

## INTERREG IVA 2 Seas Project 'Information System on the Eutrophication of our Coastal Areas '(ISECA)

### Dcom2: The Communication Tools and Activities Elise Chiroutre (NAUSICAA), 2014



#### Executive summary:

Communication towards the public was indispensable in the ISECA project. We addressed two different kinds of public: stakeholders and the public at large to whom it was crucial to deliver information and raise awareness. In that purpose, communication activities were led all along the project. Tools were also developed and disseminated.

This report gives an overview of communication and dissemination activities and tools in the ISECA Project.

*Communication was a collaborative task in frame of the Communication and Dissemination activities within the ISECA project. Contributions of the ISECA partner institutes are listed below:*

Institute	Person(s)	Contribution
Nausicaá	Elise Chiroutre, Anne Vernier, Candice Hilderley, Manuel Cira, Ingrid Picquart (com. strategy)	Leaders
ADRINORD	Richard Santer	
PML	Steve Groom, Gavin Tilstone, Victor Martinez-Vicente	
CEMARE	Prem Wattage	
VLIZ	Carolien Knockaert, Annelies Goffin	
University of Greenwich	Koulis Pericleous, Georgi Djambazov	
VITO	Jean-Luc De Kok, Leo De Nocker	
NIOZ	Jacco Kromkamp	

## 1. Introduction

Communication and dissemination (C&D) are mandatory in any INTERREG project and a specific workpackage (A4) was dedicated to it. In addition, C&D are also necessary and essential in projects such as ISECA as a support to other ISECA activities: identification of the key actors, collecting end user requirements for the characterization of the eutrophication, determination of public perception towards eutrophication and the socio economic aspects. Thus, an entire sub-action to these actions was also achieved as part of workpackage 1 (A1), namely the Info Days and the Final Event which are reported in DA1-0.

The communication plan was the input to the C&D activities. This deliverable is online with this document.

## 2. Context

### 2.1 Project overview

ISECA “Information System on the Eutrophication of our Coastal Areas” is a European project which was launched in July 2011, and ended in 2014. It includes 8 partners from the 2seas Interreg region (North West of France, England, and Belgium). ISECA is a cross-border cooperation project funded by the European program INTERREG 4A “2 Seas”.

For decades, scientists observed the algae development on the coastline individually with their own tools. Thanks to ISECA, their knowledge is now brought together in a single database (the WAS: Web Application Server) in order to anticipate the phenomenon evolution and inform the authorities and stakeholders so they can take appropriate measures.

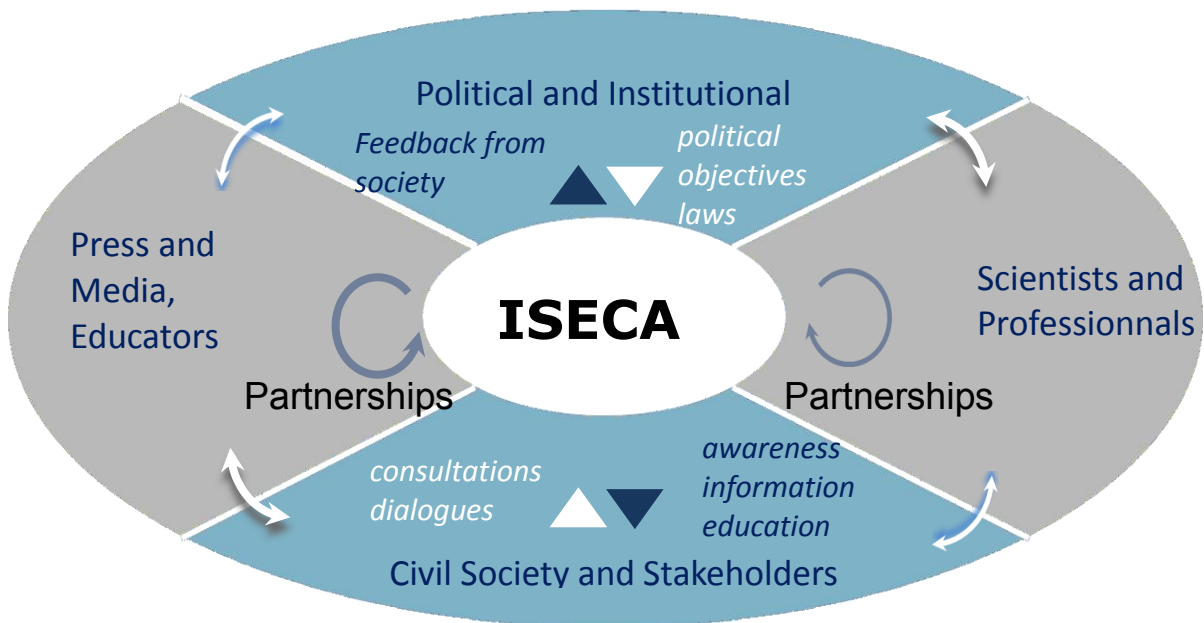
ISECA aims at improving and spreading the scientific knowledge on eutrophication in the 2 Seas region. Useful information on eutrophication will be available for all the stakeholders concerned (local administration, water management, etc.) but also for public at large. ISECA will also communicate on the eutrophication in order to engage all the public concerned and to encourage the exchange of information.

### 2.2 Positioning

In the ISECA consortium: Marine Scientists study the phenomenon, Social scientists try to evaluate the impact, Information specialists collect data, Outreach organizations explain the issues at stake to different audiences and gather their opinion.

Together, as a consortium, they are at the interface of different stakeholders and target groups; the ISECA consortium will act as a facilitator between these different groups

and make sure that they participate in the process of understanding eutrophication and their role in this phenomenon, so as to act in an appropriate way.



### 3. Communication strategy

#### 3.1 Presentation

From the beginning of the project, NAUSICAA developed a Communication strategy to outline the overall communication so as to develop coherent joint communication. A draft version was presented to the project partners in Oostende meeting in February 2012. After collecting partners' feedbacks, NAUSICAA met up with VLIZ in September 2012 to consolidate and precise it. The document and its provisional plan were then updated. The latest version was validated during the meeting in Plymouth in July 2012 and send to the JTS for approval.

Following the JTS request, it was enriched with **communication indicators** (numbered objectives to achieve) and an **outline of the main actions' timeframe and budget**.

#### **Annexes 1 and 2.**

These are reference documents for the whole project period and for each project partners. There are available on the WIS (FTP part). <http://www.iseca.eu/en/about/document-system/Private/Communication-and-dissemination/Communication-Strategy/>

#### 3.2 Targeted public

Definition of the target groups occurred when setting up the communication strategy, then it was refined through the creation of the A1-1 database. Questionnaires (A1-2/A1-3/A1-4)

were useful to define their respective needs to then think of tailoring actions/products to match them. 2 main categories:

(i) Stakeholders: specialists and info-multipliers. E.g:

- Marine Scientists
- Actors representing Research Institutions, Environmental Public Institutions, and SME concerned by the field of coastal water quality measurement.
- Representatives of institutes/agencies specialized in water quality control or taking an interest in learning remote sensing technique and modelling.
- Tourism, industry, fishery and agriculture sectors for the output of the perception study on eutrophication.
- Media to know more about and highlight research and possible solutions.
- Information multipliers such as environmental educators, nature guides, tourism officers to relay information and educate the public at large

(ii) General public: rather non-initiated people but interested in understanding the causes and possible solutions of eutrophication of the coastal waters along the Channel/North Sea shore. It can be individuals, families, schoolchildren...

Note that, in the A1-1 database, categories to classify were organized:

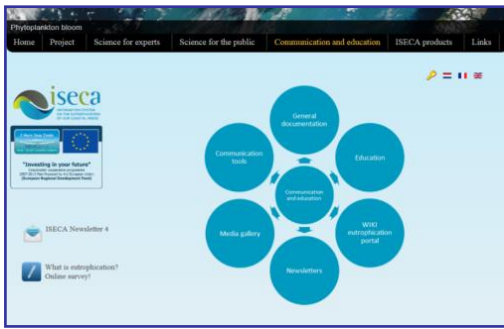
- Policy: at different levels (state, regional, local)
- Commercial: fishing, aquaculture, industry, farming...
- Education: formation (e.g. universities), environmental sensitizing
- Research/science: applied science, water quality, ecology, environment (atmosphere, water...), remote sensing ...
- Public "users": tourism, sports, association...

## 4. Communication Tools

To promote the ISECA project and bring it alive, communication tools were created. They also aim at informing and raising public awareness on the coastal eutrophication and its issues.

NAUSICAA is the leader and key player in this task but this is also a collective effort. Indeed, partners were asked their opinion for most of the C&D tools. They also contributed to their dissemination by getting involved in some events.

Translations were mainly produced by NAUSICAA (FR, EN) with the participation of VLIZ (DU), ADRINORD (FR, EN) and VITO (DU). **Note that all these tools are available on the trilingual WIS. They systematically highlight the support from EU Interreg 2 Seas program.**



Communication and Education section  
on ISECA website:

<http://www.iseca.eu/en/home-en/11-uncategorised/135-comedu>

## 4.1 Internal communication tools (i.e. between partners)

To communicate toward the outside (i.e. towards the public), the first condition is to have a good communication between project partners. Indeed, it is crucial to get along well together, to regularly exchange and understand each other's tasks. The involvement of everyone is important to build a joint collaboration. NAUSICAA and Adrinord as lead wires play an important role to join forces, as well as Vliz.

During the project, the internal communication was based on several regular exchanges: emails, phone calls, but also meetings: else between some partners at some occasions to discuss or develop a particular aspect of the project, else on semestrial progress meetings. The WIS was the support for the internal communication with, for instance:

- the section on the semester meeting at <http://www.iseca.eu/en/about/document-system/Private/Meetings/> with the agenda, minutes and all the presentations.
- the section on the semester reports in with all the annexes at <http://www.iseca.eu/en/about/document-system/Private/Management/Semester-Reports/>

Some internal tools were also created to reinforce partnership. They are presented below.

### 4.1.1 Identity kits on each partner

So as to better know each other's, Nausicaá contacted all the partners at the beginning of the project to have a document filled by everyone to get information such as their role in ISECA and their institute missions in general. 8 identity sheets were created. Identity kits as well as the presentation forms of the ISECA activities were also precious tools that helped NAUSICAA and VLIZ to better understand the scientists' work and the issues at stake in the project. Indeed, at the very beginning of the project, NAUSICAA had to comprehend the scientific contents so as to correctly communicate and be able to simplify the messages to deliver to less specialized audiences. <http://www.iseca.eu/en/about/document-system/Private/Communication-and-dissemination/Communication-tools/Identity-kits-ISECA-partners/>

### 4.1.2 Agenda of all partners 'communication events

This document is very useful for a correct coordination of C&D. It is updated each semester

by NAUSICAA and put on the WIS private section for all to be informed.

<http://www.iseca.eu/en/about/document-system/Private/Communication-and-dissemination/Communication-events/>

#### **4.1.3 Inventory list of the C&D Tools**

Available on the WIS, private part and distributed to the project partners.

#### **4.1.4 Regular “C&D flash-info” delivered to the partners**

NAUSICAA sends it by email. It is a reminder, summarizing the very last actions in communication and the one to come. It increases collaborative work and encourage.

### **4.2 External communication tools**

#### **4.2.1 Logo and graphic design**

All partners were involved in their selection. NAUSICAA worked with the project coordinator to define the final logo and then collaborated with a communication agency. The final versions of ISECA’s logo and graphic design were presented during the February 2012 meeting in Oostende and are available on the website.

<http://www.iseca.eu/en/about/document-system/Private/Communication-and-dissemination/Communication-tools/How-to-use-the-logo/>

General layout for PowerPoint presentations and documents were also given by NAUSICAA to all PP.

#### **4.2.2 ISECA Communication resources (A4)**

Communication tools will be created in the framework of WP4 for all: target groups, professionals, stakeholders, science communication multipliers, general public & media, to be used by each partner:

- **Project vision**

<http://www.iseca.eu/en/about/project-outline>. Document in the 3 languages elaborated by Adrinord with the help of Nausicaa. It summarizes the project.

VITO created a shorten version for distribution during the 2seas annual Event in Rotterdam (14-15March 2013).

- **Presentation form of the ISECA contents**

This work was carried out by NAUSICAA in 2012 with the help of Adrinord. After simplification of the content to be accessible and understandable by all, translation and layout works were done. The different sheets are part of the WIS general documentation

and exist in the 3 languages. They were distributed during events such as public debate, info days and final conference.

#### **Activity 1: Eutrophication in the 2Seas Region: the great inventory**

- ✓ [Phaeocystis and foaming beaches](#)
- ✓ [Socio-economic analysis in ISECA](#)

#### **Activity 2: Earth Observation Products**

- ✓ [In situ measurements in ISECA](#)
- ✓ [What is ocean colour?](#)
- ✓ [Ocean colour from space](#)
- ✓ [Atmospheric correction and ocean colour](#)
- ✓ [Plymouth Marine Laboratory Level 1 Earth Observation Database](#)
- ✓ [Plymouth Marine Laboratory Level 2 Earth Observation Database](#)

#### **Activity 3: Modelling**

- ✓ [Atmospheric modelling for ISECA](#)
- ✓ [Modelling marine and coastal eutrophication](#)

- **Info leaflet for general public**

Document created by Nausicaa. It promotes the website and the A1-3 questionnaire on general public's perception on eutrophication. An electronic version and some hard copies are available as predicted (English and French versions).

