ABSTRACTS

IMSCC 2014

1st International Marine Science Communication Conference

8-9 September - Porto, Portugal

ciimar
Interdisciplinary Centre of Marine and Environmental Research

European MARINE BOARD COMMUNICATIONS PANEL
Communications Panel

Ciência Viva

AGÊNCIA NACIONAL PARA A CULTURA CIENTÍFICA E TECNOLÓGICA

Introduction

The 1st International Marine Science Communication Conference (IMSCC 2014) – New tools and practices is an interdisciplinary and international marine science communication meeting jointly organized by the CIIMAR (Interdisciplinary Centre of Marine and Environmental Research of the University of Porto); the European Marine Board Communications Panel (EMBCP) and Ciência Viva (National Agency for Scientific and Technological Culture).

IMSCC 2014 intends to bring in the state-of-the-art in Marine Science Communication and to highlight new tools and practices in this field, in order to support scientists and marine science communicators in developing their communication skills to set up a more efficient dialogue with journalists, decision-makers, and the general public. Experts of international renown from various spheres have been invited to give their points of view on these issues – which are crucial to support the development of Marine Science Communication within the society.

Presentations and workshops will cover a broad spectrum of Marine Science Communication issues that are of interest to a multi-disciplinary and international audience. These sessions will identify or offer solutions to problems, utilize case studies, identify knowledge gaps or collaboration opportunities, and discuss broader applications and implications of the material presented.

Marine Science Communication is one of the priorities of CIIMAR since it translates our findings in a language that can be understandable by non-scientific audiences and potentiates the acceptance of science. IMSCC 2014 fits our purpose to provide scientists, journalists and other MSC professionals with recent and new tools to achieve this task. In this year, Porto University has launched the OCEANUS- Marine and Science Technology – a competences center in this area and CIIMAR will have its brand new building in the Leixões harbor, making the IMSCC 2014 another important milestone fitting our mission.

The President of the Organizing Committee,

Vitor Vasconcelos

ORGANIZING COMMITTEE

Vitor Vasconcelos - CIIMAR (President)
Agnès Marhadour - CIIMAR
Joana Saiote - CIIMAR/EMBCP
Ana Noronha - Ciência Viva
Jan Seys - EMBCP/VLIZ
Albert Gerdes - EMBCP/MARUM

SCIENTIFIC COMMITTEE

Vitor Vasconcelos - CIIMAR/FCUP (President)
Jan Seys - EMBCP/VLIZ
Albert Gerdes - EMBCP/MARUM
Isabel Sousa Pinto - CIIMAR/FCUP
José Manuel Azevedo - FLUP
Rui Ferreira - Sealife Porto

IMSCC 2014 1st International Marine Science Communication Conference

Porto, 8-9 September 2014
Hotel Ipanema Porto

PROGRAMME

Monday, 8 September 2014 | **The Challenge of Communicating Marine Science - Best Practice Examples**

8:15 - 9:00 **Attendees Registration**

9:00 - 9:20 **Opening Session**
Maria de Fátima Marinho Vice-Reitora da Universidade do Porto
Vitor Vasconcelos President of CIIMAR
Ana Noronha Executive Director of Ciência Viva
Jan Seys Chairman of EMBCP

9:20 - 10:10 **Keynote speaker: Power Tools for Science Communicators**
Nancy Baron

10:10 - 10:50 **Pechakucha talks:**
Chair: Filipe Castro

Bridges Between School and Blue Science - Engagement of High School Students in Ocean Literacy
Bernardo Mata & Diogo Geraldes

Sea-education summer school
Anouck Hubert

CSC CIIMAR Science Communication
Vitor Vasconcelos

Diving into the Ocean - Introducing marine research in the summer leisure agenda of the Euro-region Galicia-Northern Portugal
José Jato

10:50 - 11:10 **Coffee Break**

11:10 - 11:40 **Highlight talk: Science Policy Relations: What ideal are we striving for?**
Jan Stefan Fritz

11:40 – 12:50 **Oral communications:**
Chair: Albert Gerdes

Infographics and confidence indicators: keeping it sweet and simple for policy-makers
Georgia Bayliss-Brown

“Fish Scale” and “Mr. Goodfish” projects: two communication campaigns about sustainable sea food consumption to mitigate overfishing
Giada Franci

FAMAR: an example of how to disseminate scientific knowledge to engage local population in the conservation of seagrass populations
Maria Del Carmen Ramírez

Art students enhance their ocean literacy
Nancy Fockedey

12:50 - 14:00 **Lunch**

14:00 - 16:00 **Workshop 1: Engaging the public - How to do it?**
co-organized with Ciência Viva
Chair: Ana Noronha

Speakers: Ivvet Modinou; Patricia Filipe; Catarina Gonçalves

Workshop 2: Community Learning - Are you In?
Chair: Ana Paula Mucha

Speakers: Guy Baker; Emilio Fernández Suárez

16:00 - 16:15 **Coffee Break**

16:15 - 16:30 **Poster session**

16:30 - 17:20 **Panel Discussion**

18:00 - 19:30 **Visit to Sealife**

19:30 - 22:00 **Cocktail**

Tuesday 9 September | New tools and trends in Marine Science Communication

9:00 - 9:50 **Keynote speaker: Communicating Marine Sciences Across Digital Media**
David Braun

9:50 - 11:00 **Oral communications**
Chair: Jan Seys

Social media for scientists: the twitter jitters
Helen Murray

Oceanblogs.org – Kiel marine sciences blogging resource
Jan Steffen & Christian Urban

An online logbook to share marine knowledge: the case of the scientific expedition of the CNR Urania vessel along the Adriatic sea
Alba L'Astorina

The Value of Photography as a Tool for Marine Science Outreach
Christine Shepard

11:00 - 11:20 **Coffee Break**

11:15 - 11:50 **Highlight talk: The Altered Oceans Series: Lessons learned on the power of multimedia**
Kenneth Weiss

11:50 - 12:30 **Pechakucha talks**
Chair: Miguel Santos

Successful communication of marine sciences via YouTube – Challenges, opportunities, and strategic options
Albert Gerdes

"Open Ocean": MARE's marine science communication plan
Filipa Lacerda

"Mon océan & Moi": an outreach program with an important "remote" communication component
Carolyn Scheurle

12:30 - 12:45 **Poster Session**

12:45 - 14:00 **Lunch**

14:00 - 16:00 **Workshop 1: 10 Tips to talk to the media: Addressing journalists in a changing world**
Chair: Albert Gerdes

Speakers: Luis Henrique Pereira; António Granado

Workshop 2: New Era – Web 2.0
Chair: David Braun

Speakers: Stephen Curry; Beatrice Lugger

16:00 - 16:20 **Coffee Break**

16:20 - 17:40 **Panel Discussion & Closing Session**

17:40 **Cocktail and CIIMAR Choir**

Keynote speaker | 8 September 2014

Nancy Baron | Director of Science Outreach for COMPASS

COMPASS is an organization focused on communicating science with a special expertise in marine issues. She is the lead communication trainer for the Leopold Leadership Program based at Stanford University, USA. Nancy leads workshops for academic, government, and NGO scientists, helping them develop core competencies as communicators who want to make their work more accessible and relevant to journalists, policy makers, and the public. She has designed and led science communications programs in the United States, Canada, Sweden, Tanzania, Panama, Brazil, South Africa, and other countries. Many of these communications workshops have focused on topics such as ocean acidification, fisheries, marine reserves, coral reef ecology and dead zones. Nancy began her career as a biologist in Banff National Park in Canada, spent six years as Director of Education at the Vancouver National Aquarium, then morphed into journalism and is now a communications coach for scientists. She has won numerous writing awards including the Canadian Science Writers Science in Society and National Magazine awards. An ardent naturalist, she published a popular field guide, The Birds of Coastal British Columbia (Lone Pine Publishing), and a "how to" communications guide book for scientists titled Escape from the Ivory Tower: A Guide to Making Your Science Matter (Island Press). For her work at the intersection of science and journalism, Nancy was awarded the 2013 Peter Benchley Ocean Award for Excellence in the Media.

Power Tools for Science Communicators

How can we mobilize society to better care for oceans and all they provide? How can marine scientists and experts make science meaningful to their audiences: policymakers, the public or the media? In this keynote address, Nancy Baron will provide practical advice on how to deliver a clear message and insights into what the rapidly evolving field of the social science of communication is revealing about how to engage and influence people. Using marine science examples and stories of scientists who are leading the way, Nancy will illustrate how to frame and deliver powerful messages. She will demonstrate the importance of optimism, hope and success stories to reach an overwhelmed public and to help catalyze change.

Keynote speaker | 9 September 2014

David Braun | Digital Outreach Director at National Geographic Magazine

David Braun is a 17-year veteran of National Geographic, currently serving as a senior digital editor developing stories focused on Nat Geo mission programs. He also directs his popular National Geographic News Watch blog, including a companion blog to Tales of the Weird, a bestseller book he edited for National Geographic in 2012. David's 40-year journalism career in the U.S., UK, and South Africa gives him global perspective and experience across the media landscape. He's covered Congress, the White House, international legislatures, and the United Nations, and been published/broadcast by the BBC, CNN, AP, UPI, National Geographic, De Telegraaf, Travel World, and the Johannesburg Star. Assignments in more than 60 countries included traveling with Nelson Mandela in North America and Bill Clinton in Africa, and covering political negotiations hosted by Fidel Castro in Havana. As a member of the National Geographic Expeditions Council, and media representative to the Committee for Research and Exploration, David has accompanied Nat Geo explorers and scientists to 69 field sites in 14 countries. He has been a featured lecturer on National Geographic Expeditions to Vietnam, Cambodia, and the Galapagos. David has served as a member/executive of journalist guilds, press clubs, editorial committee of Online Publishers Association and other professional groups. He was a WMA Magazine of the Year Awards judge (2010-2012). He has more than 120,000 followers on Twitter, Facebook and other social media.

Communicating Marine Sciences Across Digital Media

David Braun shares his experience and tips for communicating marine science to a global digital audience. A veteran of 40 years in journalism, Braun has worked on a wide range of media, including 17 years at National Geographic, where he was communications editor in the Public Affairs office, the first editor in chief of National Geographic News, and founding editor of the News Watch network of some 400 bloggers. Currently he is Director of Outreach for Multiple Platforms, reporting into National Geographic magazine. Prior to National Geographic, Braun worked at CMP Media, where he was the Washington correspondent of TechWeb, one of the earliest online news services, and before that, he was a wire editor for United Press International.

Braun will show examples of how marine sciences can be communicated through news stories, blogs, and social media. He will talk about his role in working with internal and external partners with a view to identifying the strategic objectives and measurable impact in the production and distribution of content. "Easy and inexpensive access to digital publishing tools and platforms means that now everyone can be a publisher," Braun says. "But just because you can doesn't necessarily mean you should. You have to be clear what it is you are publishing, for whom, and for what purpose."

Highlight talk | 8 September 2014

Jan-Stefan Fritz | Head of the Brussels Office of the German Marine Research Consortium (KDM)

Jan-Stefan Fritz is a Senior Associate Research Fellow in the Institute of Intercultural and International Studies at the University of Bremen and Head of the Brussels Office of the German Marine Research Consortium (KDM). Since moving to Brussels in 2003 Stefan has represented different German research organizations to the EU. On behalf of KDM, Stefan is also partner/subcontractor in several EU research projects, including ECO2, CSAOceans, BlueMining and AtlantOS (submitted). The focus of his work is on articulating science-policy strategies and on building networks between the research-, policy- and business communities. Prior to Brussels, Stefan worked for the EU and International Bureaus of the German Federal Ministry of Education and Research (BMBF) and, before that, as a consultant to UNEP and UNESCO. In all these cases, his work focused on developing more effective scientific advisory processes for international environmental policy. Stefan's research interests are on science-policy relations, ranging from the history of the role of science in shaping early twentieth Century international cooperation to more recent efforts at bringing science into marine governance arrangements. Stefan holds a Ph.D. in International Relations from the London School of Economics and Political Science (LSE).

Science-Policy Relations: What ideal are we striving for?

This presentation explores the challenge of science-policy relations from the perspective of marine science communication. It argues that over the past 30-40 years developments such as, for example, the democratization of science (e.g. public sampling campaigns), use of the precautionary principle or debates about the legitimacy of scientific advice have given new shape to science-policy relations. Such developments are a challenge to both scientists and policy-makers alike and have made the relationship between the two groups more complex than ever. Drawing on examples related to climate and fisheries as well as from the EU and the UN, the presentation highlights the complexities of this relationship in practice and argues that understanding this complexity is crucial to shaping successful interactions between the two communities. Given the poor state of the oceans and rising levels of unsustainable economic exploitation, the presentation concludes by observing that marine science communication will play an increasingly important role in shaping the way society perceives the oceans and this, in turn, will influence the way in which the oceans will be used in the future.

