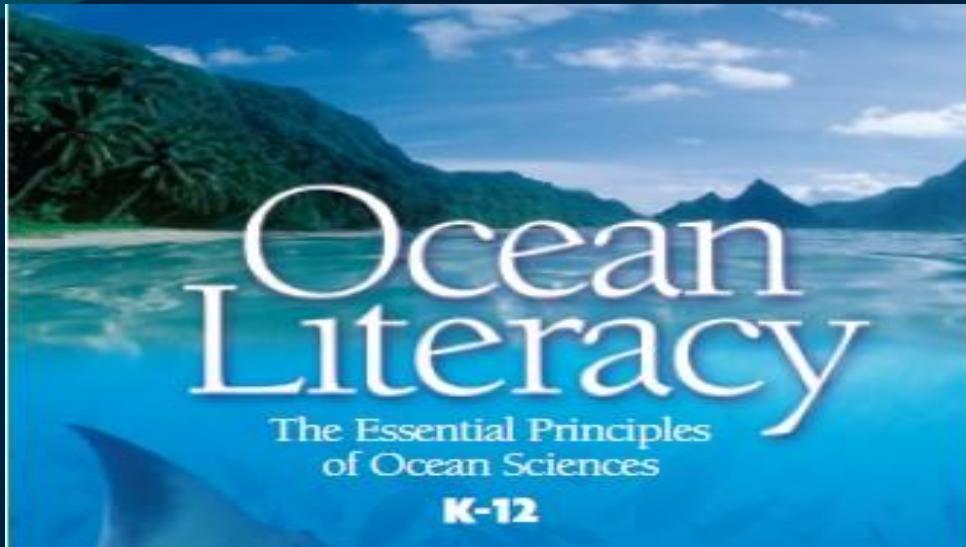


Marine Tech & media (Germany)

How to get more ocean stewardship?

1. Identify and implement “essential principles” of ocean sciences

US-movement on Ocean Literacy
(+ Japan, Chili, China, Australia,...)



The seven essential principles about the way the ocean works are:

1. The Earth has one big ocean with many features.
2. The ocean and life in the ocean shape the features of Earth.
3. The ocean is a major influence on weather and climate.
4. The ocean makes the Earth habitable.
5. The ocean supports a great diversity of life and ecosystems.
6. The ocean and humans are inextricably interconnected.
7. The ocean is largely unexplored.

These can be reviewed in full at www.coexploration.org/oceanliteracy. The Center includes these principles throughout its mix of hands-on, minds-on programs and engaging exhibits.