[http://www.iseca.eu/en/index.php?option=com\\_content&view=article&id=147:procom&catid=11:uncategorised](http://www.iseca.eu/en/index.php?option=com_content&view=article&id=147:procom&catid=11:uncategorised)

At first, 2 000 were printed in each language - EN, FR, DU- (so a total of 6 000). Then NAUSICAA printed some more with integration of QR code (10 000 FR + 3 000 EN). All along the project- and even after-, they were disseminated during various events around the thematic and also left at disposal on Blankenberge (Belgium) and NAUSICAA Sealife Centers.

- **Stand-alone displays (project banners)**

[http://www.iseca.eu/en/index.php?option=com\\_content&view=article&id=147:procom&catid=11:uncategorised](http://www.iseca.eu/en/index.php?option=com_content&view=article&id=147:procom&catid=11:uncategorised) . Nausicaá decided to make 3 different stand-alone displays:

- Two dedicated to the general public on “what is eutrophication”: one illustrated by green algae and one concerning foam as visible result of eutrophication.
- One dedicated to the stakeholders on ISECA project.

Each of them contains few sentences, some photos, official logos, the website address and similar layout. A proposal was presented in Antwerp meeting in Dec. 2012 to define the content. In 2013, the banners were given to the different partners to be used in scientific conferences, key events of the project (e.g., Info Days) and other occasions. A total of 16 project banners were printed. Repartition per partner's institute is in **annex 3**. Indeed

institutes were asked to choose 2 stand-alone displays and the language they want (French, English or Dutch).

- **Project Folder**

Its design is similar to the stand-alone displays and the leaflet. QR code integrated. The content was suggested by Nausicaa and validated by all. The document was given to partners during Portsmouth meeting in December 2013 (1 000 copies printed). They were disseminated above all during Public debate, UK Info Days and Final conference.

<http://www.iseca.eu/en/about/document-system/Private/Communication-and-dissemination/>

- **Newsletters**

[http://www.iseca.eu/en/index.php?option=com\\_content&view=article&id=94:newsletters&catid=11:uncategorised](http://www.iseca.eu/en/index.php?option=com_content&view=article&id=94:newsletters&catid=11:uncategorised). It was decided that 3 per year will be written. A total of 6

newsletters were created as originally predicted. Translation is made by NAUSICAA (En, Fr) and VLIZ (Du).

They are disseminated through various ways:

- during ISECA communication events or education activities
- downloadable on the WIS and promoted on the homepage
- sent to all partners each times for them to relay if they want to solicit their networks. For instance, NAUSICAA sent it to its registered public to the World Ocean Network actors (at regional level) and tourism offices. It concerns around 350 contacts.
- sent to the ISECA registered people.

The main objective is to make scientific information and research more accessible to a wider audience. Events important for the ISECA project are also put in the spotlight. The newsletter consists in four headers:

- **Introduction:** project related information (progress of the project and project results)
- **Science:** focus on a scientific topic important for ISECA (for example: eutrophication, phytoplankton blooms, in situ measurements in ISECA, earth observation via satellites...)
- **Zoom:** focus on a specific ISECA partner (general presentation of the institute and explanation of the partner's work in ISECA)
- **Agenda:** data on future and past events which are attended by one or more ISECA partners and / or are important for the ISECA project

- **Photos and videos**

Photos and short videos are available in the mediagallery of the website:

[http://www.iseca.eu/en/index.php?option=com\\_photogallery&view=photogallery&layout=photogallery&](http://www.iseca.eu/en/index.php?option=com_photogallery&view=photogallery&layout=photogallery&)



They are useful to introduce or illustrate the subject during events or education workshops. They also attract and document the project activities and eutrophication phenomenon. Photos were given by all project partners at NAUSICAA's request. Concerning the short videos, 10 had been created all along the project. Note that the "3 questions to..." types aim at more specific issues.

✓ **"When the sea foams", 2012**

First ISECA video created by A. Delater and J. Legrand. We can see a little boat going backward from the sea to the source. It raises the question of the eutrophication causes. Speechless video. Humorous, questioning and dynamic. The video was also regularly broadcast in NAUSICAA exhibition (TV platform).

✓ **"The ISECA project: Focus on Eutrophication", 2013**

Available in FR and GB with English subtitles for both. Launched first during the UK Info days. It is sometimes broadcast in NAUSICAA exhibition as well. Close collaboration work with the video producer. Content was elaborated by NAUSICAA and validated by all PP. NAUSICAA also selected the sequences, provided the illustrations, wrote the English subtitles and registered the English voice.

✓ An **interview with Alain Lefebvre** from IFREMER occurred in 1<sup>st</sup> semester 2013 at NAUSICAA in order to make a video but unfortunately the shot encountered a technical problem. (**Annex 4**).

✓ From end of February till June 2014, **4 videos "3 questions to..."** were created. These are 4 short interviews of experts on eutrophication. The principle is simple: 3 questions are asked to experts from different fields in link with eutrophication and eventually they can pass on a personal message on that issue. Experts are:

- Alain LEFEBVRE, Researcher and Director of the Environment & Resources Laboratory, leader of the French group OSPAR (IFREMER),
- Didier COCHE, Director, Responsible for contracts with local authorities, (VEOLIA EAU),
- Jean-Louis DESMEDT, Responsible for External Relations and Training (ECOVER),
- Frédéric COUSIN, Head of Laboratory, water quality control (NAUSICAA).

NAUSICAA worked with the experts to adjust their speech and close collaboration with the video producer. NAUSICAA also selected the sequences, the illustrations and made the English subtitles.

✓ **3 other "3 questions to..."**. The NAUSICAA team also benefited from the experts' presence at the final conference (30 June-1<sup>st</sup> July 2014) to interview some of them so as to enrich the

initial series of “3 questions to...” videos. 3 ISECA partners chosen:

- Jacco KROMKAMP, Senior Scientist, Department of Marine Microbiology from the Royal Netherlands Institute for Sea Research (NIOZ, Netherlands),
- Carolien KNOCKAERT, Junior Scientific assistant from the Vlaams Instituut voor de Zee (VLIZ, Belgium),
- Gavin TILSTONE, Senior Scientific Officer, Bio-optical Oceanographer, Remote Sensing & Optics Group from the Plymouth Marine Laboratory (PML, UK).

Here are the type of questions asked:

- What is eutrophication? Is it a natural phenomenon?
- Why/How can it become a threat for the marine environment?
- What actions have been taken to learn more about eutrophication?
- What further progress can be made (especially in your sector)?
- In your area of specialization, which actions have been taken to inform on the eutrophication of coastal waters?
- What is your personal message for the public?

These last interviews were finalized on last semester 2014.

- ✓ During the World Ocean Day (WON) at NAUSICAA, 2014: in the frame of ISECA, a spectacle was proposed to 400 children and 50 adults. It was entitled “les coquillages s’incrustent assez” and dealt with water quality (June 6th). An extract was chosen and integrated to the WON short video.
- ✓ To offer the possibility to Nausicaa’s visitors to get information on the thematic of coastal eutrophication, *a final ISECA video* was created last semester 2014. It gathers the main topics discussed during the conference. It will be on the ISECA website but also in Nausicaa’s exhibition (TV platform). A referent document is annexed to get an idea of this tool (**Annex 5**).
- ✓ Apart from these videos, events were filmed: the Public Debate (which was watchable by streaming), the 2014 WOD at Nausicaa in the frame of ISECA and the final conference (plenary sessions). They are stored by NAUSICAA.

- **Press Release**

Minima of 6 had to be delivered during the project. 13 were made and sent to different media (11 from NAUSICAA and 2 from PML). They aimed at announcing events to reach a large audience. They are accessible on request.

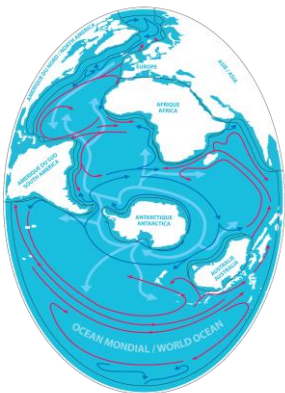
### 4.2.3 ISECA educational tools and guidelines (A4)

To learn more about eutrophication, its causes and consequences, ISECA created some educational "tools". They also intend to raise public awareness on the human impact on water quality in the North Sea (and other waters). Teachers, coast guides, scientists, policy makers and even general public can use it to expand their knowledge about the eutrophication phenomenon in general. All partners and info multipliers are invited to organize educational activities, make use of these tools and set up activities according to their possibilities.

This induces a correct understanding of scientific messages. Then they needed to be simplified to make them accessible to everyone, even non-initiated people. Moreover, the subject being quite complex, funny and pedagogical approaches had to be found. For example, Nausicaa first started by what the public could have already seen on the seashore: the foam phenomenon or the green macroalgae proliferation (mediated in French Brittany). They can be visible results of eutrophication.

All educational tools are available in the 3 languages and are on the WIS. They were all presented, performed and relayed several times. For instance, "Why does the sea Foam?" activity was performed more than 40 times and reached more than 830 people.

- **The "World Ocean" puzzle**



This is a specific hands-on tool already existing at NAUSICAA for the interaction with the public. It shows that everything goes to the sea. This tool was adapted to ISECA objectives and messages and then adapted into electronic version in the kit "All Oceanside dwellers". Puzzles were also printed (500 copies) and distributed to infomultipliers with a storyboard.

- **"Why does the sea foam?" activity (long version: 1h duration)**

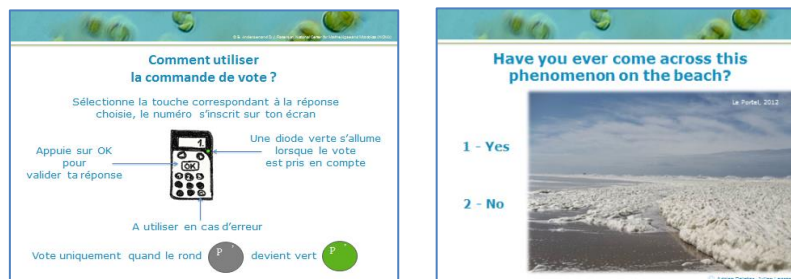
This first ISECA Educational activity was created by NAUSICAA in 2012. It is an interactive workshop in which the public is asked its opinion by using an innovative computer tool which allows people to vote with individual keypads: the PowerVote System<sup>1</sup>. The voting result are registered and kept by NAUSICAA. The first objective of this activity is to know more about people's perception on the phenomenon of foam and to test their knowledge on eutrophication. Then, explanations are given: what is eutrophication, what causes eutrophication and what are the consequences for the environment? Finally suggestions are

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<sup>1</sup> Alternatively it can still be used with other tools for example numbered cards that people would raise in the air to give their opinion.

made to obtain a better water quality in future. The workshop offers a playful moment with pictures, drawings, photos, videos, voting keypads and observation of a drop of water through microscopes (to observe phytoplankton). It was performed many times by NAUSICAA during the project at different occasions (mainly towards the aquarium's visitors: individuals but also schoolchildren) and relayed to info multipliers and partners (NAUSICAA training days and teacher open doors, French and UK info days).

This tool is designed for **adults and children from 13 years old**. **Storyboard and questionnaire** (PowerPoint) are disseminated and downloadable on the WIS in the 3 languages: <http://www.iseca.eu/en/home-en/11-uncategorised/157-why-does-the-sea-foam-long>



The scientific content was validated by all partners but also ISECA advisor A. LEFEBVRE and L.F. ARTIGAS (IFREMER, MREN-ULCO). Note that this activity also helped for the A1-3 (determination of the public perception) and confirmed its results.

- **“Why does the sea foam?” activity (short version: 15min duration)**

NAUSICAA also proposed a shorten version of “Why does the sea foams?”. It is perfectly adapted to use on a stand in order to deliver simple and quick information on eutrophication to family audiences. It can even last less than 15 minutes.

Easy to handle, it requires simple material such as:

- photos to show foam and the unicellular algae *Phaeocystis*,
- a plant in clay pot with stickers to represent the plant growing needs,
- illustrations of the water cycle to explain people that everything goes to the sea, and
- the white of an egg to mimic the foam phenomenon.

This tool is designed for **adults and children from 7 years old**. Storyboard, panels, illustrations and stickers are downloadable at: <http://www.iseca.eu/en/home-en/11-uncategorised/158-why-does-the-sea-foam-short>

Again, the scientific content was a back and forth work between NAUSICAA and the scientific partners.



It was performed several times by NAUSICAA during outreach events such as the International Kites Festival at Berck sur mer (France) in April 2013 or at the Parc Festival in September 2013. In 2014, VLIZ also received from NAUSICAA a set of material to relay the activity in Belgium.

- **Beach Lab Tool on eutrophication**

This activity was created by Vliz and performed during the Zee op de Korrel event and Info Days in Belgium in sept-oct 2013. It is dedicated to guides/educators organizing informational tours on the coast.

In this experimental tool, public is invited to test its research skills by analysis of a seawater sample under the microscope for phytoplankton species. By using an egg they will also try to mimic the foam phenomenon. Chemical analysis (measurement of nitrate and phosphate concentrations) is performed on two samples, natural samples and strongly polluted samples (produced by the addition of chemical fertilizers used in gardens), in order to create awareness about the impact of these human-induced nutrient addition to aquatic environments. This tool is designed for **children from 14-18 years old**. The storyboard is available at: <http://www.iseca.eu/en/home-en/11-uncategorised/154-beach-lab-experiment-tool>



- **Satellites and Ocean Colour Activity**

This activity was created by PML and first performed during the UK Science Week in Plymouth, in March 2013.

Satellites used in remote sensing are an important tool for scientists when observing the Earth. It can provide a wide visual picture and allows us to create more insight into the eutrophication processes by studying Ocean Colour.