Highlight talk | 9 September 2014

Kenneth Weiss | U.S. Environmental Journalist and Pulitzer Prize Winner

Kenneth R. Weiss, a Pulitzer Prize-winning writer, focuses on topics at the intersection of science, environment and public health. He is now working on a book that draws the connections between women's rights and reproductive health with hunger, poverty, national security and environmental decline. The book was inspired by his series, Beyond 7 Billion, www.latimes.com/populationrising, published the Los Angeles Times on the causes and consequences of human population growth. He was the lead reporter for the Altered Oceans series, www.latimes.com/oceans, which showed how the slow creep of environmental decay often has a more profound impact than cataclysmic natural disasters. Besides winning the Pulitzer Prize for explanatory reporting, Weiss has won the George Polk Award, the Grantham Prize, a Robert F. Kennedy Journalism Award, the Scripps Howard Foundation's National Journalism Award and many others. He holds a bachelor's degree in folklore from UC Berkeley and lives in Carpinteria, California. Like way too many Californians, he prefers to conduct his own ocean research from his surfboard.

The Altered Oceans Series: Lessons learned on the power of multimedia

Pulitzer-prize winning journalist Ken Weiss traveled the world to assess the health of the world's oceans. Ken accompanied wildlife researchers tracing the lethal impact of toxic algae blooms killing sea lions and other marine mammals. He visited the edge of the Eastern Pacific garbage to measure its toll on seabirds, and he dived with scientists studying what's diminishing in coral reefs in the Atlantic, the Caribbean and Pacific. To reach general audiences, he found it's best to "show, not tell" the challenges facing living oceans. He painted word pictures in his stories, of course, and invoked other story-telling techniques. But he found stories told on video really helped land-dwelling people understand what's going on beneath the surface of the sea. Tools to make and edit videos are more available than ever to scientists and other ocean experts to tell their own stories, and explain their research to limitless audiences on the Internet.

Day 1 | 8 September 2014
Oral Communications
Chair: Albert Gerdes

Infographics and confidence indicators: keeping it sweet and simple for policy-makers

Bayliss-Brown, G.A.
Centre for Environment, Fisheries and Aquaculture Science (Cefas), UK

Our understanding of the marine environment is becoming increasingly important due to the role that it plays in quantifying global changes, stocks of resources and ecosystem services. Marine research is, therefore, a necessity and should be relevant and productive. The implications of providing effective (user-specific) communication of these research outputs to stakeholders - including policy-makers, industry and environmental managers - are clear. In addition, funding streams, globally, are becoming increasingly targeted towards research that can providing tangible outputs to assist decision-makers; hence, measuring the impact of investment into knowledge transfer is essential.
This presentation will explore innovation in the communication of marine science to policy makers in the UK. The speaker, Miss Georgia Bayliss-Brown B.Sc. M.Sc. is Marine Climate Change Scientist at the Centre for Environment, Fisheries and Aquaculture Science (Cefas) and she is "revolutionising the way Cefas scientists are communicating with its customers". Georgia has eight years' experience in scientific project management and has recently implemented a science communication strategy at Cefas, an executive agency of the UK Department of Environment Food and Rural Affairs (Defra).
A number of innovative techniques have been developed, and are being utilised at Cefas, for communicating research findings to the end-user. The techniques to be presented include a method for developing infographics by assisted scientist-to-designer "concept translation"; image tracking for impact measurement; confidence indication for identifying knowledge gaps and research prioritisation; and, participatory processes working directly with end-users to create bespoke products.

"Fish Scale" and "Mr. Goodfish" projects: two communication campaigns about sustainable sea food consumption to mitigate overfishing

Valettini, B. & Franci, G.
Costa Edutainment S.p.A.-Acquario di Genova, Italy

According to the last FAO reports, the percentage of the world fish stocks assessed, considered fully or overexploited and thus reaching or exceeding their maximum sustainable yield, has further increased in recent years, now approaching 90%. Moreover it is estimated that over 40 million tons of fish caught every year are thrown back into the sea, not being the targeted fishes. Last but not least, only about 10% of the over 700 Mediterranean edible species, is actually merchandised, due to wrong established eating and cultural habits.
Sustainable sea food consumption is therefore crucial to help mitigate overfishing and to preserve marine biodiversity.
From 2009 to 2014 Genoa Aquarium has participated to two projects about sustainable sea food consumption: the European Life+ project "Pesce Ritrovato (Rediscovered Fish) by Fish Scale" and "Mr. Goodfish" campaign. Both campaigns aimed to raise consumers awareness, increasing their knowledge and appreciation of neglected species and offering simple and constructive solutions.
The projects have pioneered the new EU fisheries policy which will progressively come into force, forbidding to throw fish back into the sea; considering that neglected species are often a significant fraction of fish waste, increasing their demand and commercial value, surely helps to incentivize and motivate fishermen to reduce and finally avoid, fish discards.
The communication strategies adopted a "positive" approach based on the promotion of sustainable species lists and through the creation of stakeholder networks that involved fishermen, the retailing chain, restaurants, tour operators and consumers.
Several communication tools and materials have been created and customized specifically for the different targets; some of them, like shopping bags, children calendars/posters with the seasonality of fish or posters for fishmongers, thanks to how they were conceived, are self-explanatory.
These materials have been distributed during events held at the Genoa Aquarium and in many other occasions as shows, exhibitions, fairs etc.

Some others communications tools, like children games, or a theatre show, conceived specifically, have been used during over 300 events organized for the projects. Whenever possible "theoretical" information has been combined with the chance for the public, not only to learn to recognize the sustainable species and to cook them, but also to taste some recipes based on their use.

FAMAR: an example of how to disseminate scientific knowledge to engage local population in the conservation of seagrass populations

Ramírez M.C., Azcárate P. & Brun F.G.
University of Cádiz. Faculty of Marine and Environmental Sciences. Department of Biology (Ecology Area). Puerto Real. 11510. Spain

In spite of the large importance that nature in general, and marine environment in particular has for the development and wellness of the citizens, they keep rather invisible for the main public and coastal managers. Within marine environments, seagrasses comprise one of the most important and widespread ecosystems in the world, providing humans with important ecological and economical services. Although the economical value of the ecosystem functions and services provided by seagrasses are among the highest at world, these species are declining at very high rates in coastal areas mainly as a result of human derived activities. Some previous studies concluded that the lack of "charisma" of these species make them invisible for citizens and coastal managers, making necessary to increase their visibility, in order to conserve and preserve this crucial ecosystems. This can be done by increasing their presence in the media, as well as improving our capacity to transfer the scientific knowledge to citizens and public managers in a straightforward language, that can be easily understandable by the non-experts.
A group of researchers from the University of Cádiz (south of Spain) reacted against this situation by setting up FAMAR, an environmental volunteering educational programme focusing in marine areas and seagrass ecosystems in Cádiz bay. In a first step from 2006 to 2011, a monitoring program using volunteers (undergraduate students mainly) began to monitor the seagrass populations of the inner Cádiz bay. After 2011, the volunteers (including different sectors of the society) were involved in the preparation of non-technical dissemination materials (e.g. booklets, brochures, flyers, a didactic unit for scholarships) in order to reach different groups of citizens (i.e. fishermen, coastal managers, tourists, etc). To undertake such dissemination actions, the volunteers were helped by the researchers in order to transfer accurately the science knowledge, but in the same language used by the receptors of the information, supporting the community learning process.
In the last two years, FAMAR started their "scholarship and educational programs", which involved more than 1.000 schoolchildren and more than 400 adults in different activities (dissemination sessions, workshops or courses). Moreover, in order to open a path to disseminate in a fast and accurate way the scientific knowledge generated by our research activity, FAMAR has a blog active (www.famar.wordpress.com), which is updated continuously, where all the research and dissemination materials are available for free. The visits to this blog can be used as a proxy for success of our dissemination activities, since in the last years, where we have increased the number and quality of our dissemination activities, the number of annual visits is increasing exponentially, from around 1.000 visits per year in 2010 to almost 20.000 visits estimated for this year.

Art students enhance their ocean literacy

Fockedey, N. [1], Goffin, A.[1], Copejans, E.[1], Van Bruane, J.[2], Demuysere, M.-A.[2], De Dobbelaere, T.[2], De Wolf, D.[3], Van Rijckeghem, C.[3], Tavernier, I.[4], Janssen, C.R.[4] & Marine@UGent consortium[4]
[1] Flanders Marine Institute (VLIZ), InnovOcean site, Wandelaarkaai 7, 8400 Oostende, Belgium; [2] Academie voor Beeldende Kunst van Gent, Offerlaan 3, 9000 Gent, Belgium; [3] Science Communication UGent, Onderbergen 1, 9000 Gent, Belgium; [4] Interfaculty Research Consortium Marine@UGent. Secretariat: Laboratory of Environmental Toxicology and Aquatic Ecology, J. Plateaustraat, 22, 9000 Ghent, Belgium

Marine Art was a project where art students were brought into contact with marine scientists. The aim was to enhance the art students' ocean knowledge and observation skills, to stir up curiosity for seas and the ocean, and to give inspiration to the creative process. The enthusiasm of 1 250 participants resulted in 65 workshops and an exposition with more than 300 art works. 8 000 people visited the exposition.
In the project (October 2012 - February 2013 in Ghent, Belgium) the Flanders Marine Institute (VLIZ) brought art students of the Academy for Visual Arts Ghent into contact with the world of marine researchers from the Marine@UGent consortium of the Ghent University. By means of a presentation about their research, a dialogue about an ocean issue or a visit to the lab, the art students learned about the status of the ocean and about marine scientific work.
Aim was to enhance the art students' ocean literacy, which is all about understanding the ocean's influence on people and the influence of people on the ocean. It is also about assessing what people know, want to know and should know about the ocean.
1 250 participants (between 6 and 70 years old) followed one or more of the 65 workshops organised. This resulted in more than 300 drawings, paintings, graphics, sculptures, mixed media work, illustrations, photographs and animated films. Endpoint of the project was an exposition for the public at large (2 – 6 February 2013), where the art work was confronted with the science that gave the initial inspiration to it. About 8 000 visitors came to admire the 2 000 square meters of art expo.
The free publication 'Marine Art - marine science sets sail to the art world' illustrates this process, the interpretation by the art students, the work-in-progress and the resulting art expo; complemented with quotes and pictures of participating art students, teachers and scientists.
The publication can be downloaded as a pdf or browsed through online. More pictures and videos of Marine Art workshops and the exposition can be found on the photo and video gallery www.vliz.be/MarineArt.

References

Goffin, A.; Fockedey, N.; Seys, J.; Tavernier, I. (Ed.) (2013). Marine art: Marine science sets sail to the art world. Flanders Marine Institute/Ghent University: Oostende & Gent. 143 pp.

Pechakucha presentations
Chair: Filipe Castro

Bridges Between School and Blue Science: Engagement of High School Students in Ocean Literacy

Mata, B.[1], Geraldes, D.[1], Silva, F.[2], Costa, R.[2] & IPMA team.
[1] Portuguese Institute for Sea and Atmosphere (IPMA) – Portugal; [2] Task Group for the Extension of the Continental Shelf (EMEPC) – Portugal

Nowadays, science apprenticeship should be focused in the development of skills that go beyond the simple acquisition of concepts. Based on this assumption, the Portuguese Institute for Sea and Atmosphere (IPMA) and the Task Group for the Extension of the Continental Shelf (EMEPC) created a marine sciences educational project called "Bridges between school and blue science", financed by Ciência Viva Agency as a part of the program "Escolher Ciência". The goal is to promote scientific and ocean literacy among high school students and to raise awareness for the importance of ocean knowledge in Portugal. In its first year, "Bridges between school and blue science" was implemented in seven high school classes from different regions and backgrounds around the country. Every hands-on and minds-on activities were designed according to the national curriculum guidelines and competences expected at the end of high school.
After an initial stage where students were encouraged to reflect about the nature of science and inquiry, the participants were engaged in real marine investigations, working under the guidance of scientists in IPMA's labs. They were incorporated in actual marine biology and geology investigations, where they had an active contribution and got a true understanding about the daily routines of scientific work. In a final stage, students analyzed the data collected in the labs, and wrote a scientific paper or poster. They shared their results and newfound knowledge with investigators and with each other in a scientific congress created specifically for this project.
The implementation of inquiry based science education, the immersion in real investigation environments, and the scientific guidance provided by the investigators gave these high school students an understanding of the nature of science, inquiry and marine sciences. This goes beyond the scientific knowledge acquired through the school curriculum, and allows them to develop a true scientific literacy. All these strategies kept students genuinely interested, motivated and involved in marine investigation. Some of the participants even applied the experiences they had in the labs to other classes. For the marine investigators involved, "Bridges between school and blue science" allowed a sharing of their knowledge, experience and investigations with a young audience, while also contributing as an excellent way of outreach for their investigations.

Sea-education summer school

Hubert, A., Project officer sciences for society
LabexMER, European Institute for Marine Studies IUEM, France

The Sea-Education summer school lead by LabexMER, was designed in close collaboration with our scientific partners UBO, Ifremer, and Océanopolis. The shared objectives are to participate in the training of secondary school teachers, to contribute developing the link between high schools and university and increase the visibility of Brittany's excellence in terms of marine and coastal research, both in natural and social sciences. Our ambition is to turn this Sea-Education summer school into a benchmark event at a national and at a francophone level by proposing an interdisciplinary approach for the exploration of science & society topics in marine and coastal sciences.
The Sea-Education summer school offers teachers from any area with an immersive experience. Working with researchers, at the heart of the "Science in the making", they will discover new approaches and scientific tools that they can reinvest in innovative and/or interdisciplinary educational projects.
The theme of the 1st edition in 2013 was"Coastal risk sciences and society".
In august 2014 the second edition will explore "Climate changes, ocean and society".
The Pechakucha presentation will explain why and how the idea was born at the European Institute for Marine Studies, why the design of this 5-day training is particularly innovative and how we are collaborating with a didactic research laboratory to develop and implement an evaluation method of the summer school.

