



RESOURCE PACKAGE

www.seachangeproject.eu

CONTENTS

- 1 INTRODUCTION**
- 2 INTERNATIONAL THEMATIC DAYS**
- 5 SEA CHANGE RESOURCES**
 - 5** Learn more about the Sea Change project
 - 6** Introducing Ocean Literacy
 - 8** The Ocean, well-being and health
 - 9** Activities and interactive elements
 - 10** Resources for educators and citizens
- 11 CUSTOMIZE YOUR OWN SEA CHANGE EVENT**
- 13 STAY IN TOUCH WITH SEA CHANGE**



INTRODUCTION

INTRODUCTION

The ocean is a defining feature of our planet and its essential life support system. Five interconnected ocean basins form a unified body of water covering more than two-thirds of the Earth's surface and containing 97 percent of all available water. All life on this planet, including our own, exists because of the ocean. Understanding the ocean is also essential to comprehending and protecting the environment we depend on. And yet we are, to a large extent, unaware about the ocean's influence on us and our influence on the ocean. This is what the concept of Ocean Literacy (OL) wants to address.

An ocean-literate person:

- Understands the importance of the ocean to humankind.
- Can communicate about the ocean in a meaningful way.
- Is able to make informed and responsible decisions regarding the ocean and its resources.

At its very core, OL constitutes the foundation for citizens' empowerment to take direct and sustainable action towards a healthy ocean, healthy communities, and a healthy planet, and therefore bring about a fundamental "sea change" in their relationship with the ocean.

This is the impetus behind the creation of this resource. Inspired by and sourced from the EU-funded Sea Change project, this resource package aims to introduce not only the project and its outputs but also basic information about OL, suitable opportunities, and inspirational ideas for the integration of OL in the activities of Ecsite community members.

This resource will allow you to:

- Acquire basic information about OL and the Sea Change project
- Learn about the official international days which can be used as a platform for OL activities
- Discover a wealth of written, multimedia, and interactive materials which are available free of charge and ready to use – simply click on the hyperlinked titles in the text to gain instant access
- Gain inspiration for your own initiatives and learn more about concrete OL activities and actions you can adapt and replicate
- Explore additional sources of information

We truly hope you will enjoy this package and find it useful. In case you decide to use any of the resources, please let us know by filling in this short [online form](#).

Questions, thoughts, general feedback, ideas or remarks? Please share them directly with Tomas Rehacek (trehacek@ecs site.eu).



INTERNATIONAL THEMATIC DAYS

March 3rd WORLD WILDLIFE DAY

World Wildlife Day is a celebration of the diversity of our ecosystems and a chance to raise awareness of the benefits of conservation efforts.

The ocean supports a great diversity of life. This diversity is largely unexplored, with an estimated 91% of marine species still awaiting description. In the meantime, pollution poses a danger to marine ecosystems and affects, directly and indirectly, human health.

March 22nd WORLD WATER DAY

World Water Day brings attention to the importance of freshwater, the sustainable management of this resource, and water-related issues more generally.

Almost all the rain that falls on land comes from water evaporated from the ocean while seas and the ocean are the final resting place for much of our litter, threatening this essential cycle.

April 7th WORLD HEALTH DAY

The World Health Organization and other related organisations use this date to raise awareness and understanding about crucial health issues, and mobilise support for action.

Human health and wellbeing are inextricably linked to the ocean. Not only is the ocean an important source of seafood and human medicine, but the ocean has an important positive influence on our mental and physical health, an impact often referred to as the “blue gym effect.”

April 22nd INTERNATIONAL MOTHER EARTH DAY

Designated as an international day in 2009, this celebration recognizes the interdependence that exists among human beings, other living species, and the planet we all inhabit.

As a climate regulator and climate change buffer, the ocean acts as Mother Earth’s life support system. The inextricable connection between the ocean and humans is a key principle underlying the concept of Ocean Literacy and is reflected in key aspects of the “Our Ocean, Our Health” campaign.



May 2nd

WORLD TUNA DAY

World Tuna Day intends to raise awareness of the threats facing tuna populations and the economic and social benefits of sustainably managed tuna stocks, and to share best practices in this regard.