In the first part of this activity the public will study some satellite images and try to identify their origin (cyclone, phytoplankton bloom...etc.). In the second part they will perform a simple Ocean Colour experiment to demonstrate how changing concentrations of phytoplankton, dissolved organic matter or suspended particles can have an influence on the colour of the ocean. This tool is designed for **children from 7-11 years old**.

<http://www.iseca.eu/en/home-en/11-uncategorised/156-satellites-and-ocean-colour-activity>



- **ISECA Educational kit “Tous riverains de l’Océan”**

This tool gathers **all educational products** developed during the project. NAUSICAA worked with external graphic designers for it. The electronic version is downloadable on the WIS at: <http://www.iseca.eu/en/tous-riverains> but also parts of it on NAUSICAA website and WON blog. It includes all instructions, storyboards, animation supports and bonus such as videos, illustrations and themed sheets.

1 000 CDROM copies were also printed. 800 were distributed to schools from the Nord Pas de Calais Region. The other 200 are available for the other info-multipliers such as environment educators, nature guides, partners...

- **Smartphone Application : “track game: from the source to the sea”**

Following the final conference and to enhance the results of the project, NAUSICAA has developed a specification for the creation of an educational tool for the visitors’ aquarium. This application deals with water quality in a funny way and aims at families. It raises the question of the use of water from the source to the sea. The ISECA project allowed the development of the specification, the launch of the tender, the choice of the company to work with, the conception of the model and its design, creation of a prototype and the specific development of the application. It is a way to continue with the public well beyond the end of the project.

#### **4.2.4 The Web Information system (WIS) :**

See deliverable Dcom1- WIS for more details, **annex 12**. Within the ISECA project one of the challenges was to build a portal that responds to the needs of two important target groups:



scientists and the public at large. This was done by creating two different menu-items: science for experts which contains scientific publications and science for the public where the overall eutrophication phenomenon is shortly explained. The portal gives visitors access to the most important project results and deliverables (e.g. Information Search Tool, Web based Application Server (WAS), official project reports, publications but also different communication tools such as project leaflets, newsletters and educational activities developed for a wider audience. It is a cross-border place of collaboration dedicated to coastal waters quality. **The ISECA portal is the most important communication tool. It gathers all the work achieved within the project and largely contributes to make the project live and even perpetuate.** Here are its main goals:

- ✓ to access existing information on eutrophication over the Interreg 2 Seas geographical area
- ✓ to identify demands and needs thanks to questionnaires
- ✓ to share information & tools
- ✓ to inform and educate others on the issues
- ✓ to put light on ISECA results

**VLIZ** was responsible for the creation and the implementation of the WIS, which was a big task. All partners contributed to the content and to the promotion of the website, especially NAUSICAA (for documentation and tools inputs, advices, document adaptation and enrichments, French part of the website and translations FR/EN). Partners participate both in the elaboration of documentation as well as participation to scientific dissemination.

The ISECA official web address is <http://www.iseca.eu/>



*English homepage of the WIS*

#### 4.2.5 Scientific communication tools (A1, A2, A3)

All project partners also contributed through scientific tools which were presented and disseminated during events.

- **3 ISECA project posters**

They were presented in conferences and also disseminated to in A4 format stakeholders during ISECA outreach events.

[http://www.iseca.eu/en/index.php?option=com\\_content&view=article&id=147:procom&catid=11:uncategorised](http://www.iseca.eu/en/index.php?option=com_content&view=article&id=147:procom&catid=11:uncategorised) .

- Martinez-Vicente, V.; Tilstone, G.H.; Groom, S.B. (2011). *“Eutrophication: a response of the sea biology to human activities”*.

- Martinez-Vicente V., Tilstone G.H, De Kok J.L., Van Best C., Groom S.B., Santer R., *“Earth Observation Tool for monitoring Coastal Eutrophication”*.

- J-L. de Kok and W. Boëne., *“Integrating Earth Observation with field data and model simulations - the ISECA project”*.

- **10 other posters and several publications during the project**

They deal with Earth Observation, In-situ and Modelling activities. **A complete list** made by NAUSICAA is annexed to this report (**see annex 6**) and available on the FTP. Public can also access some of them in the “SCIENCE FOR EXPERTS” section of the website.

- **The Web Application Server (WAS) tool and its manual**

<http://www.iseca.eu/en/results/web-based-application-server-was>

The WAS is one of the main result of the ISECA project on the ISECA portal. Its purpose is to demonstrate how model simulations can be combined with field measurements and Earth Observation data online in a platform for monitoring and analysis of coastal eutrophication in the English Channel and Southern North Sea. In addition researchers will be given access to a generic library of reusable model components, which makes the construction of models easier.

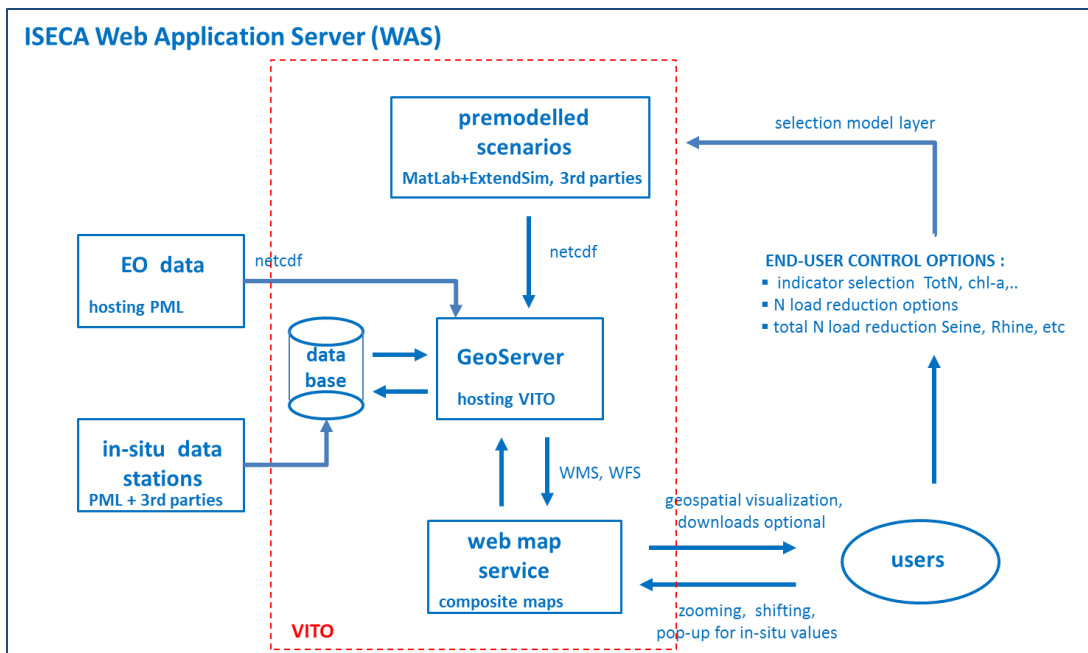
The WAS will enable people to select and compare the impact of different scenarios and management options on key water quality indicators and identify problem areas following the OSPAR recommendations.

The access to the WAS is restricted to registered users in order to respect the data rights and identify the potential end users. The current version is intended for demonstration purpose. The architecture permits data updates and replacement of model scenarios with results of more complex models.

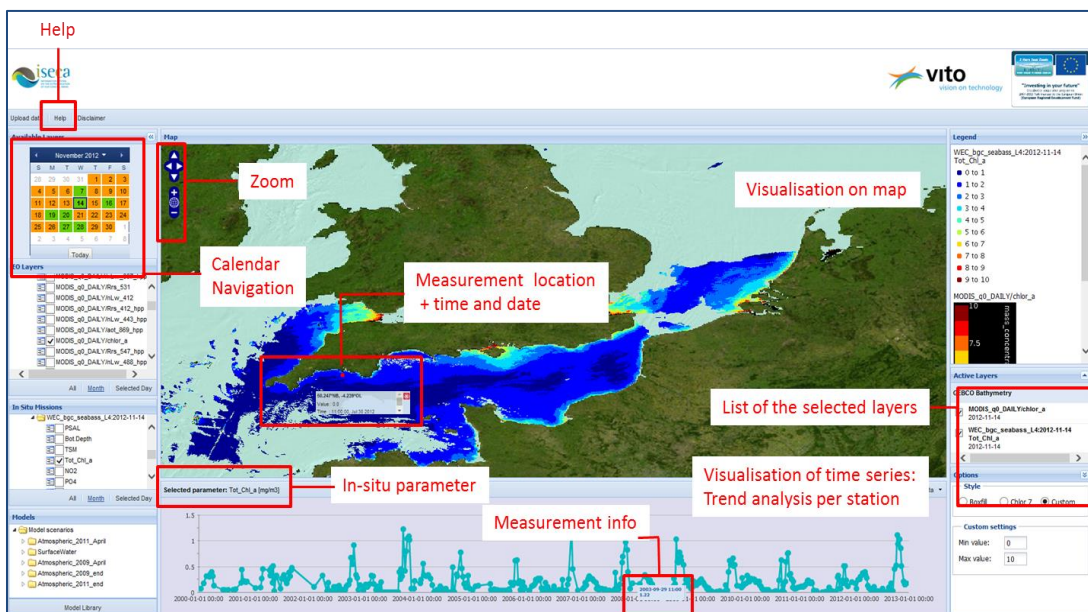
**A detailed manual** in English was also created by VITO to be used during the final event and thereafter as an online help for people. <http://www.iseca.eu/images/ISECA%20manual.pdf>

For further information, please have a look at the dedicated deliverable.





Principles of the WAS



General user interface of the WAS with calendar-based selection of EO and in-situ data. Below the model scenarios selection (not shown) and trend analysis chart on in-situ data.

- **Questionnaires**

They aimed at allowing the ISECA partners to get information but crosswise, they were also opportunities to communicate with the public and raise concern.

- ✓ A1-2 Questionnaire: made up by PML to collect requirements from this actors, as well from agencies and data collectors. <http://www.iseca.eu/en/about/activities/11-uncategorised/83-useruk>

- ✓ A1-3 Questionnaires: led by NAUSICAA to determine the perception of targeted publics about the eutrophication phenomena. One face-to-face questionnaire (**annex 7**) was created and then another one going further (i.e tacking public willingness to act) and put online: <http://www.iseca.eu/en/science-for-all/what-do-you-know-about-eutrophication>
- ✓ A1-4 Questionnaire(**annex 8**): led by CEMARE to develop concepts of social-economic analysis of eutrophication impacts in the frame of climate change. Face-to-face proceeding.

- **Deliverables and technical reports**

The complete list is available on the WIS. Note that some of them are made public at: <http://www.iseca.eu/en/results/deliverables>

- **Other scientific tools developed**

Other tools were developed during the project but for a specific event. For instance:

- ✓ 2 pagers inserted in a portfolio for the EMSEA conference (see deliverable DA1-0)
- ✓ **PowerPoint presentations and abstracts** for conferences. Some are accessible on the public WIS such as those from the Final event: <http://www.iseca.eu/en/home-en/11-uncategorised/231-pptisecafinalevent> . Others are on the private FTP.
- ✓ **Proceedings concerning atmospheric correction and optical properties.** <http://www.iseca.eu/en/science/activity-2>

## 5. Events

Events allowed us to communicate towards different public. Here is the summary of the C&D events led during the ISECA project.

**The agenda in annex 9 gathers all events (name, date and project partner involved). They are a way to promote the project, deal with the subjects it tackles and disseminate the tools.**

### 5.1 Events towards scientists, stakeholders and info multipliers (A1)

- **Scientific and maritime conferences**

Project partners presented their results in Scientific & maritime conferences, that they attend on behalf of their individual organization (out of ISECA budget), or on behalf of the project consortium (included in ISECA detailed plan of action). A total of 19. Here are some examples:

- ✓ PML: Marine Optics Conference in UK, 2012 and 2013
- ✓ CEMARE: ECSA 53 conference, China, oct 2013
- ✓ VITO: IOCS meeting in Darmstadt, may 2013
- ✓ ADRINORD: ESA meeting, Italy, Oct 2012
- ✓ NAUSICAA: DYMAPHY (Interreg project) final event in Dec.2013 and IFREMER colloque (high frequency measurement and techniques) in June 2014 at Boulogne sur mer



Conference at PML

- **Info Days**

An important communication activity in the ISECA project was to organize Information Days on the theme of coastal water quality and eutrophication in the three countries: France, UK and Belgium. For more information, please consult the **deliverable DA1-0**.

These Info-days aim at training and mobilizing information multipliers and stakeholders, so that they can afterward inform different audiences and promote the project information material – the information multipliers' targeted groups are outreach organizations, educators, media...

Country	Date	Place
FRANCE	28 <sup>th</sup> November 2012	Boulogne-Sur-Mer, Nausicaa
UNITED KINGDOM	3 <sup>rd</sup> to 5 <sup>th</sup> September 2013 + 10 <sup>th</sup> October 2013	Plymouth University Plymouth, PML
BELGIUM	19 <sup>th</sup> September 2013	Ostend



- **Final event**

From Monday 30<sup>th</sup> June to Tuesday 1st July 2014, Nausicaá hosted and organized the Final Event of the ISECA project in House. It focused on coastal water quality (mainly in the Channel and the North Sea areas) in relationship with eutrophication and presented the

important ISECA project outcomes. Plenary sessions addressed eutrophication: definition, causes, consequences, means of detection and monitoring, legislation, public perception, solutions and perspectives. On the second day, two specialized workshops were organized: one concerning the functionalities and use of the Web Application Server (WAS) that has been developed during the project and another dealing with the ISECA information and education activities to raise awareness on the subject. Field Trips closed the event (Nausicaá exhibition, Ifremer laboratory with a presentation of Marel-Carnot high frequency instrumented station, the local water-treatment plant Séliane).