CSC – CIIMAR Science Communication

Vitor Vasconcelos
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[2] Department of Biology, Faculty of Sciences, University of Porto, Rua do Campo Alegre, Porto 4169-007, Portugal

CIIMAR Science Communication (CSC) strategy leans on a diversity of approaches that aim to reach the maximum number of targets. CSC is based on young and less young CIIMAR researchers that actively use their time exploring new languages and new approaches that are not always recognized in terms of career opportunities. SC is easier for scientists when it is based on writing a paper, presenting a communication on a specialized conference or presenting an innovation based on our own research, like a new vaccine of a new underwater remote control vehicle. But we need to use other approaches and other languages to reach young audiences or their parents that have limited scientific background. So, learning from nature we known that by using a diversity of approaches we will be more successful and will reach higher stability on our processes. Science needs to be learned form small ages and that approach we were able to apply by contracts with the municipalities of Vila do Conde and Matosinhos, in their CMIA (Environmental and Monitoring and Interpretation Centers). The challenge was high, how to build a SC program based on an empty building with renewed or new functions? Working with the local communities including schools, analyzing their environmental problems, engaging with the local needs was that basis and worked well. From exhibitions to workshops, from field visits to lectures for adults we managed to pass from an empty building to a full room, or full rooms. We also use CIIMAR laboratories to show that science is reachable and that is done by real people. The experience of working in a real lab is unforgettable. The use of internet is optimized in our project CIIMAR at School (CIIMAR na Escola). Knowing that our previous activities have a local or regional scale we wanted to go further and launched a portal were teachers from any place in the world can download free protocols for simple experiments adapted to every age group and natural sciences discipline. Together with these activities they can "order" a talk on a specific theme and a scientist will go to the school, present the talk and interact wit the students. It is a great experience especially for those that had never seen and talked to a scientist. All these programs have been done in articulation with other institutions and especially with Ciência Viva, with who we participated in several nationwide activities, learning from crossed fertilization.

"Diving into the Ocean". Introducing marine research in the summer leisure agenda of the Euro-region Galicia-Northern Portugal

Jato, J., Fernández, E., de los Bueis, J., Urgorri, V.
Campus do Mar, Vigo, Spain

The International Campus of Excellence - Campus do Mar gathers 25 institutions linked to marine research, teaching and technology transfer from the Euro-region Galicia - Northern Portugal. One of its main objective is to transfer new knowledge generated at the laboratorios to the society through the development of a singular dissemination programme made up of a number of projects targeted at several audiences: general public, university community and primary and high school student. These initiatives aim at fostering citizen's curiosity, thereby increasing their knowledge on the oceans, and to enhace the visibility of the "Campus do Mar" R&D aggregation.
The main project of the outreach program is "Diving into the Ocean", an itinerant action that brings the work of marine researchers to the society by means of simple experiments related to key topics of the marine research agenda. Some of these topics are the diversity of microscopic organisms live in a drop of seawater, ocean circulation, the process of coastal upwelling, ocean acidification, fishing areas of the world and the origin of commercial fish species, integrated coastal zone management and the structure and dymamics of dunes. The workshops, based on the methodology of Learning by Doing, are complemented and enriched by parallel activities such as underwater film projections in the street or small fieldwork activities.
"Diving into the Ocean" has been developed every summer since 2011, with workshops set up in beaches and othercentral areas of Galician and Portuguese cities, seeking to introduce marine science and technology in the leisure time of the participants. The content of the activities are based on the science generated by Campus do Mar researchers, after an adaptation process developed by educators. Workshops are run experts in marine dissemination through an initial explanation adapted to the scientific background and age of the participants, followed by practical and simple experiments for participants to solve as a challenge.
In the three editions organized, "Diving into the Ocean" received more 20,000 visitors in 16 different locations thanks to its interactivity and ability to adapt and engage a wide range of audiences.

Poster presentations

Field work to motivate students into marine sciences

Borges, R.[1,2], Baioa, A.M.[1,3], Freitas, R.[1] & Drago, T.[4,5]
[1] Centro Ciência Viva de Tavira
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Marine science communication can be more effective among school students when they learn contents in a non-formal way, outside of the school formal educational context. In particular, field work that includes sampling methodologies and procedures commonly used by marine researchers, can be very effective to motivate students into marine science topics.
Taking advantage of the proximity to the Ocean and to the Ria Formosa coastal lagoon (a protected area located in the Algarve region, South of Portugal), a project involving the collaboration between a Science Centre (Centro Ciência Viva de Tavira), a local school (EB 2 3 D. Manuel I, Tavira), its Parents' Association and a Research Centre (Instituto do Mar e da Atmosfera, IPMA, Tavira), promoted a science club at the school. This science club implemented several hands-on activities that included field trips where students (between 10 and 15 years old) could contact with sampling methods commonly used in marine sciences, complemented with laboratorial analysis of samples. The laboratorial part took place both in the science club at school labs, and the IPMA research laboratory, where students could also directly contact with researchers and observe distinct types of experiments in marine sciences. We present the set of activities that were conducted in this project, related with marine sciences. By combining field work activities, laboratorial analyses and other outside activities in which scientific contents were also explored in a non-formal context, the strategy employed was very effective to engage students into science topics.

'Young Marine Scientists' Day', the annual hot spot for up-and-coming researchers

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Started in 2001 the VLIZ Young Marine Scientists' Day has grown to be the largest multi-disciplinary marine research day for young scientists in Flanders/Belgium and its neighbouring regions. Over 300 young (mainly master students, Phd students and young postdocs) marine and coastal experts from all disciplines come to this event to share knowledge from lectures, pitching presentations, a keynote address, elevator speeches, posters, demonstrations and interactive sessions. This annual symposium highlights the diversity, quality and relevance of marine and coastal sciences in Flanders/Belgium and it is the opportunity for young researchers to network and forge interdisciplinary relationships.
The main highlights of the day are the platform presentations and the poster presentations by the students and post-doctoral scholars. The young marine and coastal scientists are challenged to present their research in an attractive way, to think outside the box and to stupefy the audience with a fascinating talk on their research topic which takes in account the importance of their research to society. A contest is coupled to the presentations and the posters in order to encourage the presenters to use innovative communication techniques that overwhelm the audience. The winners of the best pitching presentation and the best poster are selected by the audience and are awarded with a voucher. The overall idea is that the young scientists get the opportunity to hone their presentation skills.
The Young Marine Scientists' Day is always kicked-off by an experienced scientist who gives a lecture in which he/she looks back upon his/her lifetime inspired by the ocean. It is a teaser for the young scientists to build their career in marine research.
This annual gathering is an inspiring, stimulating day for young marine scientists. They are challenged to present their work in an attractive way. By doing so they profile themselves in the broad network of marine scientists and experts who are professionally involved with the coast and the sea. The VLIZ Young Marine Scientists' Day is an excellent opportunity to network with not only colleagues, but also people from other institutions who might one day be collaborators on any number of projects. It is the place where the following generation of marine scientists is founded.

CIIMAR at School

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To encourage the curiosity of young students about Marine and Environmental Sciences and introduce them related concepts, CIIMAR researchers developed the outreach programme CIIMAR at School. The project combines an offer of classroom specialized talks and hands-on experimental activities targeted at boosting interest by these areas and improve scientific and ocean literacy. They address a series of topics related, among others, to climate change, the impact of pollution, integrated aquaculture, ecosystem services and blue biotechnology which are an integral part of national educational curricula, several of them of essential contribution to ocean literacy. These are available to school teachers and science educators through a web platform (http://www.ciimar.up.pt/oCIIMARnaEscola) where specialised talks can be requested and protocols of experimental activities are freely available upon a simple registry.
The programme consolidates strong two-way interactions of knowledge transfer and sharing of resources by taking CIIMAR scientists to schools to give talks within their field of expertise or talk about their career as examples of professional vocational models. The hands-on science activities have been providing a lively effective approach to introduce school students important topics. They require simple, easy-to-find materials and work on a Do It Yourself basis. Since October 2012, they have been accessed by teachers and science educators from all over Portugal. In the activities students are also acquainted with a variety of aquatic organisms, some living in extreme habitats, with key roles in trophic chains, provided by CIIMAR to the schools.
The experimental activities were also taken to five high-schools in a fresh approach allying the volunteer collaboration of university students. Anchored on CIIMAR researchers and technicians, the university students performed the activities with their high-school colleagues helping enhance curiosity about the science activities. The youngsters were very receptive to their presence and their experience as university students. The experience suggests this interaction may bridge the gap between high-school and university education, and encourage interest for careers in these areas.
Finally, the internet platform has been proven very useful and effective in disseminating lectures and activities, and assist educators with the experimental protocols.

The programme has been supported by Ciência Viva - Agência Nacional para a Cultura Científica e Tecnológica, through the Programme Escolher Ciência: da Escola à Universidade (PEC95) and FCT funds through PEst-C/MAR/LA0015/2013.

MoBIDiC – a citizen science project for monitoring marine biodiversity

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Ocean literacy is on the map of the European policies and priorities to create a more informed and concerned public that will better understand the need to manage the ocean ecosystems and resources in a sustainable way. Marine citizen science projects have started to multiply recently on a global scale since they are seen as one of the most effective strategies to engage the citizens. In June 2014, CIIMAR launched officially an online platform for marine biodiversity monitoring, relying on a collaborative model between researchers and the public. Since 2005 CIIMAR worked with schools in getting students and teachers involved in field trips to rocky shores in the north of Portugal to monitor data in seasonal campaigns. Data was uploaded in an online database that is open for data sharing. The present project, called MoBIDiC - Intertidal Biodiversity Monitoring and Ocean Sciences Dissemination - is now opening to a wider public allowing different levels of participation and data acquisition. Through online registration, participants enter data from their field observations. The data is then integrated in an open-source database, co-created by citizens and scientists. This new platform will also integrate data from other European countries. For that, an inventory of common species inventory was done: and resources to help identification were produced. Data entered will allow comparisons and time series at different scales and discussions at a wider scale. MoBIDiC platform was designed to evolve in complexity in a bottom-up logic. The verification of the identification of the species uploaded is done at the beginning by a group of experts. But amateurs can become specialists too: once a beginner citizen scientist gets familiar with a group of species ID, he/she integrates a validation panel to verify the new registrations. The expertise progresses until the process runs in a sustainable way for itself. This process is accompanied by technical support and workshops to teach fieldwork techniques and marine species identification, as well as what can be done with the data entered. In this communication we'll present the new MoBIDiC app and the results of the work developed so far with the MoBIDiC schools in the monitoring of intertidal biodiversity and in the creation of a curriculum that will engage more the student with the marine environment, resources and activities.

Scientix – the community for science education in Europe

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Scientix 2 it's an European Union program created to gather and coordinate all European projects for education on Science, making these resources accessible to all teachers, researchers and educators on STEM, even projects already completed may be available here.
The gold in this program is community STEM, teachers of students aged 4 to 21 years old, teaching Math's, Science and Technology (MST), e-safety and eskills/digital competences, they will continue to receive particular attention. All resources and projects are available on the website as Creative Commons license determined. It's accessible in eight European languages, which does not include Portugal as in Europe, we are a small country. However, the resources are available in several languages and you can apply for online translation, if you're registered.
The activities available are diverse and range from the possibility of being registered in European projects, sometimes linked to the research, the opportunity to participate in workshops, conferences, etc.. Some of main programs are Open Discovery Space (ODS) and ViSH, and Ingenious. Also, the Future Classroom is built to experiment how knowledge can be explore by our future scientists.
This program is designated Scientix 2 because it already had a first phase where they held a very significant conference, as may consult the portal. This program which runs from 2013 to 2015, will organize a conference in October, will have the participation of 550 teachers from across Europe with workshop, competition and lots of new ideas.
The dimension of teaching in science is in need of a new pulse of cool ideas. Well here is an excellent opportunity. It›s a great way to motivate for this important work.

Aquamuseum of the Minho river – Science Communication in the regional context

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The River Minho is an international water body located on the northwest of the Iberian Peninsula. Its main course is approximately 300 km long and the basin has a total area of 17080 km2. The last 77 km are part of the northwest boundary between Portugal and Spain and the aquatic ecosystems have great diversity and several environmental functions being the international river section a Natura 2000 site and the estuary is classified as a "Zona de Protecção Especial para Aves" (ZEP), an "Important Bird Area" (IBA) and is a CORINE Biotope. This river section aquatic environment is still not affected by major infrastructures and plays important role for local economies due to the high diversity of migratory species. Currently several exotic fish species established in this river following the trend of nearby regions. Therefore, adequate regulations and awareness of the community on the risks of practices related with aquarium trading and recreational fishing are highly required in order to preserve the ecological richness of this ecosystem. The project "Aquamuseum of the River Minho" is born of a professional relationship at the level of scientific research in the area of Aquatic Ecology developed in the River Minho by University of Porto in the 80's. It is located in Vila Nova de Cerveira, reaching an area of 1100 m2 is constituted by a public aquarium, a fisheries museum, area for otters, library and laboratories. Opened to the public in 2005, the scientific dissemination is done using different ways: expositions, guided visits, didactic and cultural activities for students and citizens and pedagogical activities for specific groups of population (e.g. fishermen). The promotion of scientific research by Aquamuseum, in collaboration with Research Centres, allows a continuous update of the knowledge of the natural heritage of the River Minho.