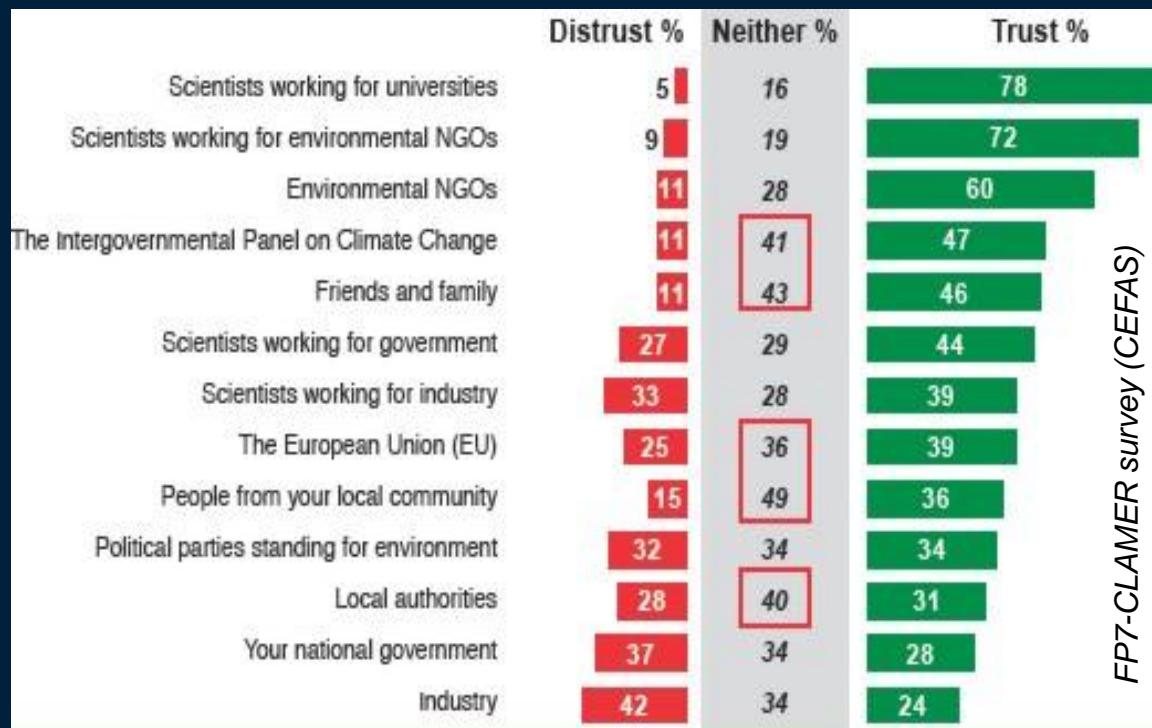


How to get more ocean stewardship?

2. Make it a holistic & inclusive process

- * both formal education and informal ways of learning
- * requiring a more effective collaboration between educators, scientists, industry, public authorities, NGOs, the public, etc...

SCIENTISTS



*Science heroes as
ambassadors*

"The issue for marine scientists is less to train them on communicating marine sciences than to give them incentives to communicate on their work, which in the current system might be a distraction of their career"

How to get more ocean stewardship?

2. Make it a holistic & inclusive process

EDUCATORS

Inspiring teachers is the quickest route to inspiring pupils



How to get more ocean stewardship?

2. Make it a holistic & inclusive process



THE PUBLIC (e.g. "MarineArt" project)



How to get more ocean stewardship?

3. Strategic plan & reflection on how to make outreach effective and respond to societal needs (Horizon 2020)

Outreach activities of 64 EU & national research projects on marine climate change examined in terms of 'good practice' (FP7 CLAMER – CEFAS)

Conclusion: *in most cases outreach did not extend beyond one-way imparting of knowledge through project websites, brochures, scientific papers or conferences with little or no attempt to involve members of the public and stakeholders directly.*

A few exceptions:

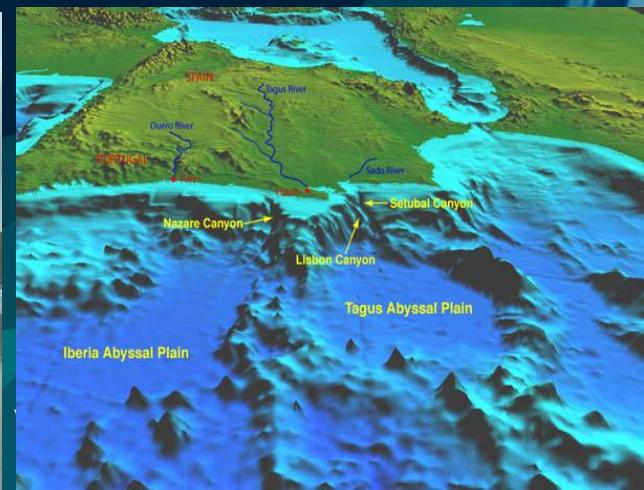
CAPE FAREWELL

The Cultural Response to Climate Change
(www.capecfarewell.com)



HERMES

Hotspot Ecosystems Research at the Margin of European Seas (www.eu-hermes.net)



How to get more ocean stewardship?