The event aimed at policy makers, scientists, environmental educators and the general public. 64 persons participated and presented real interest in the subject (many discussions and questions). Participants considered that provided information on ISECA and eutrophication was clear and adequate.

In addition to the ISECA project partners, scientific experts including Francis GOHIN - IFREMER (France), Stephen MALCOLM and Rodney FORSTER -CEFAS (UK), Andris ANDRUSAITIS -BONUS Programme (Finland), Jacco KROMKAMP -NIOZ (Netherlands), Christiane LANCELOT -ULB (Belgium) were invited. They enriched the conference giving a presentation on their expertise. Those eminent scientists' speakers played the game of "simplifying" communication towards stakeholders thanks to the help of professional convenor David LEFORT and Alain LEFEBVRE from IFREMER.

All plenary sessions were translated in direct (French-English). **For more details on this event, please have a look at Deliverable DA1-0.** Finally, mind that an entire section on the WIS is dedicated to it:

[http://www.iseca.eu/en/index.php?option=com\\_content&view=article&id=195:%20iseca-final-event&catid=11:uncategorized](http://www.iseca.eu/en/index.php?option=com_content&view=article&id=195:%20iseca-final-event&catid=11:uncategorized)



## 5.2 Events towards larger audiences (A4)

Outreach activities were organized towards general public and schoolchildren. They are opportunities to meet up with large audiences, educate and raise public awareness. It is also a way to assess public perception and questionings, promote and disseminate C&D tools.

Most of them were done by NAUSICAA Education Team. VLIZ and PML also participated. These events are also listed in the agenda in [annex 11](#).

- **“Why does the sea foam?” Educational activities at NAUSICAA**

From 2012 to 2014, the activity is regularly performed towards individuals (mostly during holidays) and schoolchildren. In total, it was done more than 40 times and concerned more than 830 persons. Note that the workshop is still proposed by NAUSICAA to schoolchildren even after the project.

- **Outreach activities**

Many were done. Here are some examples:

- UK Science Week in Plymouth, March 2013 : Satellites and Ocean color workshop
- International Kites Meeting at Berck sur mer, April 2013
- Festival of Nature, Boulogne sur mer, May 2013
- Zee op de Korrel, Belgium, Ostend, September 2013 (Beach lab demo)
- Science Festival in France, October 2013 (Algae with scientists from the LOG) and 2014 (Satellites and Ocean color)
- World Ocean Day, June 2012, 2013 and 2014: plankton and *phaeocystis* ISECA workshop for public at large

- **Public debate**

**On the 20th March 2014**, during the World Water Day, Nausicaá held a public debate under the ISECA project. The event focused on the following question: "In which way can actions and measures taken in the past improve coastal water quality and limit eutrophication?" **70 persons** discovered the phenomenon of coastal eutrophication and asked a large number of questions to the invited speakers which indicates that the subject is both worrying as exciting the general public.



The speakers included a marine scientist (A. LEFEBVRE, IFREMER), a representative of the Water Agency (L. LEMAIRE), a representative of water treatment sector (JP. PENNAMEN, VEOLIA), a representative of the agricultural sector (D. TROLLE, GABNOR) and industry (JL. DESMEDT, ECOVER) and a consumer representative (C. POTDEVIN, CLVC). This session was diffused on TV Nausicaà by streaming and filmed (**Annex 10**).



- **17 Teachers Open Doors at NAUSICAA**

By NAUSICAA Educational Team to relay “Why does the sea Foam?” activity and promote the website.

- **4 Public and Web events**

Nausicaá proposed regular information through its news system and TV interactive theater to its 600 000 yearly visitors, out of which 20% come from Belgium, 20% from UK, 60% from France, thus guaranteeing a permanent showcase for the ISECA project.

### 5.3 Medias

All these activities were also the occasion of media promotion.

- Local and Regional Press: 3 articles to deal with eutrophication

- Radio: 7 times at minima towards different local or regional radios to announce events such as the Public Debate

- Internet: on the WIS but also via institutes’ website, Facebook page, blog + other networks  
Details are accessible on request to NAUSICAA.

## 6. Conclusion

Following the announced communication strategy and indicators, communication objectives are largely achieved (**see Annex 11**). We put real efforts into giving voice to scientists but also identify the different targeted publics and their needs, organize content/information to make it accessible to many, raise awareness and invite people to feel involved (e.g:A1-3 questionnaire, educational activities, leaflet). We also put great care into promoting the WIS and the WAS as main results of the project.

Communication tools and events have been created to respond to the different needs and publics, e.g: to promote ISECA, inform on coastal eutrophication through various outreach activities, organize events where experts could share their knowledge with the public (e.g: Public debate, Info Days, Final event), solicit and help infomultipliers to relay information on the theme by providing educational tools such as the "all Oceanside dwellers” kit. Each event was important to us to reach the more people as possible in various ways and disseminate our products.

A scientific communication through publication, posters, proceedings and presentations at conferences was also crucial.

Communication was led by NAUSICAA but strong collaboration was indispensable.

## Communication tools and Audiences

Communication products	Information multipliers	Target group	number events /actions /docs	target number	Comments
Electronic & AV support	Project Partners and info day participants	All target groups, mainly journalists and general public.	1	-	FTP platform useful for Partners and info day participants (minimum 50 users) so as to prepare dissemination
		General contents for all target groups	1	1 000 hits a month from mid 2012 to mid 2014	ISECA's presentation + link to the website will be proposed to partners to be added on their own website. Website attendance will be regularly monitored.
	Video snippets	All target groups, mainly journalists and general public.	2	minimum 2 screenings a day in Nausicaa = 34 000 people per year	Short films edited by Nausicaa and made available to partners and information multipliers for dissemination and on the web.
Publications	Communication guidelines for partners	Project Partners	1 set of documents for all partners	-	Including all tools for partners + reference to EU funding
	Guidelines and Kit for Education and outreach activities	All target groups, mainly journalists and general public.	1 electronic version + 1 000 hard copies	-	Guidelines, story board and tools to be used by partners and information multipliers
	Fact sheets "partners & project"	Stakeholders, information multipliers and journalists	8	-	Available on website and project folder
	Newsletter / e-release	Stakeholders and Interested General Public	6	3000 x 6	Around 3 000 contacts to receive e-newsletter + printed newsletter to be added in the project folder and distributed during the final conference
	Project folder	Media	6	1800 x 6	Around 1 800 journalists + printed newsletter to be added in the project folder and distributed during the final conference
	Project Partners, info day participants and information multipliers		500		To be distributed during the final conference so partners can use it in their internal networks

Leaflet	Electronic version for Project Partners, info day participants and information multipliers	All target groups	According to Partners needs	10 000	Electronic version than partners can print or disseminate
	Media	All target groups	1	100 to 120	Hard copies to be distributed at joints events Press briefing during the final conference
Promotional material	Posters for scientifics / conferences	All participants to the scientific conferences, Stakeholders, Universities and research institutions, Associations, Local, regional and national authorities,	8 to 10	-	Posters on specific scientific aspects of the project for specialised audiences
	Posters for the Public (Stand Alone Display)	General Public	8	-	1 poster in each organisation dedicated to the general public on the eutrophication's observation
	Conference display material (Stand Alone Display)	All target groups	8	-	1 poster in each organisation dedicated to the professionals on the ISECA project implementation

Events	Educational activities	Project Partners	General Public	40	800	An average of 5 educational workshop "When the sea foams" per partner or relevant information multiplier
	Outreach events in the occasion of World Ocean Day	Project Partners	General Public	24		WOD 2012, 2013, 2014 for each partners of the Project, Open Laboratory, Science Festival ...
	Infos Days and teachers conferences	Information multipliers	General Public	3	45 to 75	Mobilisation of 15 to 25 information multipliers per infoday and per country so as to prepare supplementary activities
		Public Debate	All target groups, mainly journalists and general public.	2	200	Networking with and conferences for Teachers: The objectif is to have 1 public debate in each organisation => at least 5 public debates during the project with around 50 participants each
	Public and Web events		All target groups, mainly general public.	5 to 8	250 to 400	4 Public event in Nausicaa TV interactive set (approximately 100 people), recorded and transcribed on the web (+ Web audience)
		Final Conference	Stakeholders, Universities and research institutions, Associations, Local, regional and national authorities,	4	400 to 1 000	The conference will be organised to share information and mobilise shareholders for further use of the information system
				1	100 to 120	



Activity	Description of action	Action target	Media involvement	Leader	Partners to be involved	2011		2012		2013		2014		Not included in ISECA's budget
						1 sem	2 sem	1 sem 2	2 sem 2	1 sem 3	2 sem 3	1 sem 4	2 sem 4	
<b>Stakeholder mobilisation:</b>														
1	Participation in scientific conferences	Science communication multipliers, France	X	Nausicaa	All partners: ADRINORD, VITO, VLIZ, NIOO, PML, University of Greenwich, CEMARE	X		X		X		X		X
	Info Days, France to mobilise information multipliers in all different regions	Science communication multipliers, France	X	Nausicaa	French partners: ADRINORD			X		X		X		X (meeting rooms at disposal)
	Info Days, Belgium to mobilise information multipliers in all different regions	Science communication multipliers, Belgium	X	Nausicaa	Belgian partners: VITO, VLIZ			X				X		X (meeting rooms at disposal)
	Info Days, UK to mobilise information multipliers in all different regions	Science communication multipliers, UK	X	Nausicaa	English partners: PML, University of Greenwich, CEMARE					X				X (meeting rooms at disposal)
	International Conference in Boulogne sur Mer, France to share and promote the results of the project	Professionals and scientists & media event	X	Nausicaa	All partners: ADRINORD, VITO, VLIZ, NIOO, PML, University of Greenwich, CEMARE							X		X (meeting rooms at disposal)
<b>Outreach events:</b>														
	4 World Oceans Day, 8th June	All publics	X	Nausicaa	All partners			X				X		X (Partner events on World Ocean Day)
	4 Public Debate 1	General public	X	Nausicaa				X						
	4 Public Debate 2	General public	X	Nausicaa								X		
	Educational kits / CD Roms, video	General public	X	Nausicaa	All partners				X					
	4 snippets Educational activities and Nausicaa's interactive set	General public	X	Nausicaa	All partners				X					
<b>Communication tools:</b>														
	Project information brochure in ENG, FR, NL / Logo and graphical charter (Poster...)	General public	X	Nausicaa	Adrinord, VLIZ To be used by all partners			X						
	4 Information leaflet for the Public	General public	X	Nausicaa	All partners: ADRINORD, VITO, VLIZ, NIOO, PML, University of Greenwich, CEMARE			X				X		X (Partner web dissemination)
	Regular e-releases and info 4 sheets / press releases	General public	X	Nausicaa				X				X		
	Use of differents communication 4 documents for each partners	General public		Nausicaa				X				X		X (Partner distribution)
	Regular presentation through the information & communication tools and actions of each partners	General public		Nausicaa	All partners: ADRINORD, VITO, VLIZ, NIOO, PML, University of Greenwich, CEMARE			X				X		X (Partner regular C&D tools)
4														
<b>Web Information Server:</b>														



Annex 3 REPARTITION OF THE PROJECT BANNERS -

Institute	1] FOAM			2] GREEN ALGAE			3] ISECA PROJECT			TOTAL	RESTE
	FR	EN	ND	FR	EN	ND	FR	EN	ND		
U of G					1			1		2	0
PML					1			1		2	0
CEMARE					1			1		2	0
NIOZ		1						1		2	2
NAUSICAA	1					1				3	0
VLIZ			1 envoyé						1 envoyé	2	0
ADRINORD							1			1	0
VITO		1						1		2	0
<b>TOTAUX</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>5</b>	<b>0</b>	<b>16</b>	<b>2</b>

**Fiche sujet : Eutrophisation****Suivi par : E. Chiroutre et A. Cousin-Klawinski****Affichage dynamique : Direct ! Les marées vertes avec Alain Lefebvre de l'Ifremer**

<b>Lieu</b>	Locaux de l'Ifremer à Boulogne
<b>Personne interviewée</b>	Alain Lefebvre de l'Ifremer. L'Ifremer étudie les impacts de la montée en puissance des activités humaines et du réchauffement climatique sur l'environnement marin. Il est amené à interagir avec les instances de décision en amont et essaie également de sensibiliser le grand public en aval. Son métier est basé sur l'observation et la surveillance du milieu marin.
<b>Document complémentaire</b>	Compte-rendu Infoday et doc sur Phaeocystis destinés au présentateur Et aussi <a href="http://www.iseca.eu/fr/2012-10-23-07-54-45/qu-est-ce-que-l-eutrophisation">http://www.iseca.eu/fr/2012-10-23-07-54-45/qu-est-ce-que-l-eutrophisation</a>
<b>Dates et Horaires</b>	
<b>Vidéo</b>	Film d'Adrien Delater Quand la mer mousse
<b>Direct</b>	Sur place ou par téléphone : 03 21 99 56 22 ou 06 73 58 97 52
<b>Questions</b>	<p><b>Bonjour à tous,</b></p> <p><b>Nous allons aujourd'hui vous parler d'un phénomène que vous avez peut-être déjà vu. Certains jours sur nos côtes, la mer... mousse ! Mais d'où vient cette mousse ? Pour répondre à nos questions, nous avons invité Alain Lefebvre du centre Ifremer de Boulogne-sur-Mer.</b></p> <p><b>Mais tout d'abord, quelques images...</b></p> <p><b>Bonjour Alain Lefebvre et merci d'être avec nous en direct sur le plateau TV de Nausicaá.</b></p> <p><b>Tout d'abord, quel est le rôle de l'Ifremer ?</b></p> <p>Ifremer, Boulogne. Parler du rôle de sentinelles (L'Ifremer contribue, par ses travaux et expertises, à la connaissance des océans et de leurs ressources, à la surveillance du milieu marin et du littoral et au développement durable des activités maritimes.).</p> <p><b>Pouvez-vous expliquer pourquoi la mer mousse ?</b></p> <p>A cause d'un phénomène appelé eutrophisation. L'eutrophisation est un phénomène qui, selon le milieu (baie calme ou mer agitée) et le type d'algue (macroscopique ou microscopique), peut être visible en bord de mer sous forme de marée verte ou de mousse sur la plage (cf. photo page précédente).</p> <p>Les algues se développent en mer en se nourrissant des ressources</p>