In a world of growing demand for seafood coupled with declining catches from the world's marine fisheries, environmentally, economically and socially sustainable fishing and aquaculture are essential to future food security.

May 22nd

INTERNATIONAL DAY FOR BIOLOGICAL DIVERSITY

"Biodiversity and Sustainable Tourism" has been selected as the theme for the 2017 edition of this international day, in acknowledgement of the fact that biodiversity at the level of species and ecosystems provides an important foundation for many aspects of tourism.

The ocean supports a great diversity of life and ecosystems which, together with the associated benefits of visiting coastal environments, are the foundations for strong coastal and maritime tourism sectors. To continue to benefit from the positive effects of the ocean, we have to protect marine biodiversity.

June 5th

WORLD ENVIRONMENT DAY

"Connecting People to Nature" is the theme of the 2017 World Environment Day. It urges us to get outdoors and into nature so that we may appreciate its beauty and its importance, and to take forward the call to protect the Earth that we share.

Much of the focus of environmental protection remains on terrestrial habitats and ecosystems even though more than two-thirds of the Earth's surface is covered by the ocean. Ocean-literate citizens who are able to make informed and responsible decisions in the best interest of the ocean and its resources are urgently needed!

June 8th

WORLD OCEANS DAY

"Our Oceans, Our Future" is the 2017 theme of this global day of ocean celebration. The focus will be on conservation, especially the development of solutions to plastic pollution and the prevention of marine litter. Make sure you check the WOD website which offers many resources and educational materials as well as tips and ideas for your own event.

June 25th

DAY OF THE SEAFARER

The 2017 edition encourages ports and seafarer centres to demonstrate to the general public how much seafarers matter. Ports and seafarer centres are encouraged to share and showcase best practices in seafarer support and welfare.

From the earliest times, seafaring and navigation have connected humans with the ocean. In today's modern economy the way we interact with the ocean is not only vital for a sustainable economy but also equally important in addressing the issues of ocean pollution, recreation, tourism and transportation.



September 28th **WORLD MARITIME DAY (Last Thursday in September)**

"Connecting Ships, Ports and People" has been selected as the World Maritime Day theme for 2017. The World Maritime Day promotes the maritime sector as a catalyst for the development of a sustainable blue economy.

September 29th **EUROPEAN RESEARCHERS' NIGHT (Last Friday in September)**

A traditional annual event intended to bring science to a wider public through fun learning and a chance to show the great positive difference researchers make for society.

The promotion of research careers in ocean-related fields is paramount: Did you know that we have better maps of the surface of Mars than of the world's ocean bottom?

October 2nd **WORLD HABITAT DAY (First Monday in October)**

The purpose of World Habitat Day is to reflect on the state of our environment, including the towns and cities, and on the basic right of all to adequate shelter. It is also intended to remind the world that we all have the power and the responsibility to shape the future of our cities and towns.

How does the ocean fit in? The ocean made the Earth habitable and continues to play an indispensable role in influencing our climate and weather. When pursuing sustainability, we cannot think of our personal habitat in isolation: we all share one planet and it is our responsibility to look after the ocean, whose natural environment and resources we benefit from and impact with our actions.

October 16th **WORLD FOOD DAY**

Events associated with the "World Food Day" promote worldwide awareness and action for those who suffer from hunger and for the need to ensure food security and nutritious diets for all. Together with climate change, food security represents one of the biggest challenges faced by humanity.

Fish contributes about 17% to the world's animal protein intake; however, overfishing and the incessant pollution of the ocean put the existence of marine fisheries under severe stress. World Food Day could be a great opportunity to shine the light on the latest scientific research and innovation addressing this global challenge, such as aquaponics and improved aquaculture techniques.

November 10th **WORLD SCIENCE DAY FOR PEACE AND DEVELOPMENT**

The World Science Day for Peace and Development provides an opportunity to demonstrate why science is relevant to people's daily lives and to engage them in debates on related issues.