4. Aquaria, museums & science centra should be supported in their efforts to incorporate more science into their programmes and activities



How to get more ocean stewardship?

5. Baseline studies on ocean knowledge, on how people feel about the seas & on what they want to know

Poll on what the Belgian public knows and wants to know about the seas (1250 students/seniors); 14 multiple choice questions: score = **52%**

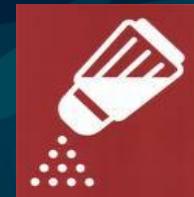
* (Pretty) well answered (62-80%):

- Tides (80%)
- Most important commercial fish (71%)



* (Rather) badly answered (13-44%):

- Groynes (13%)
- *Seawater freezing* (28%)



How to get more ocean stewardship?



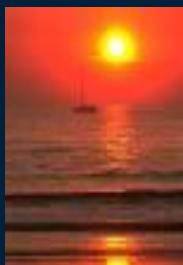
« If you think about the ocean, what pops up in your mind? »



Ice-cream, leisure, sun/beach (70-90%)



Dunes, fresh air, gulls/fish... (10-25%)



Inspiration, infinity, freedom, sunsets... (<5%)

How to get more ocean stewardship?

Ocean science vs the public: pros & cons

-

- *not aware of all the ecosystem services*
- *invisible & hostile environment*
- *considered as a place for leisure only*

+

- *spectacular new findings (& technology)*
- *all inspired by the ocean*
- *aquaria as ambassadors*

How to get more ocean stewardship?

6. Use ocean documentaries and other visuals as very strong instruments in making people understand the ocean (and feel responsible)

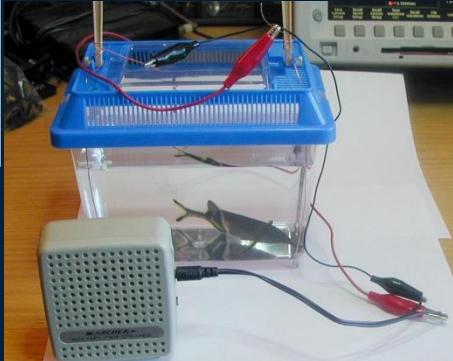


Photograph by Brian Skerry

Right Whale
National Geographic, October 2008
© 2008 National Geographic Society. All rights reserved.

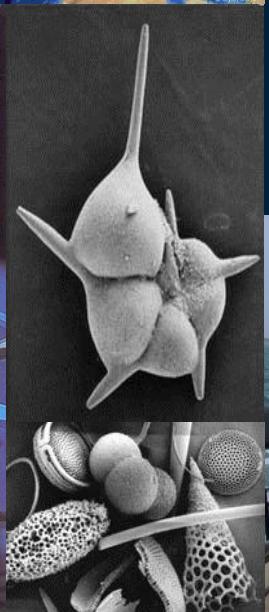
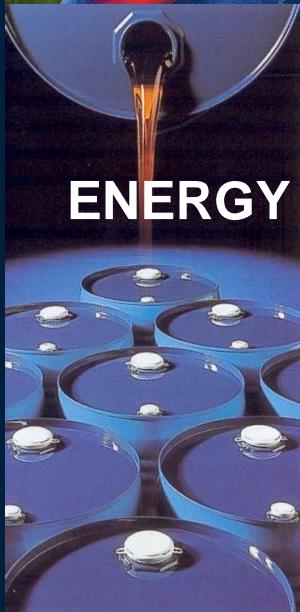
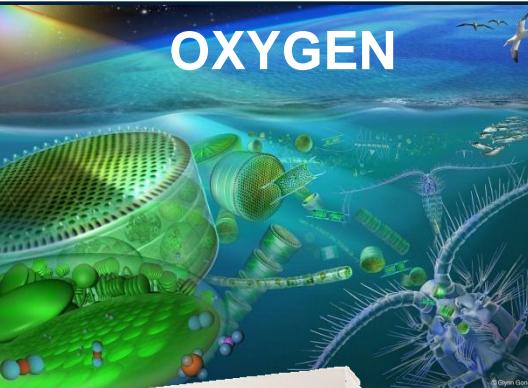
How to get more ocean stewardship?