	<p>minérales dans l'eau. Lorsqu'il y a beaucoup de nutriments (nitrates et phosphates), elles croissent rapidement. Une petite augmentation de la biomasse des algues n'a pas d'effet négatif sur l'écosystème et peut même provoquer un accroissement de certaines populations de poissons. Par contre, lorsqu'il y a trop de matières nutritives dans l'eau, une stimulation trop forte de la croissance des algues peut troubler l'eau et ainsi gêner le passage de la lumière. En effet, quand l'algue meurt, celle-ci est décomposée par de nombreuses bactéries qui utilisent l'oxygène de l'eau pour respirer ; l'eau peut-être temporairement appauvrie en oxygène ce qui menace la survie des autres êtres vivants. Ce phénomène est appelé l'eutrophisation. Selon le milieu (baie calme ou mer agitée) et le type d'algue (macroscopique ou microscopique), il s'observe sous différentes formes: marée verte ou mousse sur la plage.</p> <p><b>Quelles sont les causes de cette eutrophisation ?</b></p> <p>On parle d'eutrophisation lorsque les causes sont dues aux activités humaines telles que les rejets domestiques et industriels, les eaux chargées en engrais chimiques provenant des zones rurales,... Ces rejets sont tellement importants qu'ils accélèrent le processus.</p> <p><u>Questions du public</u></p> <p><b>Est-ce que cette mousse représente un danger pour la faune, la flore ou pour l'Homme ?</b></p> <p>...</p> <p><b>Que peut-on faire ?</b></p> <p>Depuis ces 20 dernières années, toutes ces questions ont été étudiées de manière approfondie et ont fait l'objet de nombreuses discussions... Le problème a été pris en compte au sein de la Directive-Cadre sur l'Eau de l'Union Européenne et au sein de la convention OSPAR en 1992. Ces deux conventions ont pour objectif d'instaurer une bonne gestion de nos rivières et de nos eaux côtières. Pour atteindre ces objectifs, les paramètres de qualité de l'eau doivent être régulièrement contrôlés et publiés. De même, on se doit d'étudier ses effets socio-économiques sur le territoire et identifier les informations nécessaires aux parties prenantes (acteurs politiques, agricoles, industriels, touristiques...).</p> <p><u>Questions du public</u></p> <p>Remerciements et salutations.</p>
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## Annex 5 – Final ISECA video- eutrophisation

**Film à réaliser dans le cadre du projet Interreg IV A 2mers ISECA (Information System on the Eutrophication of our Coastal Areas).**

**Durée du support proposée** : 6 minutes environ

**Thèmes** :

- le phénomène de l'eutrophisation, plus particulièrement **en eaux côtières**
- le projet ISECA

**Public visé** : le grand public (à partir de 14ans)

**Lieux de diffusion potentiels** :

- Au Plateau TV de NAUSICAA
- Dans l'exposition de NAUSICAA
- Lors d'événements internes ou externes à NAUSICAA en lien avec cette thématique.
- Lors d'animations pédagogiques en lien avec ce thème (pour un public à partir de fin collège)
- Sur le site internet NAUSICAA
- Sur le site [www.iseca.eu](http://www.iseca.eu)

**Objectifs (qui peuvent aider à construire le déroulé):**

- interpellé
- informer le public sur ce qu'est ce phénomène :
  - . Définition
  - . Ses manifestations
  - . Ses causes
  - . Les paramètres l'influençant et les différentes sources de pollution
  - . Ses conséquences
- montrer comment limiter l'eutrophisation :
  - . Importance de la recherche et du développement : il faut tout d'abord étudier le phénomène pour le comprendre, l'observer, le mesurer, le surveiller (observation satellitaire et in-situ) l'anticiper (outils de modélisation) pour alerter. Innover, améliorer les techniques.
  - . Fixer des règles (DSCMM, DCE etc.), des stratégies, organiser des groupes de travail (par ex, OSPAR...). La réglementation porte essentiellement sur les rejets d'assainissement des collectivités et des industries et sur les émissions agricoles.
  - . Informer
  - . Agir / soigner : ce qui a été fait sur les 30 dernières années ... et demain ?
- Souligner l'importance de travailler ensemble pour comprendre et agir efficacement : impliquer tous les acteurs concernés (scientifiques, secteur agricole et industriel, technicien de l'eau, décideurs, politiques à différents niveaux, etc.)
- Donner l'exemple du projet ISECA

## Annex 6

List of scientific communications, presentations and posters available at:  
<http://www.iseca.eu/en/about/document-system/Private/Management/Semester-Reports/>

### SR2

<i>Annexes</i>	<i>Description</i>
A10	ISECA Poster, V. Martinez et al, PML
A14	Correction of Fresnel reflection of the sky dome accounting for the polarisation. Internal report, ISECA, December, 2011. R. Santer and F. Zagolski,
A15	R. Santer and O. Aznay, 2011, Atmospheric correction and related issues
A-20	Accuracy assessment of satellite Ocean colour products in coastal waters. Gavin Tilstone, Steve Groom, Aneesh Lotliker, Victor Martinez-Vicente, Peter Miller, Yaswant Pradhan, Jamie Shutler. Southampton. Sept. 2011
A-21	Gavin Tilstone, Steef Peters, Hans van der Woerd, Marieke Eleveld, Kevin Ruddick, Wolfgang Schoenfeld, Hajo Krasemann, Victor Martinez-Vicente, David Blondeau-Patissier, Rudiger Rottgers, Kai Sorensen, Peter Jorgensen, Jamie Shutler. (2012) Variability in specific-absorption properties and their use in a semi-analytical Ocean Colour Algorithm for MERIS in North Sea and Western English Channel coastal waters. Remote Sensing Environment 118: 320-338.

### SR3

#	Name
A11	Poster SIMEC ICOL
A12	Poster PML, Liège
A13	Poster PML, ESA ESRIN

### SR4

#	Name
A21	Hickman A.E., Moore C. M, Sharples J, Lucas M.I., Tilstone G.H., Krivtsov V., Holligan P. (2012). Primary production and nitrate uptake within the seasonal thermocline of the Celtic Sea. Marine Ecology Progress Series 463: 39-57, doi: <a href="https://doi.org/10.3354/meps09836">10.3354/meps09836</a> .
A24	Tilstone et al. (presented by Groom) Accuracy assessment of algorithms available for MERIS in North Sea and Western English Channel coastal waters. 3 <sup>rd</sup> MERIS/(A)ATSR and OLCI/SLSTR Preparatory Workshop, 15-19 October 2012, European Space Agency, Frascati, Italy.
A26	Vermaat J., Broekx S., van Eck B., Engelen G., Hellmann F., de Kok J.-L., van der Kwast H., Maes J., Salomons W., van Deursen W., 2012. Nitrogen source apportionment for the catchment, estuary and adjacent coastal waters of the river Scheldt. A Systems Approach for Sustainable Development in Coastal Zones. Ecology and Society 17(2):30. <a href="http://www.ecologyandsociety.org/vol17/iss2/art30/">http://www.ecologyandsociety.org/vol17/iss2/art30/</a>
A40	A2-4: Poster by ADRINORD et al on the regional inherent optical properties of the aerosols
A41	A2-4: Poster by ADRINORD et al on a regional atmospheric correction for MERIS
A45	A2-4: Poster by ADRINORD et al on the validation of the atmospheric correction
A30	A2-5: Initial results with automated ship-borne reflectance measurements and data processing in near-coastal waters in the Western Channel V. Martinez-Vicente, Simis S.G.H.2 R. Alegre1, P.E.Land, S.B. Groom1
A34	A2-1: Presentation by ADRINORD et al of a new protocol to correct from the sky dome

	reflection
A35	A2-1: Poster by ADRINORD et al of a simulator of the sky dome reflection
A36	A2-1: Poster by ADRINORD et al of a new processor to correct from the sky dome reflection
A42	A2-4 Proceeding by ADRINORD et al on the regional inherent optical properties of the aerosols
A43	A2-4: Proceeding by ADRINORD et al on a regional atmospheric correction for MERIS
A46	A2-4 Proceeding by ADRINORD et al report on the validation of the atmospheric correction
A37	A2-1: Proceeding by ADRINORD et al of a new protocol to correct from the sky dome reflection
A38	A2-1 Proceeding by ADRINORD et al of a simulator of the sky dome reflection
A39	A2-1: Proceeding by ADRINORD et al of a new processor to correct from the sky dome reflection

### SR5

#	Name
31	Poster “Validation SIMEC adjacency correction for Coastal and Inland Waters” presented at International Ocean Colour Science (IOCS) meeting Darmstadt, Germany, 6 -8 May 2013 ...
33	Barnes, M., <b>Tilstone G.H.</b> , Smyth, T.J., Suggett, D., Gloel, J., Widdicombe, C. Importance of <i>Karenia mikimotoi</i> in the Western English Channel. Harmful Algae (Submitted Jan 2013).
34	Barnes, M., <b>Tilstone G.H.</b> , Smyth, T.J., Suggett, D., Astoreca, R, Lancelot C, Kromkamp J. Absorption-based model of primary production for coastal waters in two size-fractions of phytoplankton. Marine Ecology Progress Series (Submitted April 2013).
35	<b>Martinez-Vicente,V.</b> , Simis, S.G.H., Alegre, R., Land P.E., and <b>Groom, S. B.</b> , Initial results with automated ship-borne reflectance measurements and data processing in near-coastal waters in the Western Channel. (Submitted May 2013).
36	<b>Tilstone</b> et al.. Ocean colour work at PML, CoastColour User Consultation Meeting 4, Darmstadt, Germany, <b>9-10 May 2013</b> .
37	<b>Tilstone GH</b> (2013) ISECA Algorithm Validation report for Case 2 waters of the INTERREG-2Seas Regions: North Sea and Western English Channel. March 2013 Plymouth Marine Laboratory(PML) – UK.
38	<b>Tilstone G.H.</b> et al. Variability in specific-absorption properties and their use in Ocean Colour Algorithms for MERIS in North Sea coastal waters. International Ocean Colour Science Meeting, Darmstadt, Germany, <b>6-8 May 2013</b> . (Poster)
39	<b>Martinez-Vicente,V.</b> , Simis, S.G.H., Alegre, R., Land P.E., and <b>Groom, S. B.</b> , Initial results with automated ship-borne reflectance measurements and data processing in near-coastal waters in the Western Channel., NIOZ, Texel, Holland,18-20 March 2013
40	Gallienne C. and Mason, P,(2013) Proposed HyperSAS Azimuth Control System. (A7)
51	Jacco C. Kromkamp, Georgi Djambazov, Koulis Pericleous, Mayur Patel. The importance of atmospheric nitrogen deposition for the estimates of primary production in the North Sea: simple budget approach. Internal report to ISECA



## SR6

#	Name
A51	Barnes, M., <b>Tilstone G.H.</b> , Smyth, T.J., Suggett, D., Astoreca, R, Lancelot C, Kromkamp J. Absorption-based model of primary production for coastal waters in two size-fractions of phytoplankton. <i>Marine Ecology Progress Series</i> (Accepted).
A52	Yu-Yuan Xie, <b>Gavin Tilstone</b> , Sara Puddy, Claire Widdecombe, Elaine Fileman, Ulgen Kopuz, Glen Tarran, Malcolm Woodward. The effect of increases in temperature and nutrients on phytoplankton community structure and photosynthesis in the Western English Channel ( <i>Submitted: Marine Ecology Progress Series</i> ).
A53	Tilstone et al. Validation of S-3-OLCI in the Atlantic Ocean and Western English Channel, Frascati, Italy, 26-26 Nov 2013.
A44	Yu-Yuan Xie, <b>Gavin Tilstone</b> , Sara Puddy, Claire Widdecombe , Elaine Fileman, Ulgen Kopuz, Glen Tarran, Malcolm Woodward. The effect of increases in temperature and nutrients on phytoplankton community structure and carbon fixation in the Western English Channel. Challenger Society Marine Optics Conference, Plymouth, UK, 16-17 Dec 2013.
A55	Sara Puddy, Yu-Yuan Xie, <b>Gavin Tilstone</b> , Elaine Fileman, Ulgen Kopuz, Glen Tarran, Malcolm Woodward. The effect of increases in temperature and nutrients on phytoplankton community structure and carbon fixation in the Western English Channel. Challenger Society BioGeoChemistry Conference, Leeds, UK, 9-11 Sept 2013.
A56	Sara Puddy, The effect of increases in temperature and nutrients on phytoplankton community structure and carbon fixation in the Western English Channel. MSc Dissertation. Supervisors: Gavin Tilstone & Colin Munn (Uni of Plymouth). Mark – 85/100
A57	Martinez-Vicente V. Martinez-Vicente, V., Dall’Olmo, Tilstone, G., Tarran, G., Torres, R., G., Smyth, T., Groom, S.B. and WCO contributors. In-situ Optics at the Western Channel Observatory Challenger Society Marine Optics Conference, Plymouth, UK, 16-17 Dec 2013
A58	Martinez-Vicente, V and Tilstone G. H. Quality control guidelines for bio-optical data in coastal waters. Report.