The exploration of the ocean and biomedical products derived from marine plants and animals are just two of many examples of where science and the ocean meet and foster creativity, increased scientific and ocean literacy and the promotion of further learning and education.



SEA CHANGE RESOURCES

LEARN MORE ABOUT THE SEA CHANGE PROJECT

a. Sea Change: Increasing Ocean Literacy

A video introducing the Sea Change project and the concept of Ocean Literacy.



b. Sea Change Project factsheet

A ready-to-print booklet introducing the Sea Change project and the consortium. Available in English, Portuguese and Spanish.



c. Sea Change Project News

Project newsletter presenting updates, news, interviews, upcoming events and more.



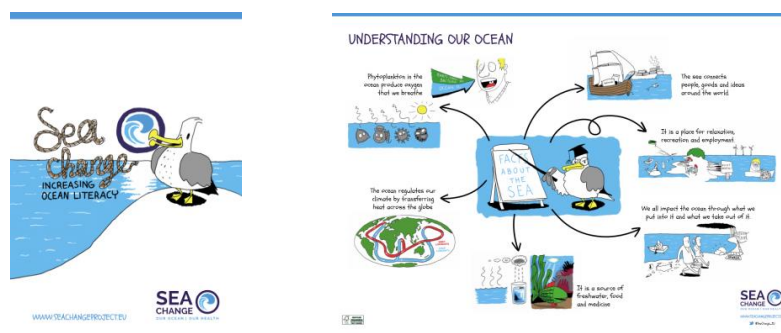
SEA CHANGE RESOURCES

INTRODUCING OCEAN LITERACY

a. Ocean Literacy Booklet and Poster

The OL booklet provides a basic summary and explanation of the concept of Ocean Literacy and its importance.

The OL poster outlines the key facts about the ocean to enhance our understanding about the ocean, its role in our daily lives and our influence on the ocean.



b. World Oceans Day Resources

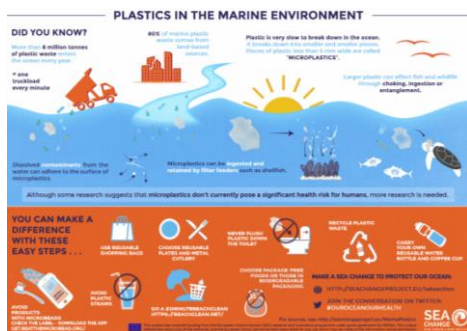
World Oceans Day is perhaps the best platform to promote ocean literacy not only because of its direct relevance, but also because of the availability of a rich database of ideas, activities, promotional materials and other resources developed by the organizers of this thematic day. Make sure you browse the World Oceans Day [database](#) of awareness activities and their [resource section](#).

The Sea Change project has also prepared a series of [fact cards](#) you can print and use at your event. In case you decide to organize an event, don't forget to [register](#) it on the World Oceans Day website.



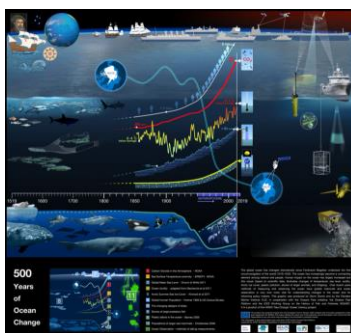
c. Plastics in the Marine Environment

An infographic about plastic pollution, what it means for ocean life and humans, and what small steps we all can take to make a difference.



d. 500 Years of the Ocean

An infographic displaying some of the macro-changes in the Ocean that have occurred over the last 500 years.



e. From ABC to ABSeas: Ocean Literacy for All

This e-learning course intended for teachers, educators and students introduces ocean literacy concepts and principles and provides useful advice on how to incorporate ocean literacy into educational programmes. Available in English, French, Italian, Spanish and Catalan.



UNESCO

COURSE

From ABC to ABSeas: Ocean Literacy for all

COURSE INFO

Francesca Santoro Self-Paced 5 Weeks Free Certified

Virtual Classroom:



This project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation (H2020-BG-2014-1) under grant agreement No. 652644. This publication/multimedia product/presentation reflects the views of the author, and the European Union cannot be held responsible for any use which might be made of the information contained therein.