Exploring marine biodiversity through inquiry with elementary school students: a successful journey?

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The skills needed for a 21st century citizen are increasingly based on critical thinking and problem solving capacities, on effective communication, collaboration, creativity and innovation. These changes involve more engaging cross-curriculum approaches emphasizing the development of different literacies, science knowledge and positive attitudes towards science, as well as an increased use of "real-life" applications, providing appealing learning contexts. In this work we present a marine ecology hands-on activity, implemented with 156 students (7-10 years old). This activity resulted from a collaboration between an institution of teachers education (IEUL) and a science centre (CCVTavira) and was integrated in a research project, «Between land and sea: a proposed integration of literacies» (PTDC/CPE-CED/117923/2010). The major goal of the project was the development of inquiry research activities, based on the exploration of marine ecosystems, mainly the intertidal zone, providing 'real-life' situations as the learning context. The activity included; i) a contextualization session in class; ii) a field trip to Ria Formosa (Algarve), consisting of sample collection and sample sorting and analysis, and iii) a consolidation session. For contextualization, students viewed a produced short video animation of two scientists responsible for monitoring the biodiversity of Ria Formosa. Students were asked to assume the scientists' role, by formulating some research questions and raising some work hypotheses. In the field trip, students sampled two different substrates, sorted the collected samples and tried to identify the different marine benthic macroinvertebrate species collected. In the consolidation session, they shared and discussed their findings. With this activity students experienced the work of a marine scientist, and had the opportunity to work cooperatively, to be involved in different phases of scientific procedure (hypothesizing, analyzing data, making conclusions based on evidence), to confront ideas, to learn some procedures for collecting data in the field and to develop reflection and critical thinking competencies.

Education and research at the littoral station of Aguda ELA, in North Portugal

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The Littoral Station of Aguda (ELA) is located on the beach of Aguda in Vila Nova de Gaia, a small fishing village 15 km south of the city of Porto. The station integrates a Fishery Museum, an Aquarium and a Department of Education and Research.
ELA belongs to the municipal firm Águas e Parque Biológico de Gaia and is linked to the Institute of Biomedical Sciences Abel Salazar (ICBAS) of the University of Porto. Opened to the public in July 1999, it has so far received more than 330 000 visitors.
The Museum gives an insight to local and global artisanal fishery, and the Aquarium displays the adjacent aquatic fauna and flora, with special emphasis on marine species of interest for the local fishery.
ELA´s environmental education programs are available for Kindergartens, primary and secondary schools, universities and the general public, covering all age groups. Regarding higher education, classes of marine biology and ecology, fishery technology, and culture of ornamental fishes are taught for under- and postgraduate students of ICBAS.
The rocky coastline next to the station, its characteristic marine species, the fishing boats and the local fish market play a significant role for education and research.
Two research projects are currently underway; one concerning the fishery, mark & recapture, and cultivation of the European lobster; and the other concerning the fishing hook in the world throughout time.
Since the beginning of the ELA project in 1989, over one hundred articles, twenty books, brochures and other information material have been published by ELA´s team.

Sea For Society – Portuguese consultations early results

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Sea for Society (SFS) has brought together a multidisciplinary partnership of 21 partners from 11 countries representing marine research institutes, funding agencies, science museums and aquaria, CSO's, NGO's, higher education institutes, business networks, to implement a MMLAP to address Specific Challenge 3: Marine Resources, inland activities and sustainable development. SFS mobilizes researchers, marine and terrestrial actors, CSO's and individual citizens and youth in a mutual learning, open dialogue and joint action to consider key questions, extract cross-cutting issues and propose challenge-driven solutions and ensure sustainable management of marine eco-system services by European citizens.
The project engages stakeholders with conflicting perspectives in a face-to-face and web-based participatory dialogue with science and research. Ten 'geographical forums' across Europe convenes economic stakeholders, environmental organizations, local authorities, the public-at-large, and youth to identify challenges and barriers of coastal and marine ecosystem services vis-à-vis societal needs.
Collective reasoning dialogues will bring about co-authored recommendations for facing up to the challenge. Key questions will be considered in the context of 'ocean ecosystem services' with an emphasis on relating complex biodiversity to 'lived experiences' in order to bridge how everyday human behavior interplays with science. Open dialogue process will lead to further empowerment of stakeholders and citizens to take action at local, national and European levels to tackle marine societal challenges.
Public Engagement in Research (PER) as it relates to European maritime policy is at the core of the process.
Sustaining the MMLAP will be important in designing the SFS mechanisms: for partnership, interaction, PER, empowerment and redressing marine societal challenges.
SFS will shape a new concept of "Blue Society" and improve the governance of research related to the oceans and seas.
In Portugal there were 2 consultations phases regarding the two kinds of audiences, citizens and youth, and stakeholders. The first's results are already available and will be presented.

Sea for Society Summer dissemination activities

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The sustainable use of marine and maritime resources is a key element of Europe Blue Growth strategy. Sea for Society is a European project aimed at developing a new vision for a society in harmony with the ocean, the Blue Society. A European Action Plan for Mobilization is under development with contributions from 28 partners in 12 countries.
Science in Summer (Ciência Viva no Verão) is a wide dissemination campaign organized since 1996 in partnership with scientific institutions and associations, museums, Ciência Viva science centers and companies, involving thousands of people across the country. The actions are free, open to everyone and lead by specialists. In the last year the program had about 35 000 participants.
This year Ciência Viva intensified the dissemination of marine science and technology in this campaign, particularly in the areas of biology, geology and engineering. These activities address topics that have been of main concern in our country, from coastal erosion to the economic growth generated by maritime activities and to the seafood consumption.
In this poster we will present the most significant activities related with the Sea for Society project and their impact within Science in Summer.

VECTORS project

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EU funded research can be extremely difficult to communicate but the results can have wide ranging outputs for a variety of audiences. An example of an EU project with extensive application potential for industry and policy is VECTORS, which is investigating the increasing and diversifying human use of the European marine environment and how this is leading to new and challenging changes for marine life and society. VECTORS is examining how these changes may affect the range of goods and services provided by the oceans, the ensuing socio-economic impacts and some of the measures that could be developed to reduce or adapt to these changes.
The EU needs scientific research to inform development and implementation of forthcoming strategies, policies and regulations, such as the EU Marine Strategy Framework Directive, the IMO Convention on Ballast Water Management and Marine Planning Directive, so communicating results to policy advisers, stakeholders and managers is essential to the successful application of project outcomes. This presentation will discuss some of the tools used to communicate VECTORS so far and the lessons learnt.
It will also discuss the citizen science campaign used in the project to generate data and increase public awareness, JellyWatch, which VECTORS has helped to fund. The campaign has been running in the Mediterranean, one of the project's case study areas, for several years and has generated a plethora of data. Jellywatch asks tourists and local beach users to report sightings of jellyfish species in order to monitor their increasing occurrence in coastal areas. While jellyfish are a natural feature of the Sea, jellyfish blooms (massive swarms of gelatinous organisms) have become a frequent sight in coastal waters and can have negative impacts for tourism, fishing and the economy as they represent a potential health risk for beach users, they can clog fishermen's nets, impact fish populations and even block the cooling systems of power plants. By collating data on jellyfish sightings and making this information available to the general public, through websites and a smartphone application, Jellywatch helps to inform local communities of potential risks that can then be avoided while gathering valuable scientific data for research.

Knowing the sea around us...The CMIA of Vila do Conde as an Important Promoter of Marine Literacy

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The Center for Environmental Monitoring and Interpretation (CMIA) of Vila do Conde is a municipal equipment with scientific and technical coordination of CIIMAR that aims to develop actions for environmental awareness and promote the construction of databases of environmental quality at the local level in order to contribute for improving the environment at a regional level.
Through the elaboration of materials that seek to create interest and environmental values on the civil society from preschool to adult age, the CMIA takes into account the needs of its visitors, as well as those of school community. Given the long maritime history and tradition of the city where it belongs, CMIA recognizes the importance of value creation aiming a better understanding of the sea's influence on the life of society and the influence of society on the sea.
Presenting a strategy based on promoting a high diversity of activities that aim to reach different audiences, the CMIA of Vila do Conde seeks to teach essential principles and fundamental concepts related to the sea, enabling their audience to communicate meaningfully about the sea and the coastal environment, creating well informed citizens capable of making responsible decisions regarding the ocean and its resources.
Among our activities we emphasize lectures with invited researchers, hands-on workshops and field trips as «Marine Biodiversity» and «Discovering the Coast», thematic exhibitions such as «There is Fishing in Vila do Conde» , «Coastal Erosion» and «Journey to the Deep Sea», among others. These resources can be requested by any institution or organized group, enhancing the range of impact of CMIA, either geographically or in the number of people educated.
Seasonally, the CMIA of Vila do Conde also operates as a Blue Center (Blue Flag European Programme) in summer, performing recreational - educational games and workshops aimed at promoting several themes related with the sea and water.
Receiving numerous interns with diverse backgrounds, from several educational institutions (professional high schools and universities), the CMIA provides to citizens beginning their careers, new skills and improvements to the knowledge of the sea and its biodiversity, through direct integration into CMIA activities.

CMIA de Matosinhos – Towards a Sustainable Future

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The Centre for Monitoring and Environmental Interpretation (CMIA) of Matosinhos operates under an agreement between the Municipality of Matosinhos and the Interdisciplinary Center of Marine and Environmental Research, University of Porto (CIIMAR) with the aim of implementing a center of scientific communication and environmental education in the area of the sea. The slogan of the centre is: "To promote, educate and meet to later learn, respect and preserve". The emblematic aim of CMIA of Matosinhos is to show the great public that the task of better meet the sea for a better management is a priority and that each of us is an actor of this administration. The message to put across is that of solidarity with future generations. The playful, teaching and dissemination character of the CMIA of Matosinhos is also assumed as essential, given the role that the ordinary citizen is reserved in the future evolution of the sea. The CMIA of Matosinhos has a very integrated character, connecting through itinerant exhibitions with a scientific approach, modern technologies of exploration and ocean research, in all its components (physical, chemical, geological and biological) as well as economic aspects and social human/environment interaction. Besides the itinerant exhibitions, the CMIA of Matosinhos interacts with schools and citizens through numerous activities involving scientific, recreational and educational outreach. The CMIA of Matosinhos is open since 2010 and since then their itinerant exhibitions were visited by more than 3200 people and over 1000 students from different schools. The CMIA of Matosinhos worked with 34 schools and in the recreational and educational activities attended 2575 students. The poster will present a summary of the activities undertaken at the CMIA of Matosinhos.

Oceans´on®: innovative approach for communication of marine science

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The Oceans´on® method has the objective of developing the individual potential of the baby and the child and a happy relationship with the Ocean, able to produce present and future actions, leading to the communication of marine science and the conservation of the marine environment. This method integrates as expressive mediators 8 characters which intertwine and work together to create emotional bonds with the ocean. Also integral part of the Oceans´on® method practice, are innovative concepts such as the 8 Waves; Blue Childhood and the Model of the Transformative Ages. The First Wave is dedicated to the exploration of critical thinking, linked to the theme Ocean Literacy. Through "Inquiry Based Learning" techniques and within a family or school context, we explore this literacy´s dimension – "Ocean Literacy means understanding the ocean's influence on you and your influence on the ocean". In this specific situation the method uses as expressive mediator Professor Oscópio, who develops real relationships with universities as a "guest professor" and where are produced specific products and services for the researchers. This specific mediator crosses the scientific method with various areas such as philosophy for children, promoting the critical thought and taking into account the individual development stage of each family member – child and caretaker. The work sequence with the different "Waves" can be chosen by the family and can vary according to their experiences and emotional condition. These session´s program covers from the birth to the 12th birthday of the child (Blue Childhood). Oceans´on® finds it´s main bases in the theories of Multiple Intelligence, Sensory Integration and Bonding. The method also follows several principles of the Modern School Movement, Waldorf Education and Coaching for Children and Youth. The designation Oceans´on® has it´s origin on the learning methodology "Hands-on Learning". In it´s goal are associated the principles of social responsibility that translate into concrete actions for the communication of marine sciences. The development of this method is linked to a spin-off of the Department of Oceanography and Fisheries of the University of the Azores, Oceanoscópio, Unip. Lda., that developed an investigation course in the area of childhood development with application in the communication of marine sciences; these days it´s current work is dedicated to the launch the trademark Oceans´on® (oceans-on.com).