## SR7

#	Name
A2.SR7.1	Barnes, M., <b>Tilstone G.H.</b> , Smyth, T.J., Suggett, D., Astoreca, R, Lancelot C, Kromkamp J. 2014. Absorption-based model of primary production for coastal waters in two size-fractions of phytoplankton. <i>Marine Ecology Progress Series</i> 504: 73-89.
A2.SR7.2	Yu-Yuan Xie, <b>Gavin Tilstone</b> , Sara Puddy, Claire Widdecombe, Elaine Fileman, Ulgen Kopuz, Glen Tarran, Malcolm Woodward. The effect of increases in temperature and nutrients on phytoplankton community structure and photosynthesis in the Western English Channel <i>Marine Ecology Progress Series</i> . In review.
A2.SR7.3	Barnes, M., <b>Tilstone G.H.</b> , Smyth, T.J., Widdicombe C, Gloel J, Robinson C, Kaiser J, Suggett D. Drivers and effects of <i>Karenia mikimotoi</i> blooms in the western English Channel (1992-2010). (Submitted) <b><i>Progress in Oceanography</i></b>
A2.SR7.4	Barnes, M., <b>Tilstone G.H.</b> , Suggett D, Widdicombe C, Bruun J, Martinez-Vicente V, Smyth, T.J. Temporal variability in total, micro- and nano-phytoplankton

	primary production at a coastal site in the western English Channel. (Submitted) <b>Progress in Oceanography</b>
A2.SR7.5	Queirós AM, Stephens N, Cook R, Ravaglioli C, Nunes J, Dashfield S, Harris C, <b>Tilstone G</b> , Fishwick J, Somerfield P, Widdicombe S. Can benthic community structure be used to predict bioturbation in ecosystems? (Submitted) <b>Progress in Oceanography</b>
A2.SR7.6	Torres R, Artioli Y, Kitidis V, Ciavatta S, Villareal M, Shutler J, Polimeme L, <b>Martinez V</b> , Widdicombe C, Woodward EMS, Smyth T, Fishwick J, <b>Tilstone G</b> , Knappett D. Sensitivity of modelled CO <sub>2</sub> air-sea flux in a coastal environment using a complex ecosystem model. (submitted) Biogeosciences
A2.SR7.7	Hang QTZ, Widdicombe S, <b>Tilstone G</b> . Coupling between primary production and benthic biodiversity in the Western English Channel. (Submitted) <b>Progress in Oceanography</b>
A2.SR7.8	Tilstone et al. Validation of MERIS COASTCOLOUR products in coastal European waters. In prep.
A2.SR7.9	Tilstone G, Gohin F. March 2014. Algorithm Validation Report for MERIS Level2 products in Case 2 Waters of the INTERREG-2Seas Region: North Sea and Western English Channel.
A2.SR7.10	Gloël J, Robinson C, <b>Tilstone G</b> , Tarran G, Kaiser J. Benzalkonium chloride: A less hazardous alternative to mercuric chloride for short-term preservation of seawater samples. <b>Submitted Aquatic Microbial Ecology</b> .
A4.SR7.8	ISECA poster : Martinez-Vicente V., Tilstone G.H., De Kok J.L., Van Best C., Groom S.B., Santer R., <i>Earth Observation Tool for monitoring Coastal Eutrophication (meeting details?)</i>
A3.SR7.1	<b>Jean-Luc de Kok</b> and Wesley Boëne. Integrating Earth Observation with field data and model simulations - the ISECA project. Poster presented at the 2Seas Annual Event. Rotterdam, March 14-15, 2013.
A3.SR7.2	<b>Jean-Luc de Kok</b> . New web platform maps the causes of marine algal blooms. VITO Newsletter. June 26, 2014.
A3.SR7.3	<b>Jean-Luc de Kok</b> , Guy Engelen and Joachim Maes. Reusability of model components for environmental simulation – Case studies for integrated coastal zone management. Revised version submitted to Environmental Modelling and Software, August, 2014.

Barnes, M., **Tilstone G.H.**, Smyth, T.J., Widdicombe C, Gloel J, Robinson C, Kaiser J, Suggett D. Drivers and effects of *Karenia mikimotoi* blooms in the western English Channel (1992-2010). (Accepted 2014) **Progress in Oceanography**

Barnes, M., **Tilstone G.H.**, Suggett D, Widdicombe C, Bruun J, Martinez-Vicente V, Smyth, T.J. Temporal variability in total, micro- and nano-phytoplankton primary production at a coastal site in the western English Channel. (Accepted 2014) **Progress in Oceanography**

Yu-Yuan Xie, **Gavin Tilstone**, Claire Widdicombe, Malcolm Woodward, Carolyn Harris, Morvan Barnes. The effect of increases in temperature and nutrients on phytoplankton community structure and photosynthesis in the Western English Channel. *Marine Ecology Progress Series*. (In press 2014). M11001.

**Tilstone G.H.** and Mallor-Hoya S. 2014. MERIS COASTCOLOUR Chlorophyll 90<sup>th</sup> percentile as an indicator of eutrophication in the INTERREG-2Seas region. ISECA Report MCC-90PIE-2Seas.

**Djambazov G. and Pericleous K.**, Modelled Atmospheric Contribution to Nitrogen Eutrophication in the English Channel and the Southern North Sea, submitted in July 2014 to the journal “Atmospheric environment”.



## Annex 7- First Questionnaire A1-3

### ENQUETE d'intérêt public : Que pensez-vous de la présence de mousses sur nos rivages ?

Nom de l'Enquêteur : ..... Date de l'enquête (jj/mm/2011) : .../.../2011

Lieu de l'enquête : ..... Région : Nord-Pas de Calais

Modalité de l'enquête : face à face  téléphone  internet  à disposition dans Office de Tourisme

---

1) Personne interrogée : Sexe : H / F âge : ..... ans nationalité : ..... secteur professionnel : .....

2) Fréquentez-vous les plages du Nord-Pas de Calais ?  
régulièrement  occasionnellement  exceptionnellement

3a) Dans quel cadre ?

Pour vous promener : oui  non

Pour vos vacances : oui  non

Pour vous soigner (Thalasso...) : oui  non

Pour travailler : oui  non  Quel métier ?

3b) Allez-vous dans l'eau ? (sports nautiques / baignade/ pêche à pied) : oui  non

4) La présence de mousses en bordure de rivage vous est elle familière ? oui  non   
Si oui quand l'avez-vous observé ?

5) Regardez les photos ci jointes. **Selon vous** ce phénomène est-il :

Un phénomène naturel biologique ? oui  non  peut être  aucune idée

Un phénomène lié à une pollution accidentelle ? oui  non  peut être  aucune idée

Un phénomène causé par les activités humaines ? oui  non  peut être  aucune idée

- Qui résulterait plutôt de la pollution des sols (pesticides, engrais par exemple)  
un peu  surtout  exclusivement  pas du tout  ne sais pas
- Qui résulterait plutôt de la pollution des eaux ? (détergents industriels ou domestiques)  
un peu  surtout  exclusivement  pas du tout  ne sais pas
- Qui résulterait plutôt du changement climatique ? (variation des températures)  
un peu  surtout  exclusivement  pas du tout  ne sais pas

6) Cette présence de mousses en bordure de rivage vous incommodent elle ?  
un peu  assez  beaucoup  pas du tout  seulement si.....

7) Pour vous la présence de mousses sur la plage et/ou sur l'eau :

- Ce n'est pas dangereux 
  - Mais cela sent mauvais oui  non
  - Mais cela salit oui  non
  - Mais cela ne fait pas joli oui  non
  - Mais cela pollue l'eau de baignade oui  non
- C est potentiellement dangereux 
  - Pour l'homme ? oui  non
  - Pour l'animal (chien, mouette, poisson, mollusque...)? oui  non

8) Dans quelle proportion ce phénomène gênerait il vos activités (récréative, sportive ou économique) sur le littoral ?

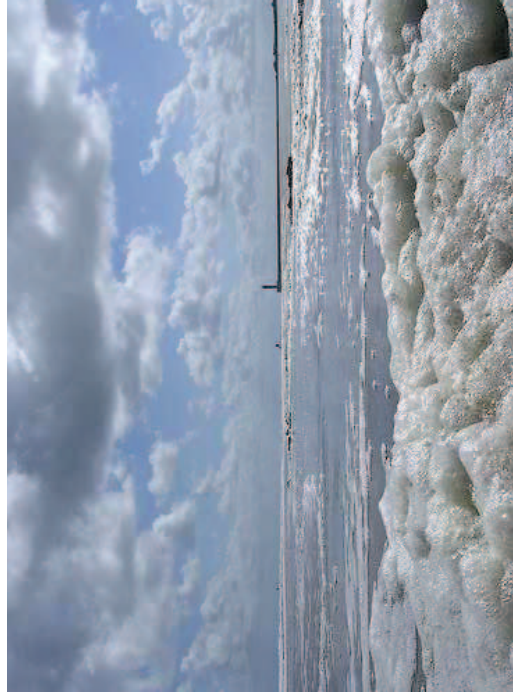
Présence de mousses jusqu'à : Plante du pied  Cheville  Genou  Hanche  supérieur   
Etendue de mousses sur l'eau : taches éparses  quelques mètres  centaines de mètres

9) Dans quelle proportion ce phénomène vous amènerait il à ne plus fréquenter cette plage ?

Présence de mousses jusqu'à : Plante du pied  Cheville  Genou  Hanche  Haut du corps   
Etendue de mousses sur l'eau : taches éparses  quelques mètres  centaines de mètres

10) Connaissez-vous le phénomène d'eutrophisation des eaux côtières ? un peu  bien  très bien  pas du tout

**Supports visuels à l'enquête « Que pensez-vous de la présence de mousses sur nos rivages ? »**



Source : [www.chtipecheur.com](http://www.chtipecheur.com)

Lieu: Boulonais

mai 2006

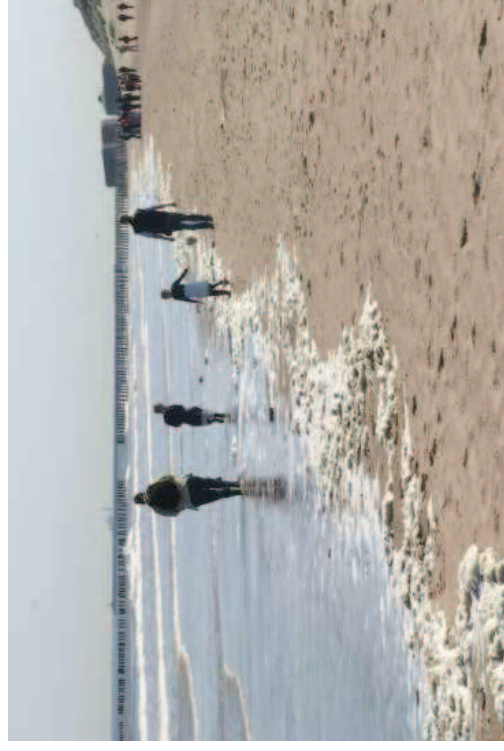
Source : [www.chtipecheur.com](http://www.chtipecheur.com)

Lieu: Wimereux

avril 2002



Source : Journée de l'Agence de l'eau du 24 nov. 2009



Source : [www.platier.free.fr/](http://www.platier.free.fr/)

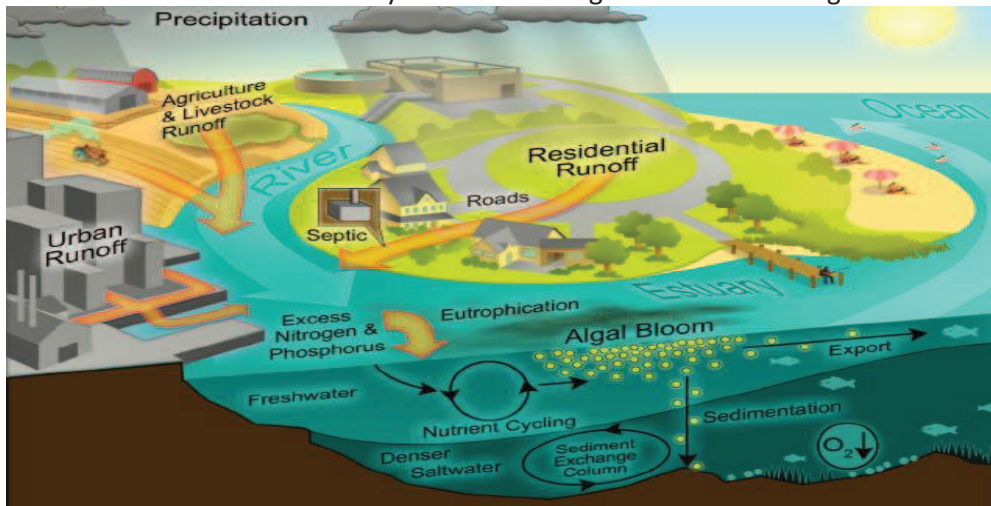
Lieu : Côte d'Opale

menée dans le cadre du projet INTERREG IV A 2MERS 'ISECA'  
*Information System on the Eutrophication of our Coastal Areas*



## SURVEY: PUBLIC PERCEPTION ON EUTROPHICATION IN THE SOLENT

The Solent is a heavily used body of water and there are many environmental pressures inflicted upon it. Eutrophication is an issue that results from pollutants entering into the water. These pollutants include sewage, land run-off of fertilisers and pesticides which together cause phytoplankton to grow and reproduce more rapidly, resulting in large scale algal blooms. In the southern UK harbours external inputs of nutrients could sustain the growth of macroalgae at the beginning of a growing season. Widespread growth of green seaweeds occurs in many intertidal areas of the Solent. This has several knock-on effects on the ecosystem functioning, the most damaging being the using up of the oxygen in the water (Figure 1). The European Commission (EC) nitrates directive requires areas of land that drain directly into polluted waters to be designated Nitrate Vulnerable Zones (NVZ) and for the farmers to follow mandatory rules concerning nitrate loss from agriculture.