SEA CHANGE RESOURCES

THE OCEAN, WELL-BEING AND HEALTH

There is increasing recognition that the health of the ocean is inextricably linked to human health and well-being. In their turn, humans also impact the ocean in a number of ways. Explore this crucial connection using the following resources.

a. Our Ocean Our Health videos

Videos explaining the connections between the ocean and our own well-being and health.



b. Human Health and the Ocean: What's the connection?

Ready-to-print educational leaflets dedicated to the topics of human health, seafood, marine pollution, human medicine, the “blue gym effect,” climate regulation and climate change.

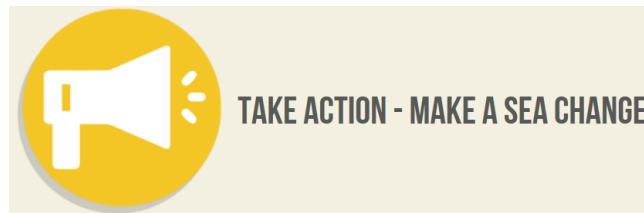


SEA CHANGE RESOURCES

ACTIVITIES AND INTERACTIVE RESOURCES

a. Take Action - Make a Sea Change

Even by making a small change in your everyday life, you can achieve big results in helping to protect the ocean. A compilation of tips and useful resources on what you can do to make a difference.



b. Crab Watch initiative

This citizen science app is a tool used for increasing Ocean Literacy. A full launch is scheduled for June 2017.



13 motivated young people participate in the Spanish Crab Watch, organised by SUBMON on 14 January 2017 in Sitges, Spain.

c. Ocean Edge Directory

A collection of educational resources and activities that are either available as downloadable products or serve as an inspiration to help you to share ocean knowledge with any type of audience.

Find below a selection of activities for a glimpse of what the database has to offer.



Our Acidifying Ocean

Interactive digital learning tool from the University of Gothenburg, Sweden, and Stanford University, USA

Users can learn key facts on ocean acidification and its link to climate change, and enter a virtual lab to explore the effects of acidified seawater on the growth of urchin larva by carrying out their own experiment.



Cool Seas

Interactive game developed by the Marine Conservation Society, United Kingdom

This digital learning environment for children allows them to learn about the impact of litter on marine wildlife through games and quizzes.



BioBlitz

Citizen science concept and project presented by the Marine Biological Association, United Kingdom

Scientists, students, and members of the public work together in a race against the clock to discover as many species of plants, animals and fungi within a set location and over a defined time period. This event is also suitable for marine and coastal areas.

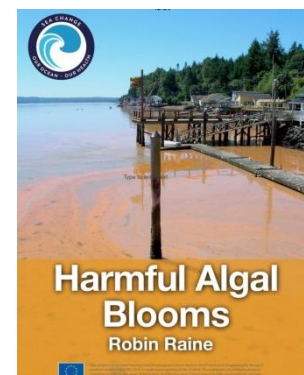
BioBlitz

RESOURCES FOR CITIZENS AND EDUCATORS

E-Book

“Harmful Algal Blooms” is an introduction to phytoplankton, the tiny microscopic plants in the ocean that are at the beginning of marine food chains.

Available via iTunes.



This project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation (H2020-BG-2014-1) under grant agreement No. 652644. This publication/multimedia product/presentation reflects the views of the author, and the European Union cannot be held responsible for any use which might be made of the information contained therein.

CUSTOMIZE YOUR OWN SEA CHANGE EVENT

Are you excited by what's on offer, but still not sure how these resources can help you bring Sea Change and Ocean Literacy to your audiences? Here are some format ideas to mix and match! We hope they will help you develop the approach that best suits your institution.

Add a Sea Change outreach stand to your event

Help your visitors get to know and learn about Ocean Literacy using Sea Change resources. Download and print our posters and educational leaflets and create your own Sea Change thematic stand which can easily complement a variety of exhibitions.

School students learn about Ocean Literacy from the Sea Change resources at a CIIMAR outreach event.