Researchers and public perspectives on the effectiveness of marine science communication tools and subjects

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Science communication is often biased according to researchers' perspectives, concerning both the tools used and the scientific topics covered. In this work, we compare the views of researchers and the public on these aspects, based on the marine science communicating activities conducted by MARE. The data was collected based on questionnaires to researchers and different audiences (general public, school students and teachers). Regarding tools, formats and scientific topics, the results evidenced a mismatch between the intended objectives of science communication and the take-home-messages perceived by the general public. Nonetheless, researchers' suggestions were in part coincident with the general public's. These results outlined the need to improve strategies and plans for communicating science encompassing a better perception of public expectations and interests, but also that it will be extremely important to provide the right skills to a wider group of researchers in order to expand science dissemination.

JUMP and CRAM-Q: diving into marine science!

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The Portuguese Wildlife Society (SPVS) is an NGO formally constituted in 2003, with a strong focus in rehabilitation of marine animals, nature conservation and environmental education (EE). Responsible for the Marine Animals Rehabilitation Center of Quiaios (Figueira da Foz, Portugal) and for the implementation, along with other partners, of European projects (ex.: SafeSea and MarPro), regarding research on marine issues (e.g. impacts of fisheries on populations of cetaceans, cetaceans and marine birds monitorization), SPVS has gathered a vast knowledge and experience in these areas. SPVS has also been strengthening the development of EE activities directed to all publics but with a strong focus in schools. In 2013, two projects – JUMP and CRAM-Q – financed by Ciência Viva and in partnership with Minho and Aveiro Universities, regarding oceans and marine species rehabilitation, started to be implemented in high schools of Aveiro and Figueira da Foz, counting with the participation of 21 teachers and 805 students. Aiming to increase participants' knowledge and skills regarding marine research and conservation, as well as to promote awareness to the protection of marine ecosystems and biodiversity, both projects included several hands-on and outdoor activities. An evaluation plan was also implemented, allowing for the collection of relevant data. Most participants showed interest in the covered topics and found the activities useful for their future, also showing interest in continuing to participate in similar activities. A preference for practical and outdoor activities, for the transmission of information with scientific data and predominance of visual stimuli was shown by the majority of participants. One of the major difficulties in engaging participation was the low availability of students and teachers, especially due the long and extremely time-consuming school curricula. Adapting the activities to the specific goals of the students' curricula has proven to be a productive way to minimize this issue.

Drawing marine life: from myths to reality

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The Sea has always fascinated mankind, as evidenced by the illustrations of marine life found in the old literature. The Carta Marina (Latin for "map of the Sea"), drawn by Olaus Magnus and dating from the XVI century, is one of the many works documenting the antique myths about marine life. Indeed, in the past, the Sea was regarded by many as home to countless monsters. For this reason, marine animals often appear transfigured in appearance and dimension in the old literature. Furthermore, they are shown to exhibit characteristics typical of humans or other terrestrial animals. Several examples are found, for instance, in Icones Animalium, one of the first published books on Natural History, authored by Conrad Gesner and dating also from the XVI century. More realistic illustrations of marine life are found in more recent works, as for instance in Ernst Haeckel's book Art Forms from the Ocean, dating from the XIX century. Concerning in particular the Portuguese literature, the works of King D. Carlos, A Pesca do Atum no Algarve em 1898, dating also from the XIX century, and Augusto Nobre, Moluscos Marinhos de Portugal, dating from the XX century, exhibit remarkable illustrations of marine life. Indeed, the Scientific Illustration as a discipline that combines Art and Science was established only in the post-Renaissance period. Nowadays, effective science communication relies on appealing infographic images that not only link Art and Science but are also adapted to the target audience. Scientific illustrators, including those focused on marine life, base their work, whenever possible, on the direct observation of specimens, and always, in the complementary information available in the technical literature. Different techniques (classical and digital) are used to produce different types of scientific illustrations (descriptive, interpretative and imaginative).

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Communicating about marine discoverers as well as marine discoveries

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Marine science communication has become efficient at informing non-scientific audiences of recent discoveries and advances in knowledge about the oceans. Despite this good-quality science information, science is less and lees seen by society as being a part of culture, of which it should obviously be recognised to be a key component. Why is research now increasingly seen as a mostly utilitarian activity instead of the exciting intellectual and often philosophical quest it really is? One of the explanations of this apparent paradox in a society that is so dependent on science is that non-scientific audiences have increasingly less contacts with or information about researchers, and often have no knowledge of what scientists really do. It would seem that the more is known about science, the less is known about scientists.
There certainly is a mismatch between the increasing interest of non-scientific audiences in ocean topics and their decreasing knowledge of the research activities of marine scientists. Among other information deficiencies, non-scientific audiences generally do not know that researchers are imaginative creators, whose core activities may be seen as similar to those of artists or writers. Indeed, scientists are often considered by society as dull, overly rationale individuals, or conversely as dangerous sorcerer's apprentices. One negative consequence of this sad state of affairs is that increasingly smaller numbers of bright youngsters are attracted to scientific research, which they seldom see as the creative, inspiring, fascinating and multi-facetted activity it truly is.
Marine science communicators could contribute to resolve the problem by communicating about marine discoverers as well as marine discoveries whenever possible. This could help to bridge the widening gap between marine scientists and the public, especially young people. Such an approach would require the development of original tools and practices. Recent national and European projects have shown that when communication tools are appropriate, marine scientists participate enthusiastically in public outreach, and even dedicate significant parts of their research funds to finance professional science communication. Examples are the European Network of Excellence EUR-OCEANS (2005-2008), and the on-going initiative "Adopt a float", which is co-financed by three EU FP7 projects and a ERC Chair.

Communication triggers in marine science: the Nazaré wave example

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Science is part of almost every aspect of our lives. Consciously, or not, the understanding of science enables people to make informed decisions regarding numerous issues that affect their professional and personal agendas. However, communicate science to the public can be a challenging task: science communication demands rigorous reporting while, simultaneously, scientific knowledge should be expressed in a language comprehensible to the target audience. Additionally, it is often necessary to assure the receptivity of the audience, which may not be tuned to scientific contents. This work aims to explore the potential of communication triggers in the transference of scientific knowledge in marine science. To achieve this goal, the Nazaré wave (Norte beach, Portugal), the biggest wave ever surfed, is used as a communication trigger between the research community and high-school students. This is a very popular subject in the media and social networks that has drawn the interest of society in general. The Nazaré wave reveals to be an excellent trigger for the transfer of scientific knowledge on basic wave dynamics to the students. Additionally to the theme itself, it was found that the communication channel is also particularly important, which, in the present work, were short scientific animation videos. It was found that, when supported with the proper means, communication can go beyond the spectacularity of the theme and can constitute an additional motivation to enlarge the scientific curiosity of the audience. Results of the use of Nazaré wave as a communication trigger have been extremely positive and resulted in follow-up requests to perform additional talks on other scientific themes.

Science On a Sphere – A Global Visualization Display that is a Powerful and Intuitive Science Communication Tool.

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One of the biggest challenges with communicating science to broad audiences is to present information in a way that is intuitive, captivating and up-to-date. An added challenge for marine science communication is to relate the interconnectedness of our global ocean and the issues facing it. Over the past ten years, the U.S. National Oceanic and Atmospheric Administration (NOAA) has made significant progress in this area through Science On a Sphere(R) (SOS). SOS is a room-sized, global display system that uses computers and video projectors to display Earth systems data onto a 1.7-meter diameter sphere, analogous to a giant animated globe. This glowing globe seems to float in mid-air providing a stunning and global view of our dynamic planet. Evaluations have shown that SOS is a powerful science communication and outreach tool. We can show ocean currents, sea surface temperature, migration patterns of marine species, ocean primary productivity, impacts of human activity on our oceans and other visualizations. SOS highlights the beauty and complexity of our ocean and gives the viewer a real sense of how interconnected we are to it. This global display system is now a featured exhibit at more than 110 science centers, museums, universities, aquariums and other institutions around the world reaching more than 33 million visitors every year.
To facilitate the development of this data visualization technology and how to best use it with public audiences, we established the international SOS Users Collaborative Network. This network provides a mechanism for these institutions around the world to work together to maximize the effectiveness of the SOS system as an Earth system science communications and education platform. The SOS experience is not limited to institutions having this technology, but is readily available at your fingertips through the NOAA SOS website: http://sos.noaa.gov. This website allows users to access a library of over 450 visual datasets and movies, many of which focus on marine and ocean issues. A web-based version of SOS is in development that will allow access and manipulation of the entire catalog of visualizations. This new interface would allow users who do not have SOS to bring the experience into the classroom or their home.
We will provide an overview of SOS as a powerful tool to communicate about marine sciences and engage broad audiences, findings from evaluation reports, and the SOS Network.

"From Air to Water" a project to increase public awareness towards biodiversity using video

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The four documentaries produced under this project aimed at increasing the awareness of citizens to the importance to preserve the biodiversity and habitats of Ria de Aveiro. It is the most important wetland in northern Portugal, a Special Protection Area for Birds under the Bird Directive and an Important Conservation Area according to the Birdlife International. The videos are mainly focused on bird and invertebrate species and have around 20 minutes each. They want to show the beauty of this ecosystem and its biodiversity, the relationships between species and their habitats and some of the ecosystem services. We believe that an approach of this kind is appealing and helps to create important links with people and their will to preserve as we do not protect what we do not know.

AZTI-Tecnalia. Transfer of Knowledge to create a community of marine stakeholders

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Marine science outputs are of interest for a potentially wide range of audiences, from the professional fishermen or scientists to the regular citizens. This requires using different channels, instruments and messages specific for each public, which adds complexity to the task of communicating science and technology.
Since 2008 AZTI-Tecnalia Technology Centre is part of the FECYT (Spanish Foundation for Science and Technology) Units for Scientific Culture network. Over the years, this involvement has consolidated our commitment to allocate resources for promoting scientific dissemination addressed to the community of marine stakeholders:students, scientists, fishermen and end users of the marine and coastal space in general
Consequently an increase in the number of dissemination actions, a greater presence of AZTI-Tecnalia in events (Trade Fairs, Conferences, etc.), the development of a larger number of products for dissemination purposes (publications, news, etc.), the development of new web portals, organization of specialized events, etc. has taken. place in the last few years.
The increased diversity in dissemination channels and formats, with special emphasis on the new technologies, as well as the improved communication expertise and skills acquired by AZTI-Tecnalia's scientific researchers, have broadened the geographic scope for spreading our institution›s knowledge. Therefore, both the quantity and the quality of the messages have been enhanced.
In recent years and adapting to a constantly evolving society this Technology Center has taken a qualitative leap forward in the traditional dissemination formats. We are firmly focused on creating dissemination products in friendly formats and innovative designs through multimedia tools. They are based on images, virtual communication and interactivity with the general public over the Internet: audiovisual sequences; computer graphics and animations; introduction of the elements and functionalities that make up web 2.0 to share and exchange data, news and ideas; electronic newsletters; mobile apps.
The main challenges, pitfalls and successes of those tools will be discussed.

How can you take polar marine science to the world?

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Polar Regions are key to address major scientific issues related to Marine Science, such as climate change, ocean acidification and sea level rising. Within the last years, worldwide scientific and public communities highly beneficiated from all the research and educational programs associated to the International Polar Year 2007-09 (IPY). Today there is some IPY, Polar Weeks are an international education & outreach initiative still in full swing. Polar Weeks is a twice a year initiative promoted by the international Association of Polar Earlier Career Scientists (APECS) and the Polar Educators International (PEI). This initiative aim to stimulate the knowledge about the poles through the science that is conducted there, engaging polar scientists, educators, policy makers, the media and the public in general,
Standing out from the more than 60 countries involved in the IPY, Portugal was considered a success story. Education PROPOLAR and Profession-Polar Scientist are our most recent educational polar projects, endorsed by the Portuguese Polar Program. These programs aim to take polar scientists (including marine biologists) to schools, produce educational films (sharing mainly national scientific missions to polar regions), polar exhibitions, among others.
Together, all these initiatives carried out at the national level, and coordinated internationally, have gathered 23 scientists. In two years of work we visited more than 88 schools, from the basic to the secondary levels, and reached more than 16000 students of all ages in Portugal alone.
In this presentation we will show on the value of polar science to address world marine science issues, and focus on some examples of national and international successful activities carried out since 2007. Finally, we will provide guidance on how to convey simple marine science concepts to wider audiences.

Peeling shrimp and oral history

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The Flanders Marine Institute (VLIZ), maritime author Katrien Vervaele and the Centre for Agrarian History (CAG) set up a project on oral history and the transmission of intangible marine cultural heritage about brown shrimp (*Crangon crangon*), a local seafood product with a long gastronomic heritage in Belgium.
The project fits in with the book «Garnalen – Verhalen en recepten van vroeger en nu" (Shrimp - previous and recent stories and recipes), published in 2012 (www.lannoo.be/garnalen). The authors - Katrien Vervaele and Nancy Fockedey (VLIZ) - discovered that young people barely know the taste of freshly peeled brown shrimp and lack the skills of peeling.
Some hundred children (9-10 year old) and elderly people (living in four senior care centres at the Belgian coast) met each other in November 2013. The seniors learned the children how to peel the shrimp and meanwhile they told about the shrimp fishing, processing and gastronomy in their old days. Next to learning to know the skill, the youngsters (re)discovered the taste of freshly peeled shrimp. Meanwhile the seniors told about their old days: oral history stories of how fishing and processing of, and cooking with brown shrimp evolved over the period of some generations. Within the same activity, the children learned about oral history and oral knowledge transfer. They were confronted with their recent history.
The children were prepared in class with an educational kit with information about the biology, context and history of the shrimp. CAG, specialised in oral history and intangible cultural heritage of agriculture and food, gave expert advice and basic tips on oral history interviews (www.katrienvervaele.be/garnalenverhalen.html).
During the activity in the senior day centres, the organizers noticed that the role of the supervisor at each table was crucial, since the children of this age experienced some difficulties to get the conversation going. The reactions of both sides, children and seniors, were heart warming positive. The success of the activity prompted the organizers to share their experiences and to inspire other schools and senior care centres to organize this activity.
For more information, see: www.vliz.be/en/peeling-shrimp-and-oral-history.