[http://www.tokresource.org/tok\\_classes/enviro/syllabus\\_content/5.4\\_eutrophication/index.htm](http://www.tokresource.org/tok_classes/enviro/syllabus_content/5.4_eutrophication/index.htm)

**Figure 1. A diagram representing the eutrophication process.**

The purpose of this survey is to determine the public perception towards water quality in the Solent and its effects on public use and their willingness to contribute to improvements.

### NOTES ON THE QUESTIONNAIRE

*Please take a little time, using these notes, to familiarise yourself with the structure of the questionnaire before answering the questions.*

In what follows we will present you with different options called choice sets. These are made up of the attributes and levels described below.

#### Attributes

**UPSTW** – Upgrade sewage treatment works

**REDAGNUT** – Reduce nutrient inputs from agriculture to rivers and estuaries discharging to the Solent water; Farms must comply with requirements from Solent Nitrate Vulnerable Zones (NVZ) schemes.

**COST**– Management and monitoring cost (this payment would be an additional yearly tax contribution per person)

#### In summary:

##### **UPSTW – Upgrade sewage treatment works:**

- STATUS QUO - maintain current levels
- IMPROVING - more treatment work to improve water to good level
- SIGNIFICANTLY IMPROVING - cost more but water at excellent level

##### **REDAGNUT – Reduce nutrient inputs to rivers and estuaries discharging to the Solent water:**

- STATUS QUO - current number of farms compliant with the requirements of the Solent NVZs
- IMPROVED COMPLIANCE - the number of non-compliant farms is halved
- FULL COMPLIANCE- all farms become compliant

**COST – Management and monitoring cost (this payment would be an additional yearly tax contribution per person):**

- £0 – no additional tax
- £10 – additional yearly tax
- £25 – additional yearly tax

## Questionnaire Instructions

Green macro algal mats covering eelgrass resulting from large quantities of nutrients entering the solent




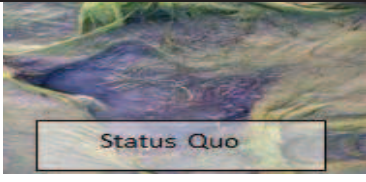
Photo courtesy of Hants and Wight Wildlife Trust

In the choices presented within the questionnaire ([section 1](#)), we will present to you the choice sets. These are made up of the elements described above. Please consider these carefully and select your preferred option.

In [section 2](#), questions are presented to find out more information about your wider preferences.

In [section 3](#), which will remain completely confidential, we ask you about yourself. This will help us to place your views in relation to others with both similar and different characteristics to yourself.

### EXAMPLE OF A CHOICE SET:


	UPSTW	REDAGNUT	COST	
1.			£0	THIS IS MY PREFERRED OPTION <input type="checkbox"/>

The above choice set is one example of possible management of the area. It contains the 3 attributes (LEVEL OF REDAGNUT, UPSTW and COST) each at one specific level.

Each choice set shown, will consist of these elements at different levels. It is your decision to choose the best choice that matches your preferences regarding the management of the Solent. Therefore, on the [questionnaire](#), we would like to ask you to consider,

**“which ONE option do you prefer the most!”**

**BEFORE TICKING YOUR PREFERRED CHOICE, PLEASE SPEND TIME CONSIDERING ALL OPTIONS.**

	<b>UPSTW:IMPROVING</b>	<b>REDAGNUT STATUS QUO</b>	<b>COST</b>	
1.		 Status Quo	<b>£10</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>
	<b>UPSTW: IMPROVING</b>	<b>REDAGNUT FULL COMP</b>	<b>COST</b>	
2.		 Full Compliance	<b>£25</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>
	<b>UPSTW: SIG IMPROVING</b>	<b>REDAGNUT STATUS QUO</b>	<b>COST</b>	
3.		 Status Quo	<b>£25</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>
	<b>UPSTW: IMPROVING</b>	<b>REDAGNUT IMP COMP</b>	<b>COST</b>	
4.		 Improved Compliance	<b>£0</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>
	<b>UPSTW: SIG IMPROVING</b>	<b>REDAGNUT IMP COMP</b>	<b>COST</b>	
5.		 Improved Compliance	<b>£10</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>
	<b>UPSTW: STATUS QUO</b>	<b>REDAGNUT IMP COMP</b>	<b>COST</b>	
6.		 Improved Compliance	<b>£25</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>
	<b>UPSTW: SIG IMPROVING</b>	<b>REDAGNUT FULL COMP</b>	<b>COST</b>	
7.		 Full Compliance	<b>£0</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>
	<b>UPSTW: STATUS QUO</b>	<b>REDAGNUT STATUS QUO</b>	<b>COST</b>	
8.		 Status Quo	<b>£0</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>
	<b>UPSTW: STATUS QUO</b>	<b>REDAGNUT FULL COMP</b>	<b>COST</b>	
9.		 Full Compliance	<b>£10</b>	THIS IS MY PREFERRED OPTION <input type="checkbox"/>











## Annex 9- agenda all partners' C&D events



	Jan-13	Feb-13	Mar-13	Apr-13	May-13	Jun-13	Jul-13	Aug-13	Sep-13	Oct-13	Nov-13	Dec-13
ALL PARTNERS							Progress meeting - Medway (UK) 9th-10th July 2013					Progress meeting - Portsmouth (UK) 17th,18th,19th dec 2013
ADRINORD			2Seas Annual Event Rotterdam 14-15 March 2013									
CEMARE										ECSA 53 conference to present the Solent survey - China 13-17th October		
NAUSICAA			2Seas Annual Event Rotterdam 14-15 March 2013 + ISECA 2nd Newsletter + teachers training day at Nausicaa	International Kites Meeting - Berck-sur-mer (WSF activity) 13th, 14th, 20th, 21th April 2013 "When the sea foams" to Nausicaa's visitors (13th, 17th, 18th, 19th, 22th, 23th, 24th, 25th, April 2013) and toward groups	Festival of Nature - Boulogne sur mer 25th May 2013 + ISECA 3rd Newsletter	Word Ocean Day - Boulogne sur mer Plankton and phaeocystis ISECA workshop 8th June 2013 + launch of the AI-3 questionnaire on ISECA website		4th ISECA Newsletter	educational ISECA activities on external stands or in House for different dates + EMSEA conference (UK Info Days) - Plymouth + project folder and new ISECA videos launched	science festival (algae workshop with the LOG)		DYNAMAPHY Final event - 2 and 3 Dec 2013 + RESOMAR workshops - and 5 Dec 2013 - Boulogne sur mer
NIOZ												
PML			UK Science Week - Plymouth (satellites and Ocean Color activity) 15th-24th March 2013. Optics Conference, 18-20 March 2013, NIOZ, Texel, Holland.		CoastColour User Meeting, 9-10 May 2013, Darmstadt, Germany + International Ocean Colour Science Meeting, 6-8 May 2013, Darmstadt, Germany.				EMSEA conference (UK Info Days) - Plymouth 3-5 September 2013. Challenger Society Biogeochemistry Conference, Leeds, UK, 9-11 Sept 2013.	Conference at PML -Using satellites to monitor the seas around us (UK Info Days) - 10 October 2013		Marine Optics Conference at PML 16th 17th December 2013
UNIVERSITY OF GREENWICH												
VITO		2 seas ERANET Forum - Brussels 6th Feb 2013	2Seas Annual Event Rotterdam 14-15 March 2013		IOCS meeting - Darmstadt 6th-8th May 2013							
VLIZ		Expo Marine ART Project 2nd February 2013 Young Scientist Day 14th-15th February 2013	2Seas Annual Event Rotterdam 14-15 March 2013		Aquarium Sealife Blankenberge (schools) From end of May				Zee op de Korrel - Ostend 12/09/2013 19/09/2013 26/09/2013	Belgian Info Day - Ostend 11 October 2013		seminar with coastal guides 14th December 2013 Beach Lab activity demo

## Annex 9- agenda all partners' C&D events



	Jan-14	Feb-14	Mar-14	Apr-14	May-14	Jun-14	aug 14	Sep-14
ALL PARTNERS						Final Event - 30 June-1st July 2014 + Progress meeting 7 at Nausicaa Boulogne sur mer		
ADRINORD								
CEMARE							IMMC3 Conference - Glasgow, UK- 14- 19th Aug 2014 (A1- 4 results presentation)	
NAUSICAA	CCST gathering (WSP activity presented)		Public debate- Boulogne sur mer 20th March 2013			word ocean day - Boulogne sur mer (Plankton and phaeocystis ISECA workshop ) - 6th to 8th June 2014 + MAREL CARNOT + IFREMER Conference Boulogne sur mer 12-13th June ISECA Newsletter		ISECA Newsletter 6 + last ISECA videos
NIOZ								
PWL						Marine and Coastal Policy Forum (Plymouth,UK) 18 th June 2014		stakeholders meeting at DEFRA Offices- London, UK- 19th Sept 2014
UNIVERSITY OF GREENWICH								
VITO								
VLIZ								

### Préparation à la conférence-débat du 20 Mars 2014

**Événement organisé lors de la Journée Mondiale de l'eau dans le cadre du projet Interreg 2mers ISECA (Information System on the Eutrophication of our Coastal Areas)**

**Lieu :** Plateau TV ou Océan Atlantique selon le nombre d'inscrits.

**Heure proposée :** 19 h à 20 h 30

**Thème :** En quoi les actions mises en place depuis 30 ans améliorent la qualité des eaux côtières et limitent l'eutrophisation ?

#### **Objectifs (avec ébauche de déroulé):**

- Mettre en avant le projet ISECA : comment s'observe et se mesure l'eutrophisation (observation satellitaire et in-situ) ? Quel est ce projet ?
- Brièvement informer le public sur le phénomène d'eutrophisation côtière et les paramètres observés: qu'est-ce que c'est ? À quoi cela est-il dû ? Quelles en sont les conséquences ? Sous quelles formes cela peut-il se manifester ? (mousse/marées vertes) ...
- Faire intervenir des professionnels concernés par cette problématique (scientifique, représentant de la filière eau, industriel, agriculteur...) : « Qui êtes-vous et en quoi vos actions améliorent la qualité de l'eau et limitent l'eutrophisation des eaux côtières ? ».  
Notre idée est d'insister sur la partie positive de leur métier « en quoi les choses s'améliorent » depuis quelques années mais sans pour autant occulter les efforts qu'il nous reste à faire pour que les eaux côtières soient de bonne qualité...
- Permettre au public de poser des questions aux experts
- Disséminer les outils ISECA

**Public attendu :** ouvert à tous mais un public plutôt averti : étudiants concernés par le sujet, relais éducatifs (enseignants, animateurs...), abonnés de NAUSICAA, Citoyens de l'Océan, Réseau Océan Mondial, autres.

**Invitation aux intervenants :** Il s'agit de :

- un expert scientifique (IFREMER)
- un représentant Bassin versant (Agence de l'eau)
- un représentant de l'épuration de l'eau (VEOLIA)
- un industriel (ECOVER)
- un représentant du monde agricole (GABNOR)
- un représentant des consommateurs (CLCV)
- un représentant qualité de l'eau à NAUSICAA