6. ... and don't forget the other senses (smell, taste, touch,...)



How to get more ocean stewardship?

7. Make the public understand the relevance of the ocean in their daily life activities



How to get more ocean stewardship?

7. Make the public understand the relevance of the ocean in their daily life activities

What does the public want to know about the ocean?
(poll with 1250 Belgians)

Ecosystem protection & policy
Weather forecasts Offshore windparks

Marine pollution

Animals & plants Food security

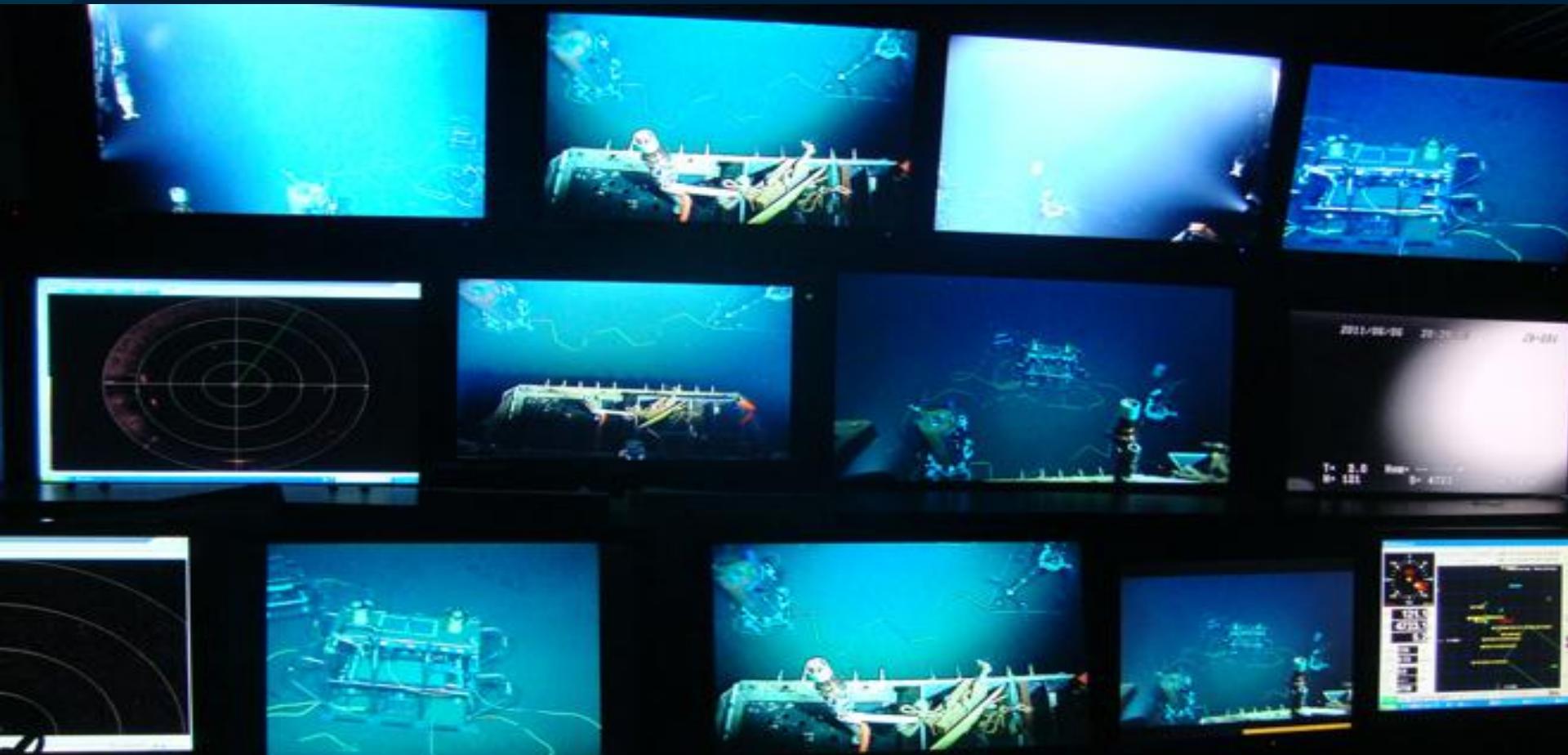
Oil disasters Dangers for beach tourists