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Pel grijze garnalen en proef de verhalen. Het Virtuele Land - CAG (www.hetvirtueleland.be)

Feel the Ocean Project – marriage of arts and ocean science in the data-mining era

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This paper is to present an idea of future project "Feel the Ocean", while still a concept level at present, on application of global ocean observation data sets to benefit science communication. With increasing societal demand on better understanding of mechanism of global change and its effects on sustainability of marine ecosystem services, ocean science is now facing the era of mass data mining as in the various industry and business sectors. Physical, chemical and biological monitoring data over the world oceans are being collected day by day using various tools such as satellite remote sensing, autonomous buoy and float, and shipboard observation under individual observation projects and/or initiative of global ocean observation systems. Many of those data sets are shared for free to public for scientific and academic use. As all the data, that contain both spatial and temporal information, can be reduced into numbers and transformed into other signals, such as color, sound, pressure, smell and taste, those signals could be treasure resources for creativity. We will seek the ways to use these signals to create art work, music and installations not only for the original scientific purposes and outreach, e.g. to detect of climatic signals in ocean environments, paradigm shift of ocean biogeochemical cycles, and spatio-temporal variation of plankton biodiversity in a more integrated and/or multi-dimensional way compare to the conventional visualization techniques, but also to inspire and enlighten communities outside academia on pivotal role of ocean to human society. The tools to be developed would also enable people with sensory deficiencies to listen "sound" of global warming without seeing and feel "touch" of whale singing without hearing. This project will yet be possible only through a close collaboration among ocean scientists, technician and artists of various areas, and we hope to find collaborators in interest to make it happen.

Pessoa Não-Humana / Non-Human Person

Pedro Fernandes (Instituto de Ciências Sociais, Universidade de Lisboa)
Filipe Mayer Reis (Camberwell College of Art, University of the Arts London)

Non-Human Person is a project of marine science communication through art that celebrates the research of Hof and Gucht of 2007 that identified the presence of spindle cells in the brains humpback whales, responsible in humans for the capacity to love and deep emotion.
Based on this and other related research, the Declaration of Rights for Cetaceans was created in 2010 by the Helsinki Group, which recognises cetaceans as non-human persons with the right to life, that cannot be forced to captivity, cannot be subject to cruel treatment, or be removed from their natural environment.
The result of this project was the sculpture "Non-Human Person", a humpback whale that erupts out of the ground doing the characteristic surface behaviour "breach", which contains in its interior a naive heart that symbolizes its emotions.
By discovering the emotional heart that hides in the interior of the sculpture, the observer is challenged to have the same experience as the researchers had when they discovered love in the brains of the whales.
This project was born from a partnership between science and art, where several public engagement techniques were explored, and that was exhibited in a public place by the beach of Estoril as part of an art competition, for which it won the public award.

IMSCC 2014 1st International Marine Science Communication Conference

Porto, 8-9 September 2014
Hotel Ipanema Porto

Day 1 | 8 September 2014

Workshop 1 - Engaging the Public: How to do it?
Chair: Ana Noronha

Ana Noronha is Executive Director of Ciência Viva. She obtained her PhD in Physics (Non-Linear Dynamics) in 1987. She developed research in this field until 1997 and co-authored several publications in peer reviewed international journals and books for undergraduate education in Physics. In 1997 she joined the Ciência Viva team.

Speakers

Ivvet Modinou | Science Communication Manager at the Natural History Museum of London

She joined the Natural History Museum in 2004 and her team of Science Communicators bring together scientists and visitors to explore, discover and discuss the natural world through flagship programmes such as Nature Live. She has led on developing a numbers of innovative formats for scientists to communicate their work within a Museum environment and she also leads on training and coaching scientists in how to best to communicate to different audiences.

Engaging Science in Museums

Ivvet Modinou will discuss some of the strategies museums can use to engage visitors with ocean science. She will advocate that the most successful forms of engagement often embed scientists in the creative content development process. She will focus on the work her team at the Museum do to engage scientists in public engagement, making sure their science is accessible without compromising on its integrity.

Patricia Filipe | Education and Communication Manager - Oceanário de Lisboa

Patricia's passion for marine biodiversity and the oceans led her to study biology and to start her professional life at the Institute of Marine Sciences in Barcelona (Spain) where she integrated several oceanographic campaigns, including an expedition in Antarctica. Since Patricia invested in a career dedicated to ocean knowledge, science communication and education conservation. Her experience in environmental education, public relations, leisure and entertainment has established for over 15 years as education officer at the Oceanário. She post graduated in Education Conservation by the American Zoo and Aquarium Association, in Leadership by the Catholic University of Lisbon and in Marketing Communications by the Kellogg School of Management. She is head of Education and Communication at the aquarium since 2009.

Engaging the public – How to do it? @Oceanário de Lisboa

Communication professionals are nowadays designing content curatorship plans in order to increase exhibitions awareness and its related education projects and campaigns. In this new media and communications age, content is leading the way. The main challenge is to respond to target audience different levels of interest, to adapt the speech to different communication channels and to follow the social trends. For that it is determinant to select relevant subject matter within projects, to extensively edit information, to establish institutional partnerships which strengthen key messages and integrate the communications mix wisely. Contents are now, more than ever, vital for our brands. We need to be exposed to accomplish our conservation mission and for that we have to become intelligently social, to develop and promote ongoing dialogue with our visitors, trying to keep connected to our audiences at all times. This new paradigm implies that continuously new content must be generated, in order to feed this need to communicate, to be social or to be relevant. Aiming to engage and involve audiences through the story of our products, communications is seen as content factory working closely with the teams of exhibition design, biology and education. Our institution constitute itself as a window of stories that should promote "engagement" with the public, with ability to gain new customers, their loyalty and, through them, amplifying market penetration. In this sense, communication professionals should seek to raise reports, stories, images, testimonials, in short, all the information that may be available allowing us to built distinctive and unique positioning, enhancing projects and bringing maximum return over the business investment to accomplish its mission.
Three communication cases will be presented, targeting the general public, the media and decision makers: 1 - The temporary exhibition "Sea turtles The journey."; 2 – Communication project "Voxmar"; and 3- Mapa "Portugal é Mar".

Catarina Gonçalves | Blue Flag National Operator

Catarina Gonçalves is currently National Coordinator of the Blue Flag Programme (BFP) at the Blue Flag Association of Europe, ABAE, representative of the FEE (Foundation for the Environmental Education). While training in environmental education, she has taught and continues to collaborate with various institutions in the enrichment of public health specialization courses, Maritime Authority and Environmental Education.

Education creates positive change for all

How we do it? The Blue Flag way!
The Blue Flag is a voluntary eco-label awarded to more than 4000 beaches and marinas in 48 countries across the world. The Blue Flag works towards sustainable development of beaches and marinas through strict criteria dealing with Water Quality, Environmental Education and Information, Environmental Management, and Safety and Other Services. Is owned and run by the non-government, non-profit organization the Foundation for Environmental Education FEE promotes sustainable development through environmental education worldwide. FEE's vision is a sustainable world in which education creates positive change for all.
With nearly 30 years of environmental education and raising awareness experience, Blue Flag Programme can share his successful approach that implies the engagement of all participants: beach and marina users, decision makers, managers, media and general public working together in collaborative solutions in their communities making cultural practices as an integral part of sustainable issues. The changing of behavior and attitudes concerning bathing areas and marine environment is not easy and immediate, it requires taking informed decisions, planning, the sharing of innovative approaches, developing critical thinking and continuous improvements. How we do it? The Blue Flag way!

Day 1 | 8 September 2014

Workshop 2 - Community Learning: Are you in?

Chair: Ana Paula Mucha

Ana Paula Mucha is a CIIMAR researcher since 2005 and has published about 40 articles on contamination and coastal ecosystem recovery. She is also the Scientific Coordinator of the CMIA de Vila do Conde since 2013, coordinating various exhibitions and collaborating with different CIIMAR outreach initiatives.

Speakers

Emilio Fernández Suarez | Director of Campus do Mar, Vigo, Spain

Emilio Fernández received a degree and later a PhD in Biology from the University of Oviedo. He was a post-doctoral research fellow at Plymouth Marine Laboratory (UK) and the Rosenstiel School for Marine and Atmospheric Sciences of the University of Miami from 1991 to 1993 and at the Institute for Marine Research of the Spanish Research Council (CSIC) from 1993 to 1994. He took a position as lecturer of Marine Ecology at the Faculty of Marine Science of the University of Vigo in 1995. Since 2011, he is full professor of Marine Ecology at the same university. His research has been focused on the study of biologically-mediated fluxes of matter and energy in marine systems in relation to environmental changes. At present, he is interested in the assessment of the functional response of coastal ecosystems to inputs of organic and inorganic matter in the context of global change. Principal scientist of 16 research projects funded by regional, national and European agencies. His scientific record is summarized in more than 100 scientific papers published in indexed international journals. He was the Spanish representative in SCOR from 1999-2005 as well as member of the Spanish Marine Science IGBP committee (2001-2005), JGOFS North Atlantic Synthesis and Modelling Group (2000-2004) and SOLAS Programme (2000-2005). Co-chair of the ASLO meeting held in Santiago de Compostela in June 2005. From 2005 to 2009 he was General Director of Sustainable Development of the Regional Government of Galicia. Since 2010 he is the Director of the International Campus of Excellence in marine sciences leaded by the University of Vigo and is currently the manager of the Spanish National Plan for Marine Science and Technology. All along his professional career he has been actively involved in the dissemination of environmental and marine scientific knowledge.

Social awareness and scientific culture at Campus do Mar

"Campus do Mar" is an aggregation of Spanish and Portuguese Universities as well as Research Institutions strongly focussed on marine research and teaching. The objectives of this network of marine-related institutions are i) to train and prepare the best professionals and researchers in the field of Ocean Science and Technology, ii) to generate high quality research and international impact and iii) to provide the industry with the most effective tools to improve competitiveness at a global scale. One of the four strategic axis of "Campus do Mar" is focussed on social awareness and scientific culture, an axis aimed at placing the Campus do Mar brand within the constellation of marine institutions at the international level and transferring the knowledge generated by the R&D aggregation to the general public. The Campus do Mar public outreach programme is organized into five main projects: communicating science for scientists, dissemination within research projects, generation of "marine spirit" among the Campus community, approaching the oceans to young students and outreach and public engagement. In this presentation, a summary of the actions carried out over the past two years is shown and the main barriers and weaknesses of the adopted approach are discussed.

Guy Baker | Communications Officer at the Marine Biological Association

I manage how the MBA is perceived to external audiences through liaison with academic staff, media relations, social media interactions and branding. I am editor of The Marine Biologist, a new, bi-annual magazine for MBA members and anyone with an interest in life in the sea. I write funding bids for educational projects, manage a community outreach project bluesound and assist with delivery of other MBA education projects. I have editorial responsibility for the MBA web site.

Blue Sound: A journey to reconnect communities with the natural environment

My talk is about a marine community outreach project run by the Marine Biological Association, and about what we learned through running it.
I want to talk about what we did to engage with audiences that are socially excluded, in contrast to more traditional science communication approaches that are successful in schools and at science fairs or museums.
So, I'd like to try and give an overview of our journey over the last 4-and-a-half years, a look at some of our successes and challenges, and share some of our learning.

Day 2 | 9 September 2014
Oral Communications
Chair: Jan Seys

Social media for scientists: the twitter jitters

Murray, H.
Plymouth Marine Laboratory (PML), UK

This presentation will tackle the challenge of engaging more scientists with social media.
The talk will be aimed specifically at marine science communicators and scientists but is also highly relevant for science journalists, marine educators, PhD students, early career scientists and international scientific media. It will share some of our knowledge and experiences from using social media for communicating marine science at Plymouth Marine Laboratory (PML). The main focus of the talk will be to address the why there is still a lack of engagement between some scientists and social media, speculating on some of the reasons why many scientists have been hesitant to utilise social media as a dissemination tool for their research.
The presentation will also outline the potential of social media for marine science communication, as well as the opportunities it can open up. It will emphasise the huge value of using these channels for science communication; in terms of measuring impact, citation numbers, paper downloads, career development, global collaboration, targeting messages, breaking down stereotypes and profile raising of individuals, organisations and issues facing the marine environment. The talk will conclude with hints and tips for effective use of social media for science and open up discussions on the future horizon of scientific communication in a world where digital communication is prevalent.
Positive examples of communications projects which use social media for scientific dissemination will be demonstrated (such as 'The Marine Ripple Effect' which is administered by PML on behalf of the UK Marine Science Co-ordination Committee, MSCC). The talk will furthermore illustrate some ways in which PML use social media effectively for marine science communication, giving advice on how scientists and science communicators can set up a more efficient dialogue with journalists, decision-makers, and the general public/non-traditional audiences.