Want instant interaction?

Your audiences can take action via our online pledge to “Make a Sea Change,” play one of the online tech games developed by young coders in the Sea Change project, and engage with Sea Change on social media. The Ocean’s Edge directory is home to some exciting online laboratories where your visitors can become ocean scientists for an afternoon.

Participants at the IQ Film Fest, Liberec, Czech Republic, learn about the games developed by young coders during Sea Change project activities.



Try out an innovative Sea Change activity developed by our members

Sea Change project partners are developing and testing new resources and outreach activities! If you would you like to get involved with these projects – by promoting them or running your own activities – do not hesitate to get in touch!



And if you're looking to develop hands-on indoors and outdoors educational activities specifically tailored to your institution, the MOOC “From ABC to ABSeas: Ocean Literacy for all” has some wonderful suggestions for science communicators and educators: from art projects, to climate change and ocean scavenger hunts and obstacle courses.

***CrabWatch** activities developed by The Marine Biological Association presented at the “Sea the difference” event at the National Marine Aquarium UK. If you are interested in CrabWatch, contact Jack Sewell at jase@mba.ac.uk.*



Add a personal touch to your event

Organise a “Science & Sailors Café” to unlock the full potential of dynamic exchanges of knowledge! Senior citizens hold treasure-troves of knowledge and experience from living and working on the coast and so do ocean or water adventurers such as divers, sailors, and kite-surfers. Working together with scientists, these groups can share a fascinating mixture of science, culture and history with your audiences.

Alexander Kirilov, a Bulgarian diver, speaking at the Muzeiko’s Adventure Kids Day diving workshop. Source: Julian Hristov



Use Sea Change to find out more about your local community

No community is too far from the ocean! Sea Change believes every community should know its links to the ocean and understand how its day-to-day actions can have a cumulative effect on the health of the oceans and the sea. Micro-exhibitions on local topics could be a great opportunity to take the first steps towards making a “Sea Change”. You can introduce the concept of Ocean Literacy through the prism of local cultural dimensions to water use and water problems, or concrete changes to the hydrology of the local area as seen in archival documents and old photographs.

Help your visitors experience the “blue gym” effect

The ocean has an almost magical effect on our physical and mental health. People feel calmer and more relaxed and revitalised after visits to coastal environments. Why not try to replicate, using images and sounds, this special atmosphere? And if you want to encourage your visitors to reflect on their connection to the ocean, you could provide a selection of ocean-related pictures in a postcard format and encourage them to share their feelings about marine environments.

*Suggestion for a “blue gym” postcard from Lesson 5 of the MOOC
“ABC to ABSeas: Ocean Literacy for all”*



Questions, ideas or remarks? Please share them directly with Tomas Rehacek (trehacek@ecs site.eu).



STAY IN TOUCH WITH SEA CHANGE

Online presence

Website www.seachangeproject.eu

Twitter [@SeaChange_EU](https://twitter.com/SeaChange_EU)

Facebook [@SeaChangeProjectEU](https://www.facebook.com/SeaChangeProjectEU)

Your contact at Ecsite



Tomas Rehacek
Project manager
trehacek@ecsite.eu



Image credits: **Sea Change** (www.seachangeproject.eu); **BioBlitz**: Marine Biological Association (<https://www.mba.ac.uk/>); **Cool Seas**: Marine Conservation Society (<https://www.mcsuk.org/>); **Our Acidifying Ocean**: I2SEA (<http://web.stanford.edu/group/inquiry2insight/cgi-bin/i2sea-r2b/i2s.php#>)

References: **Sea Change** (www.seachangeproject.eu); **Ocean Literacy Network** (2013). Ocean Literacy: The Essential Principles and Fundamental Concepts of Ocean Sciences for Learners of All Ages, available at: <http://www.coexploration.org/oceanliteracy/documents/OceanLitChart.pdf>.



This project has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation (H2020-BG-2014-1) under grant agreement No. 652644. This publication/multimedia product/presentation reflects the views of the author, and the European Union cannot be held responsible for any use which might be made of the information contained therein.