Climate change

Coastal floods/defense

How to get more ocean stewardship?

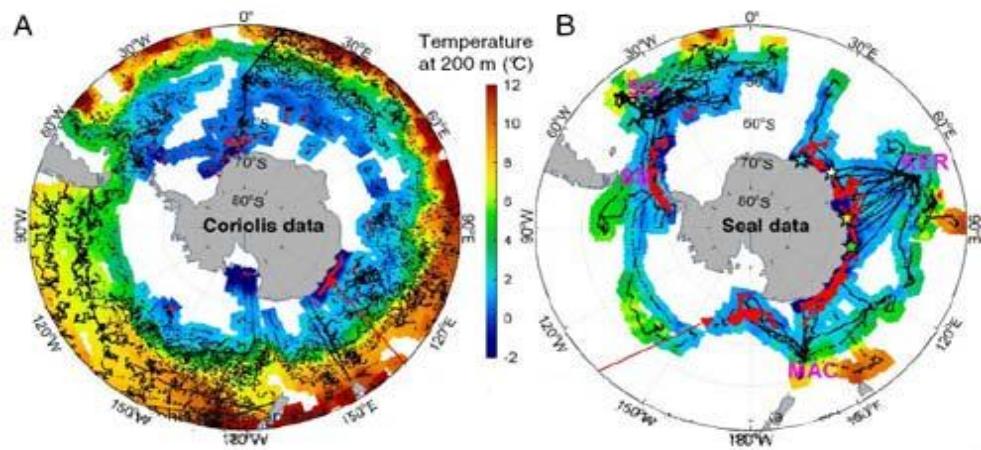
8. Use new technologies where appropriate



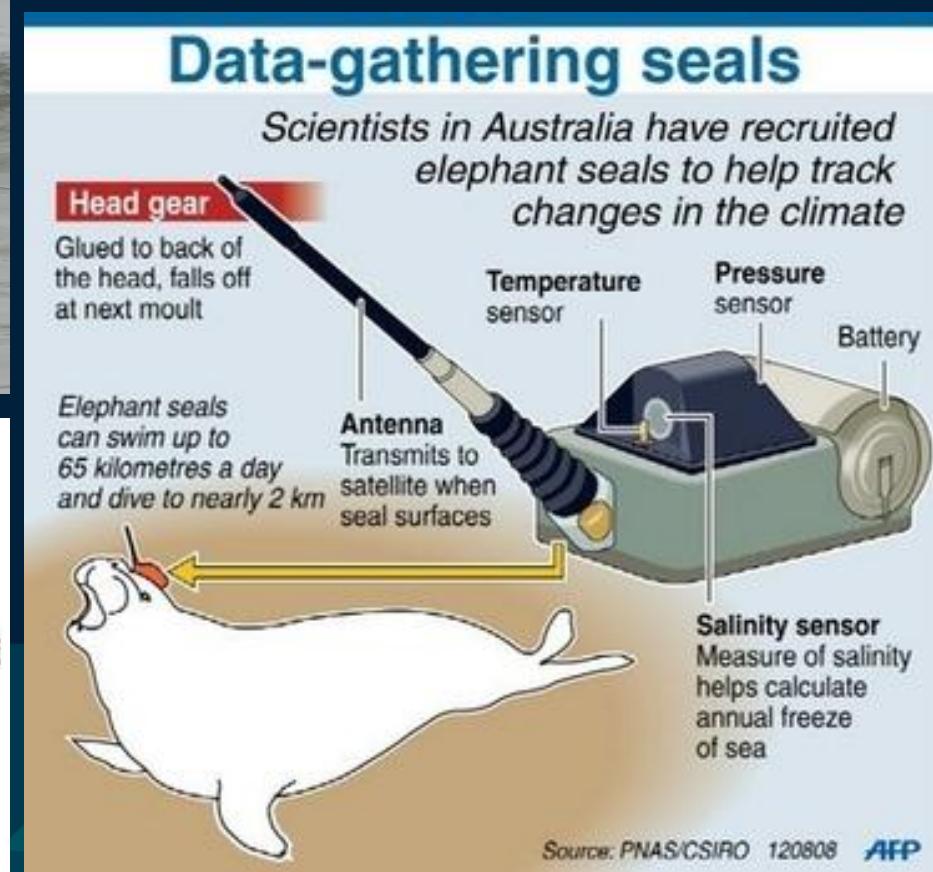
New media, cabled observatories, forecasts based on remote sensing, HD-cameras, « smart sensors », ARGO-floats, tagging,...