Oceanblogs.org – Kiel marine sciences blogging resource

Steffen, J.[1] & Urban, C.[2]
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Kiel is a well known location for marine sciences in Germany and the one with the longest tradition. Kiel University, the GEOMAR Helmholtz Centre for Ocean Research Kiel and the Institute for the World Economy have established an interdisciplinary approach to marine research here that focuses on natural sciences as well as on legal, economical and social aspects of the oceans. Public outreach is an integral part of this Kiel-based research network and alongside classical PR activities, the Web 2.0 is also targeted by Kiel University›s Cluster of Excellence «The Future Ocean» and GEOMAR. In 2013 their press teams launched the joint blog portal «Oceanblogs.org» (www.oceanblogs.org), that aggregates and communicates the broad spectrum of marine sciences happening in Kiel, hence making it known to a greater public and also boosting digital communication on a peer-to-peer level. On Oceanblogs marine scientists write about their projects and expeditions, discuss scientific questions and also get in touch with the public. Oceanblogs is open to anyone involved in or wishing to cooperate with Kiel marine sciences. Every user is invited to comment on content and/or pose scientific questions.
In less than a year's time, Oceanblogs has managed to accumulate different projects, expedition teams and scientists accounting for a total of 21 individual blogs on Oceanblogs. Until June 2014, a total of about 250 posts have been published, averaging 750 site visits per day. Oceanblogs content is also multiplied via social media like Twitter and Facebook. Initial skepticism among some scientists is now giving way to a growing acceptance of online activities in general and particularly Oceanblogs as an increasingly well reputed resource for marine science communication. In addition, Oceanblogs also supports other major campaigns run by Future Ocean and GEOMAR: For example, the marine science exhibition «Future Ocean Dialogue» (www.futureocean.org/futureoceandialogue), which recently opened to the public, is also featured on Oceanblogs (http://www.oceanblogs.org/futureoceandialogue/), offering an online dialogue between exhibition visitors and scientists in Kiel.

An online logbook to share marine knowledge: the case of the scientific expedition of the CNR Urania vessel along the Adriatic sea

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Public communication of science and technology (PCST) is an integral part of the mission of the Italian National Research Council (CNR), which is deeply involved in investigating on. innovative and inclusive communication approaches.
The logbook, drawn up by responsible during scientific expeditions, is a very peculiar form of written communication. It refers to research activities closely confined in space and time, which often imply collaboration among various competences, not only scientific but also technical, technological, operational and managerial. In particular, in oceanographic expeditions, the logbook is written by the scientific or logistical shipping responsible, who reports activities, procedures, tools, data and other useful information able to document the ways in which the scientific expedition is held, its objectives and results.
The journal is a less technical and more personal form to communicate the achievements during a scientific expedition. In CNR it has been sometimes used as a way of popularizing science: the Base Dirigibile Italia diary is a good example of that, having a remarkable success and being followed by a number of people. Other journals, drawn up daily by scientific personnel during research expeditions, have been shared on the web by means of blogs and social networks.
In this presentation we describe a special edition of logbook tested within a scientific expedition on the CNR research vessel Urania along the Adriatic sea that introduces some innovative components to the tradition of journal writing.
In particular, we refer to the use of tools and channels typical of Web 2.0, characterized by a high level of interaction between user and application. They are used in the journal for producing a narrative of the expedition, where many actors, both on board and ashore, blending their voices produce and share new knowledge. The web 2.0 technologies lend themselves to accomplish this task through a participatory approach to content creation, a strong multimedia vocation, and a communication model typical bi-and multi-directional. The journal we present aims at engaging in the activity not only the researchers on board, but also their colleagues at work and amateurs at home or surfing the net, creating a wide brainstorming around the marine environment themes, and calling attention on environmental issues in the Adriatic.
The appearance of the journal is atypical: The main interface uses a web map to visually describe the legs and the stops of the expedition, and let people enrich it with various multimedia contents, eventually linked each other: technical reports, relief measures, personal records relating to life on board, but also images, audio, video, radio links, comments from interested individuals and institutions, on board and ashore. This interaction enriches the diary of the expedition, facilitating the involvement of citizens in the research and uniting supporters and scientists around the common interest in the marine and coastal environment.
Other interfaces are then provided to facilitate the consultation of reports, by filtering for their content, category, and by ordering them in space and time.
Moreover administration tools allows to monitor and validate the submitted contributions, ensuring a selection of reports according to the criterion of the relevance and correctness.
The introduction of these innovative components on the Urania logbook have at least four consequences:
• facilitates the overall involvement of researchers participating in the mission as a group and not just as individuals;
• stimulates the use by the scientific community involved, of a more informal and less self-referential narrative language, in order to facilitate the comprehension both by experts and non-expert;
• allows to share the research carried out on board with other surfers of the Internet, which can also add comments or submit original contributions starting from the research topics;
• produces new knowledge mixing different types and sources of information and communication, on board, at home, online and also different disciplines (not only science, but also literature and other forms of art).

The Value of Photography as a Tool for Marine Science Outreach

Shepard, C.
University of Miami Shark Research Program

Photography can be a highly valuable communication tool for marine science outreach. Over the past four years, I have worked to build and grow the outreach initiative of the University of Miami Shark Research Program, with photography as a key component. The Program's mission is to advance ocean conservation and scientific literacy by conducting cutting edge scientific research and providing innovative and meaningful outreach opportunities for students through exhilarating hands-on research and virtual learning experiences in marine biology.

One of the most unique aspects of the UM Shark Research Program is that we bring over 1000 high school students onboard each year as citizen scientists to help with the research and have a participatory learning experience. The transformative power this experience can have is remarkable, both for students' conservation ethic and their career goals. Visually capturing this process, as well as the marine research in action, has been extremely successful. To assist with covering all the trips, I recruited and trained multiple photography interns each year. We post highlights from each trip on our social media networks (Facebook.com/SharkTagging, Twitter.com/rj_dunlap and RJD.Miami.edu/Blog), integrate them throughout our visually driven, interactive website (SharkTagging.com), and provide them in high resolution to the trip participants. This way, the learning process does not end on the boat. Participants can go home and share their new knowledge and strengthened conservation ethic with family, friends and peers. Each Facebook photo album not only shares the excitement students have when they see and touch their first shark, but also outlines the research process and ongoing projects with imagery and detailed captions. Thus, our worldwide network of supporters is continually reengaged in our research and outreach.

Utilizing photography as a communication and outreach tool in a marine science lab has the power to clarify the lab's research methods and goals for viewers, improve overall scientific literacy, deepen viewers' connection and conservation ethic for the ocean, inspire careers in STEM, and even generate interest for potential funding. I believe that our team at the University of Miami's Shark Research Program has pioneered an effective and potentially replicable research and outreach model for marine science with photography as a primary component.

Pechakucha presentations
Chair: Miguel Santos

Successful communication of marine sciences via YouTube – Challenges, opportunities, and strategic options

Gerdes, A.
MARUM – Center for Marine Environmental Sciences, University of Bremen, Germany

In 2007 the Deutsche Forschungsgemeinschaft (DGF), the major German science funding agency, invited MARUM, along with nine other German scientific institutes, to take part in a pilot phase of "DFG Science TV". The aim of this project was to produce short video documentaries. It included a training course covering story-telling, camera techniques, editing, and post-production. From MARUM an early career scientist and a science communicator took part and, under the title "The Blue Wonder", produced ten documentaries mainly featuring the work of early career scientists at MARUM.
"DFG Science TV" was the starting point for MARUM`s activities on YouTube, which began as early as April 16th, 2008. To date, 99 documentaries and animated videos have been produced. These videos, in part bilingual, have become an outstanding marketing tool to improve communication with TV and online media due to high numbers of views. They can be viewed at: www.youtube.com/user/marumTV.
According to our experience, certain key factors are of crucial importance in successfully implementing YouTube as an effective option within the set of potential communication activities. On the one hand, internal communication plays an important role (involvement of the administration; guidance of early career scientists as protagonists etc.). On the other hand, networking with potential partners (TV stations, TV production companies, museums and online media) can speed things up. The identification of a unique selling point (e.g. special deep-sea footage) can help to establish this communication channel.
Based on more than six years of experience, this presentation will cover the following aspects/questions:

- Applying YouTube: What kinds of hardware and software are needed?
- The role of internal communication: How to convince your colleagues?
- Cooperating with (inter)national TV production companies and museums: How to use YouTube to address specific target audiences?
- How to acquire major online media as strategic partners?
- Evaluation and feedback: lessons learnt
- A comparison: How do leading international marine science institutes use YouTube?
- The relevance and role of YouTube in marine science communication

"Open Ocean": MARE's marine science communication plan

Cabral, H., França, S., Sequeira, V., Tanner, S., Fonseca, V., Reis dos Santos, P., Vasconcelos, R. Chainho, P., Pais, M., Teixeira, C., Melo, R., Ferreira, A., Chaves, L., Assis, C., Brito, A., Caçador, M., Urban, C., Costa, J., Amorim, A. & Lacerda, F.

MARE, Marine and Environmental Sciences Centre, Faculdade de Ciências da Universidade de Lisboa, Campo Grande, 1749-016 Lisboa, Portugal

MARE is a recently created scientific research unit that resulted from the merging of former units with a long tradition in science communication. Based on that experience MARE developed a marine science communication plan called "Open Ocean". This plan involves several tools used in a wide diversity of contexts and directed to different audiences, namely school students and teachers, media, and general public. In this work a SWOT analysis of the use of these different tools in communicating science was done and the results discussed, including benefits and costs for research units.

“Mon océan & moi”: an outreach program with an important “remote” communication component

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Ocean Sciences include fundamental and applied research, cutting-edge technology and there is no doubt that ocean scientists have one of the most interesting jobs and countless stories to tell. Ocean Sciences also include approaches to major societal concerns and the need to disseminate becomes more and more evident.
Today, scientists often work together with marine science facilitators. Such teamwork not only helps to guarantee high-level communication on a variety of ocean topics but also to overcome recurrent problems such as lack in time, money and specific outreach training or experience.
The design of adapted outreach activities of course also implies the selection of adapted means of communication and in many cases a multi-way reach out may be the most appropriate strategy.
This certainly is true for the “mon océan & moi” program which focuses however on an online dissemination. With the main objective to disseminate Ocean Sciences to a non-scientific public, its Internet portal allows to specifically address young people. Web-pages propose topics and activities that can be used in formal and informal education.
The “adopt a float” initiative for example is based on the idea that school classes adopt an undersea robot and follow it during its voyage. Scientists share the acquired real-time data via an interactive map allowing the students to learn how to interpret data and to develop a better understanding of marine environments.
Using Internet as communication media and as a tool to report and follow the “adopt a float” communities activities is an undeniable asset. It also favours the participatory, modular and multi-disciplinary approach of the “mon océan & moi” program.
Having in mind the multiple advantages of Internet tools, one should be aware that such a “remote” communication cannot substitute direct contact and exchanges with the public. A fact that the “mon océan & moi” team, including the PHD students that are trained in outreach matters, drives to propose a number of “face to face” activities. The public’s feedback is not only rewarding but also gives a chance to rhythm upcoming outreach propositions.

Poster presentations

Planktonbook: a guide to the microbial plankton diversity in the Ría de Vigo

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Planktonbook is an open access facebook page that aims to show to the general public the amazing diversity of marine microbial plankton communities. The microbial plankton (including phytoplankton and the smallest-size zooplankton) are the organisms in the basis of aquatic food webs and directly involved in the biogeochemical cycles of major elements. These organisms have extremely diverse morphological shapes and complex behaviors that make them worthy of being seen despite being invisible to the human eye.
The information provided on Planktonbook consists on the publication of 1 or 2 posts per week. These posts include photos and videos of microbial plankton with an accompanying text providing some degree of scientific information. Because our target is the general public, these accompanying texts are intended to be short and connect with the normal life. Texts are presented simultaneously in two languages: English and Spanish.
Photos and videos are the result of Distral project deliverables, which include the analysis under the microscope of 290 seawater samples with the aim of increasing our knowledge on the biological richness of microbial plankton communities in the Ría de Vigo. Distral project (CTM2011-25035), funded by the Spanish Ministry of Economy and Competitiveness, has as partners the University of Vigo and the CSIC institutes: Instituto de Investigaciones Marinas (IIM) and Instituto de Ciencias del Mar (ICM). Additional material resulting from other research projects will be included to give continuation to this page once Distral project ends up in December 2014.
Since its creation on February 14th 2014, Planktonbook has increased in visibility at a rate of 2 "likes" per day, being followed at this time by almost 300 people. About 60% of the followers are Spanish, 10% Portuguese, 10% from UK and USA, with the remaining 20% belonging to various countries worldwide in Europe (eg. Italy, France, Germany), America (eg.Mexico, Brasil, Chile), Africa (eg.South Africa, Egypt), Asia (eg.Malasia, Thailand, South Korea) and Oceania (Australia).