How to get more ocean stewardship?

8. Use new technologies where appropriate



Living ARGO



How to get more ocean stewardship?

9. Citizen science, the ultimate goal?

TEST!



“Towards a society where oceans, remote as they are from our day-to-day life, are constantly brought back in the picture by feedback mechanisms between ocean observation, knowledge & public discussion”

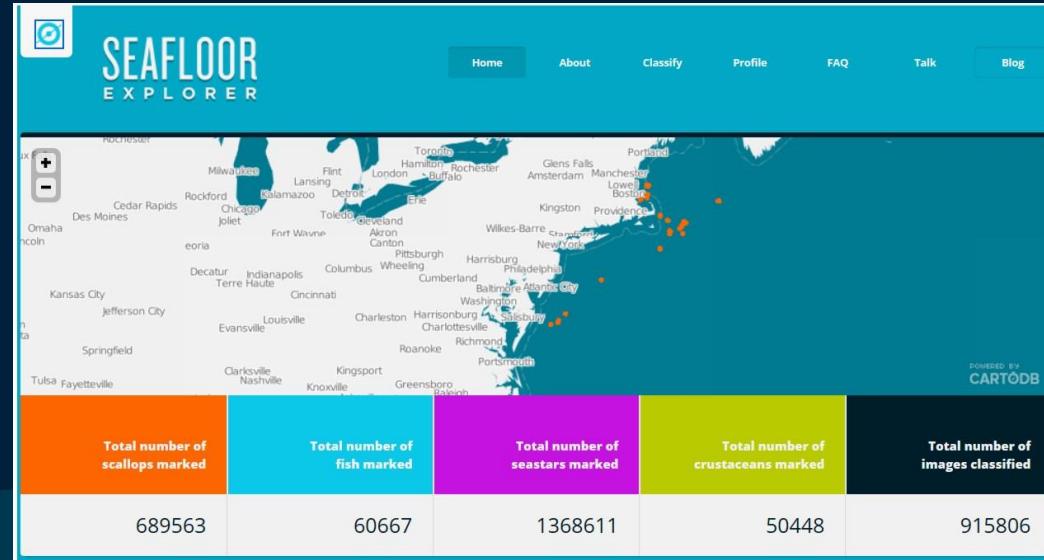


How to get more ocean stewardship?

9. Citizen science, the ultimate goal?



« I hear and I forget.
I see and I remember.
I do and I understand »
(Chinese saying)



Help explore the ocean floor.

Dive in!

The HabCam team and the Woods Hole Oceanographic Institution need your help!

Identify species and ground cover in images of the seafloor, and help create a library of seafloor life in the habitats along the northeast continental shelf.

END