Experiments in Autonomous Robotic Systems: Tracking *Mola mola*: A Case Study in Outreach and Education

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During the month of May 2014 a team from the LSTS – Laboratório de Sistemas e Tecnologia Subaquática, from Faculdade de Engenharia da Universidade do Porto led an innovative and ambitious experiment that brought researchers from Portugal, United States, Spain and Norway in a joint inter-disciplinary science and engineering effort, targeting marine science. The experiment was conducted off the coast of the Algarve near Olhão.
Autonomous aerial, surface and underwater vehicles tracked tagged Ocean Sunfish (Mola mola), the world's largest bony fish, with the objective of obtaining data from the robots to provide new insights on the habits of these fish. In doing so researchers hope to understand the environmental context in which the fish operate and gain a better insight about their behavior in space and time. Robots provided measurements of the water mass around individually tagged fish and discretely track them as they moved within the upper water column.
An early aim of the experiment was to disseminate results and generate interest among a broader public than the usual academic and research audience.
However, reaching the general public can sometimes be difficult due to lack of interest and the lack of deeper understanding of the importance of such initiative. So how could we reach a new audience and at the same time captivate their interest for engineering and biology?
The solution was to focus on a specific audience of young students more prone to learning in new ways with the hope that they would be influenced to more likely follow a career in marine science or engineering.
With a few guidelines given by different institutions, experienced in working with young students, the initial options were discussed and an educational plan defined, keeping in mind our lack of experience, low number of resources and people.
To better execute this plan, all activities were defined in a way that could establish a real connections between what students were learning at their science classes and what was happening in the real field experiment. An 8th grade class from Escola Secundária José Régio, at Vila do Conde was invited to participate in this projects and as it was not feasible to take the students to the field with us, Internet became a strong ally.
Daily blog updates, and a video conference with researcher at Olhão were an effective way to keep the audience interested between the live interactions at school.

In the end, the strong relation between what is taught at science classes and the activities defined coupled with the right audience turned out to be the key to the success of this outreach plan.
However, there were also some unexpected aspects. The data gathered was not easy for student to interpret which led to one last incomplete activity, but, surprisingly, the students came up with a more rewarding activity. Since this school was the center of a fishing community, the enthusiasm was enough for one student to bring to school a dead Mola mola, caught by a relative. With the help of biologists in this experiment, the fish was dissected in the classroom, a first for a science class.

In this paper we will use our experience as a case study in reaching the young audience here in Portugal as a viable blueprint in engagement especially in the nation's rich maritime history.

Predicting the health of marine ecosystems

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Marine ecosystems are not only rich and biodiverse, they also provide us with crucial goods and services – in a changing world it is crucial that we can predict their future health.
The OPEC (Operational Ecology) project is developing ecosystem forecast tools to help assess and manage the risks posed by human activities on the marine environment, helping to improve the ability to predict the "health" of European marine ecosystems. OPEC has developed a web-based visualisation system to share and deliver data in a form that allows for rapid interpretation at a regional scale to support policy implementation and environmental management; this is the OPEC Portal. OPEC has generated a huge resource of ecosystem model-generated data including both long timescale, providing a look back in time (hindcasts) and Rapid Environmental Assessments (REA) that provide a snapshot of the preceding year.
Such large amounts of data have previously been hard to visualise and work with without sophisticated tools. Most current web based portals are fairly simplistic and with a few exceptions, do not provide many analysis tools. The user interface to these scientific portals is often unfriendly and not as polished as those that exist in the commercial world.
Now the OPEC Data Portal addresses these problems by delivering products in a form which is simple to visualise and manipulate without requiring locally installed specialist tools. The user community, for such data is diverse and growing: the challenge has been to make the portal accessible by less specialist users while still providing powerful analysis tools.
Open standards were chosen to encourage both reuse of the technology and easy integration of compliant data sources, so potentially widening its scope and accessibility. A key element is that much of the visualisation has been implemented within the web front end to try and minimise the amount of data transfer between the web browser and portal. This has been made possible by the exploitation of a number of cutting edge JavaScript technologies, for instance the D3 dynamic visualisation library.
So, for the first time this complex data has been assimilated into an easy-to-use system that allows even the non-specialist to interrogate it for information about specific sea areas, ecological indicators and time periods. Users can build in a range of potential future scenarios to provide a powerful tool for those that make decisions about managing the marine environment.

Communicating global environmental changes effects on marine and coastal environments through an online digital gamebook

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Center of Natural Sciences and Humanities, Federal University of ABC

The scientific concept of 'Global Environmental Changes' is very difficult for the majority of the population. Therefore, there is a tendency to understand it as an abstract problem, distant in time and dislodged in space, even more when we consider marine and coastal ecosystems and their biodiversity, also distant of people's every day. Thus, educational games can constitute a powerful tool in this scientific information diffusion process, adapted to the general public and enabling the apprehension and comprehension of information, besides the direct and experiential interaction of the learner with the knowledge and, finally, the extension of all of this to a behavior change and promotion of actions that aim the improvement of socio-environmental quality. Nowadays, we have to our advantage the fact that there is a global tendency for what we can call a "knowledge society", in which internet is radically altering the way that knowledge is constructed, represented and accessed. People become more and more active agents of the process of constructing their knowledge and, because of that, the use of information technologies in formal and informal educational spaces is fundamental. People of several ages play virtual games on a daily basis and are motivated when these tools are used at learning situations. In this context, a gamebook was developed, aiming at addressing the issue of global environmental changes and their effects on marine and coastal ecosystems. Gamebooks are an interesting tool because they allow the reader to participate in the story by making effective choices, since the narrative branches along various possible paths (indicated by numbered paragraphs), which can be chosen by the player/reader.The scenario of the gamebook is a tropical coastal fictitious city called Apicum. The story revolves around the fact that the city has been showing some strange circumstances. For example, the citizens are suffering with high intensities of raining and high average temperatures. The main character of the story will have the task to investigate the causes of these climatic phenomena in the city and also what is happening with the organisms in the coral reef near the coast of Apicum as well. The presence of challenges, elements of fantasy, novelty and complexity in the gamebook can stimulate students curiosity, creativity and the development of critical thinking though discovery and problem solving. The gamebook is available at http://professor.ufabc.edu.br/~natalia.lopes/jogosmarinhos/index.php/material-de-apoio-2/16-livro-jogo.

SEALIFE

Ferreira, R. & Ferreira, A.

About Turtles:

Did you know?

All turtles lay their eggs on land. Once a male sea turtle hatches it will probably never come ashore again. Green Sea Turtle's can swim around 1,400 miles between feeding and nesting grounds every year! The Green Sea Turtle can stay under water for over five hours! Sea turtles may lay between 100 and 200 eggs each time they nest, however nearly all species are on the endangered list.

They don't have ears but can identify low frequency sounds and vibrations which help to detect predators. Green Turtles don't have teeth but some have sharp beak like mouths for crushing or tearing food. The biggest sea turtle is the Leatherback, growing up to 2 meters long and weighing 680kg!

Day 2 | 9 September 2014

Workshop 1 - 10 Tips to talk to the media: Addressing journalists in a changing world
Chair: Albert Gerdes

Albert Gerdes started his career as a free-lancer working for public German radio and TV and major popular science magazines. In 1997 he joined MARUM, the Center for Marine Environmental Sciences at the University of Bremen, Germany. Based on his expertise in film-making Gerdes initiated the MARUM TV YouTube channel and has been co-operating with major German museums where a number of exhibitions on marine research were installed during the last couple of years.

Speakers

António Granado | Science journalist and professor at Universidade Nova de Lisboa

António Granado is an assistant professor of Journalism at Universidade Nova de Lisboa, where he coordinates the Master's in Journalism and the Master's in Science Communication. He has worked as a journalist at Publico, a daily quality newspaper, and more recently at RTP, the Portuguese public broadcaster, as a multimedia editor. As a journalist, he has written extensively about science and the environment. He is the author of Ponto Media, an influential weblog on media issues in Portuguese.

The presentation will concentrate on the different perceptions scientists and journalists have of some words. These perceptions trigger, sometimes, some animosity towards one another. The words are:

Time (months v. hours)
Public (specialized v. general)
Language (specific v. normal)
Writing Structure (normal v. inverted pyramid)
Impact (restrict/very slow v. big/immediate)
Information control (peer review v. constraints)

Luis Henrique Pereira | Journalist, Wildlife Film Maker

I´m a professional naturalist, wildlife filmmaker, licensed in journalism, communication, human and social sciences, author and wildlife broadcaster. I work on the Portuguese Public TV Station (RTP). My program -"Vida animal em Portugal e no mundo" - was the first wildlife program series with Portuguese production in all history of television in Portugal, in all Portuguese tv stations. I have more than a decade dedicated to wildlife documentaries and short documentaries in Portugal and in the other places in the world, like Peru, Colombia, Brazil, Spain, Cape Verde, Azores (Portugal), S. Tomé e Príncipe. These are only some examples.

Wildlife in documentary / Field techniques and strategies

Like other ones he has done in universities, institutes, schools and diverse institutions, this lecture is based on a scientific and academic research project that took two years to prepare. It combines the author's experience and his international training in this area in particular, as well as a deep approach toward a series of authors and documentary filmmakers on wildlife, their advice, guidelines, case studies, how best to take forward the "project".
A quick explanation in PowerPoint (very brief summary on topics of academic thesis) will seek to raise awareness on the best ways of designing, producing, conceptualizing, building, planning, editing, post-producing, and finally conceiving what should be a documentary about wildlife.
There are two key ideas:
1 "Getting THE picture and not A picture."
2 "Taking the viewer to the scene and not the scene the viewer."
The lecture will also present some interesting numbers in the big productions and relate some worrisome statistics related to what we are finally doing to our "common home" and our " wild neighbors" that inhabit it.

Day 2 | 9 September 2014

Workshop 2 - New Era – Web 2.0
Chair: David Braun

David Braun is the Digital Outreach Director at National Geographic Magazine, developing stories focused on Nat Geo mission programs. He also directs his popular National Geographic News Watch blog, has an extensive experience as a journalist, is a member of the National Geographic Expeditions Council, and media representative to the Committee for Research and Exploration.

Speakers

Stephen Curry | Professor at Imperial College, UK. Blogs at Occam's Typewriter and Guardian Science Blogs

Stephen Curry is a Professor of Structural Biology at Imperial College where he teaches life sciences students at undergraduate and postgraduate level. His main research interests currently are in structural analysis — mainly using X-ray crystallography— of the molecular basis of replication RNA viruses such as foot-and-mouth disease virus and noroviruses (which include the infamous 'winter vomiting bug'). Curry is also a regular science writer. Since 2008 he has been writing regularly about his research and the scientific life past and present on his Reciprocal Space blog and the Guardian. He has a particular interest in the history of X-ray crystallography and made several short films on the subject in collaboration with the Royal Institution. In addition Curry is a founder member and vice-chair of Science is Vital, a UK group that campaigns on scientific issues, and is also on the board of directors of the Campaign for Science and Engineering.

Communicating science in the Web 2.0 era – yes you can!

I would like to give a personal perspective on the entry into Web 2.0. The tools of social media, now relatively well-established, provide researchers with greater opportunities than ever before to communicate beyond the boundaries of their discipline. Though still dismissed as trivial by some factions within academia, forays into blogging or other forms of online digital communication are good for scientists, good for science and good for society. The online world can seem like a strange and alien environment to researchers but I hope to explain through my own experiences over the past several years how I got into using social media and how it enabled me to better fulfil the role of scientist-citizen in the real world.

Beatrice Lugger | Deputy Scientific Director of the NAWIK

Beatrice Lugger is Deputy Scientific Director of the National Institute for Science Communication (nawik.de), Germany. Bringing science toward the people via public discourse and involvement by using new and old media is what Beatrice Lugger wants to promote. She has a diploma in chemistry and has been working as a science journalist for more than two decades for various prestigious German newspapers, magazines and online media. She is an expert in social media, launched and established Scienceblogs in Germany. Since 2008 she has been coordinating the blog activities of the Lindau Nobel Laureate Meetings and since 2012 of the Nobel Week Dialogue. You may follow her tweets at @BLugger

Stay connected
The use of social media for internal and external networking in the sciences

Social media provide a simple and very effective way to connect specialized groups of interest such as marine and environmental scientists from all over the globe with each other. For example in advance of huge conferences such as the IMSCC they might get in contact via Twitter<https://twitter.com/IMSCC2014> or Facebook<https://www.facebook.com/IMSCC2014?fref=ts>. Scientists and communicators use these networks to stay connected for sharing ideas, spreading news and help the marine communications community to get public attention. Social media means interaction also with lay people up to their engagement in Citizen Science projects.
Best practices from other conferences (e.g. Lindau Nobel Laureate Meetings<http://blog.lindau-nobel.org/category/languages/english/>) might give some ideas, show how the use of social media might lead to new scientific collaborations or how Facebook, Twitter, Flickr, Youtube, Blogs and other social media might be used for Citizen Sciences. Pros and cons of certain social media will be discussed.

ORGANIZATION

PARTNERS