Timing	Sujet	Intervenants	Ressources images
Service Com-Doc			
20/03/2014			
<b>CONDUCTEUR CONFERENCE EUTROPHISATION ET QUALITE DES EAUX COTIERES 20 MARS 2014</b>			
Chargée de projet : Elise CHIROUTRE et Anne VERNIER			
Animateur : David LEFORT			
Technicien en salle : Cindy BETRANI			
Technicien en régie : Jacques VANDEMARLE			
Coordination contenu : Aline COUSIN KLAWINSKI			
Timing	Sujet	Intervenants	Ressources images
19 h 00	<b>ENREGISTREMENT DE L'EMISSION</b>		
19 h 00	Accueil et présentation : Evénement organisé à l'occasion de la Journée Mondiale de l'eau qui aura lieu le samedi 22 mars 2014. Cette conférence s'inscrit dans le cadre du projet Interreg 2 mers ISECA (Information System on the Eutrophication of our Coastal Areas). Nous allons aborder ce soir la qualité de l'eau et l'eutrophisation des eaux côtières et voir ensemble quelles sont les améliorations depuis 30 ans. Valoriser ces efforts et insister sur le fait qu'il faut continuer les efforts.	David Lefort	Logos ISECA
	Mot d'accueil de Philippe VALLETTE : Insister sur le fait que la qualité de l'eau de mer est largement conditionnée par ce qui arrive des bassins versants. Par exemple, l'abondance ou non d'un stock de poissons peut-être largement influencé par les conditions de vie des juvéniles pendant leur vie proche du rivage. Des notions simples, comme tout va à la mer. Ceci est largement considéré dans la gestion intégrée des zones côtières. Appréhender le littoral est indissociable de l'examen de ce qui se passe à l'intérieur des terres.	Philippe VALLETTE	Ecran accueil ISECA Observations satellite
19 h 05	TRANSITION et présentation des intervenants. Pour aborder ce sujet, plusieurs experts sont réunis sur ce plateau : - un expert scientifique : <b>Alain LEFEBVRE</b> , responsable du laboratoire Environnement Ressources du Centre IFREMER Manche Mer du Nord (ou Luis Felipe ARTIGAS, enseignant chercheur à l'université du Littoral Côte d'Opale, laboratoire d'Océanologie et de géosciences de Wimereux) - un représentant de la filière eau : <b>Jean Paul PENNAMEN</b> - Directeur du Centre Littoral de Veolia - un industriel : <b>Jean-Louis DESMEDT</b> d'Ecover ( <a href="http://fr.ecover.com/">http://fr.ecover.com/</a> ) - un représentant du monde agricole bio : <b>Daniel TROLLÉ</b> - <b>Ludovic LEMAIRE</b> de l'Agence de l'Eau - <b>Célia POTDEVIN</b> de la CLCV (Consommation, Logement et Cadre de Vie, association nationale de défense des consommateurs et usagers <a href="http://www.clcv.org/">http://www.clcv.org/</a> )	David Lefort	Ecran accueil ISECA
19 h 08	Illustration : sujet vidéo de 2 minutes sur l'eutrophisation et le projet ISECA		Vidéos / Eutrophisation V2
19 h 10	Plus précisément, qu'est-ce que l'eutrophisation ? Point de vue du scientifique Alain LEFEBVRE de l'Ifremer Comment est-ce que ce phénomène évolue ? Quels outils ont été mis en place pour contrôler cette évolution ? Méthode conventionnelle et nouveaux outils avec mesures plus fréquentes. La méthode de travail a-t-elle changé ? Oui travail en coopération et mise en commun des données. <u>Mieux comprendre pour mieux agir.</u>	David LEFORT Alain LEFEBVRE ou Luis Felipe ARTIGAS	Photos Mousse Marée verte Photos Sciences
19 h 15	Représentant de la filière eau : Jean Paul PENNAMEN - Directeur du Centre Littoral Sujet : la station d'épuration de Boulogne-sur-Mer. Quelles améliorations depuis 30 ans ?	David LEFORT Jean Paul PENNAMEN	Photos Eau Photos Station épuration
19 h 20	Nous sommes tous concernés... Les phosphates, cela provient des lessives, non ? Réponse apportée par Jean-Louis DESMEDT, directeur d'ECOVER, une entreprise de produits détergents biodégradables. Pourquoi avoir décidé de fabriquer des détergents biodégradables ? Monsieur Desmedt, que fait le monde industriel aujourd'hui pour limiter les rejets en mer ? Traiter l'eau avant de l'envoyer à la station d'épuration ?	David LEFORT Jean-Louis DESMEDT	Photos ECOVER
19 h 30	Le monde de l'agriculture "classique" est également pointé du doigt. Monsieur Trollé, vous avez décidé d'opter pour l'agriculture biologique. Qu'est-ce qui vous a poussé à changer de pratiques ? Avez-vous déjà constaté des résultats (vous ou d'autres agriculteurs bio) ? Depuis une trentaine d'années, un travail est fait pour améliorer la qualité de l'eau. Dans votre domaine, quelles actions ont contribué à limiter l'utilisation de substances chimiques ?	David LEFORT Daniel TROLLÉ	Photos Daniel Trollé
19 h 35	Questions du public	David LEFORT	Ecran accueil ISECA
19 h 45	Et que fait-on à NAUSICAA ? Le responsable de la qualité de l'eau Frédéric COUSIN nous en parle...	David LEFORT	Vidéos / 3 questions à Frédéric COUSIN
19 h 50	Quel est le rôle de l'Agence de l'eau ? 6 agences en France. Faire parler du bassin versant et de la notion de tout va à la mer. (Est-ce que les rivières vont toutes à la mer ?). Rôle de veille globale de la qualité de l'eau. Surveillance terre-mer. Existe-t-il des solutions suite aux exemples présentés ? Des réglementations ont été mises en place, quels sont les résultats ? Que reste-t-il à faire ?	David LEFORT Ludovic LEMAIRE	Photos Agence de l'eau Photos Eau
19 h 55	Point de vue des utilisateurs avec Célia POTDEVIN de la CLCV : Si on nous dit que "tout va à la mer", que font les citoyens ? Que peuvent-ils faire de plus ? Regards sur les pratiques ? Mise en place de "nouvelles" solutions : savon noir, vinaigre...	David LEFORT Célia POTDEVIN	Ecran accueil ISECA Photos Loisirs
20 h 00	Quelles améliorations reste-t-il à faire ? Par exemple Veolia Séparation eaux pluviales / eaux usées par exemple Pour Agence de l'eau : remédier à l'inertie du système, parler du SAGE, aborder le tourisme dans la région. Pour CLCV : respect des normes, relation consommateur/industriel et agriculteur + 1 place au Comité de bassin Artois-Picardie	David LEFORT Alain LEFEBVRE ou Luis Felipe ARTIGAS Jean Paul PENNAMEN Jean-Louis DESMEDT Daniel TROLLÉ	Photos Eau
20 h 20	Questions du public	David LEFORT	Ecran accueil ISECA
20 h 30	Fin du débat : remerciements et salutations INVITATION A L'EVENEMENT FINAL LES 30 JUIN ET 01 JUILLET 2014	David LEFORT	Logos ISECA + carton annonce Evénement final

## Annex 11- Communication Indicators- All Project Partners Targeted/achieved

<b>Communication activities</b>	<b>Your target</b>	<b>Your achievement</b>	<b>Comments</b>
<b>Number of events organised (*including semestrial meetings)</b>	See details below	20	Details available on request
<b>Number of stands/presentations at external events</b>	24	24	Details available on request. It concerns events such as: World Ocean Days, Science Festival, Nature Festival ... (details in the "agenda all PP C&D events" document)
<b>Number of publications issued (* deliverables included)</b>	See details below	18	Details available on request
<b>Number of newsletter issued</b>	6	8	<b>6 ISECA Newsletters</b> created by NAUSICAA (3 languages): printed and disseminated through events. Electronic version on the WIS and dissemination via mass mailing to ISECA registered people and PP Institutes' networks. + 1 VITO+ 1 VLIZ.
<b>Number of press conferences organized</b>	1	0	Target was to invite 100 to 120 Journalists at the final conference. Press release had been disseminated but none came unfortunately.
<b>Number of press release issued</b>	6	13	11 from NAUSICAA, 2 from PML
<b>Number of project occurrences in the media</b>	1	12	11 from NAUSICAA, 1 from PML
<b>Number of average connection on the website</b>	600 hits/month from mid-2012 to mid-2013	41 017 visits ( from March 2012 to August 2014)	Trilingual website
<b>Leaflet</b>	10 000 printed	19 000	12 000 FR; 5 000 ENG; 2000 DU + electronic version on the WIS
<b>Project Folder</b>	500 printed	1000	Most of them distributed by during UK Info Days + Portsmouth Environment Day 2013 + Public Debate and Final conference 2014. Electronic version on the WIS
<b>Video snippets</b>	2	10	7 interviews "3 questions to..." + ISECA "When the sea foams" + ISECA, Focus on eutrophication + ISECA final video. FR/ENG versions for each
<b>Public and Web events</b>	4	3 + ISECA videos on the WIS and NAUSICAA TV Platform	WOD 2012 interview A Delater + 20 <sup>th</sup> March 2014 public debate + Interview of A. Lefebvre + ISECA videos on the WIS and NAUSICAA

## Annex 11- Communication Indicators- All Project Partners Targeted/achieved

			TV Platform
<b>Communication guidelines for partners (e.g.: logos, identity kit, ISECA layout, communication strategy and indicators)</b>	1 set of documents for all PP	1 set of documents for all PP	+ Available on the WIS. Including all tools for partners + reference to EU funding
<b>Fact sheets “partners and project”</b>	8	10	Available on WIS and printed for dissemination during events as predicted
<b>Guidelines and Kit for education</b>	1 electronic version + 1000 hard copies	1 electronic version + 1000 CD Rom + 500 Puzzles	Mass postal sending to schools (Nord and Pas De Calais region, France) + dissemination through events + available on the WIS and other websites (e.g: Nausicaa, CRROM and WON blogs)
<b>Project Banners</b>	16	16	1 for stakeholders on the ISECA project and 2 for general public: one on foam, another on green algae overdevelopment due to eutrophication. Each partners had at least 1 (at choice). Repartition table available on request.
<b>Info Days</b>	3	3	France (2012) UK and Belgium (2013) as predicted
<b>Final Conference</b>	1 with Around 100 pax	1 with 74 pax	At NAUSICAA, 30June-1 <sup>st</sup> July 2014
<b>Public Debate</b>	2	1	At NAUSICAA, 20 <sup>th</sup> March 2014
<b>Participation in Scientific conferences</b>	1 per semester, all PP involved	19	See all PP C&D agenda
<b>Scientific Posters</b>	8	13	Including 2 posters entirely dedicated to ISECA and 1 dedicated to the WAS
<b>Teachers’ conference and open doors</b>	2	17	By NAUSICAA Educational team, to relay the ISECA educational tools (mostly WSF activity) and promote the website
<b>Educational activities</b>	40 times to reach 800 pax	More than 40 times. More than 828 pax from NAUSICAA (if we only count in House occurrences) and more with the other partners	Including 5 occurrences for VLIZ (Zee op de Korrel, 2013) and PML (UK science week 2013). The rest was done by NAUSICAA. Details available on request. During the project, 4 different educational activities were created.



## INTERREG IVA 2 Seas Project 'Information System on the Eutrophication of our Coastal Areas ' (ISECA)

### DCom1: The Web Information System (WIS) on Eutrophication Carolien Knockaert (VLIZ), 2014.



Executive summary : This report gives an overview of the history and web statistics of the ISECA Web Information System (short: WIS). Within the ISECA project one of the challenges was to build a portal that responds to the needs of two important target groups: scientists and the public at large. This was done by creating two different menu-items: science for experts which contains scientific publications and science for the public where the overall eutrophication phenomenon is shortly explained. The portal gives visitors access to the most important project results and deliverables (e.g. Information Search Tool, Web based Application Server (WAS)), official project reports, publications but also different communication tools such as project leaflets, newsletters and educational activities developed for a wider audience.

*Design of the ISECA Web Information System (WIS) was a collaborative task in frame of the Communication and Dissemination activity within the ISECA project. Contributions of the ISECA partner institutes are listed below:*

Institute	Person(s)	Contribution
VLIZ	Carolien Knockaert, Annelies Goffin	Website design and content Dutch and English translations
ADRINORD	Richard Santer	Website content French translations
Nausicaá	Elise Chiroutre, Anne Vernier, Manuel Cira	Website content French and English translations
CEMARE	Prem Wattage	Website content
University of Greenwich	Koulis Pericleous, Georgi Djambazov, Mayur Patel	Website content
PML	Steve Groom, Gavin Tilstone, Victor Martinez-Vicente	Website content
VITO	Jean-Luc De Kok, Sindy Sterckx	Website content

# 1. Introduction

The ISECA official web address is <http://www.iseca.eu/>



English homepage of the ISECA portal

The most important project results with according web links are listed below:

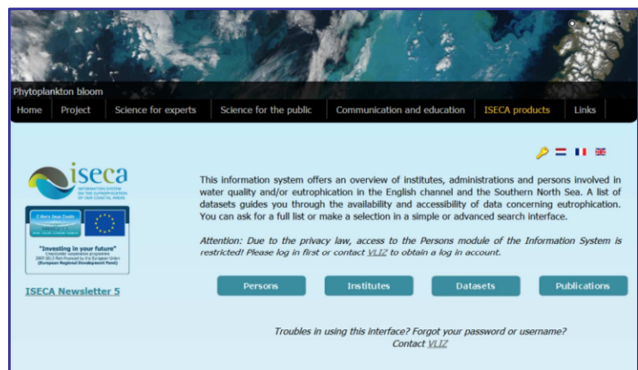
- ISECA official project reports: <http://www.iseca.eu/en/results/deliverables>
- The Information Search Tool: <http://www.iseca.eu/en/results/information-system>
- Web based Application Server: <http://www.iseca.eu/en/results/web-based-application-server-was>
- Communication and education tools: <http://www.iseca.eu/en/communication>

No.	Deliverable	Author(s)	Status*
D1.1	Inventory on eutrophication in the 2 Seas Area	Coffin A.	Final
D1.2	Self-assessment for the Remote Sensing of Eutrophication in the 2 Seas: 2008-2010	Herman-Vander N., Nohre G., Green S.	Final
D1.3	The Web-based Application Server: Combining earth observation with in-situ data	de Klerk J., Dierckx L., Peeters B.	Final
D1.4	Eutrophication problems, causes and potential solutions, and exchange of possible model-building approaches for the integrated evaluation of coastal eutrophication	de Klerk J., Dierckx L., Van Gail L., Dierckx L., Dierckx L., Nohre G.	Final

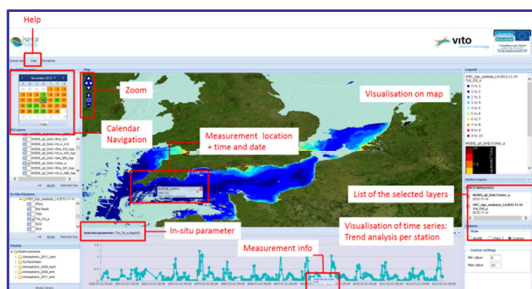
  

No.	Technical Report	Author(s)	Status*
T1.4	Service analysis for the Eutrophication in the 2 Seas Area	Van Gail L.	Final
T2	Correction of the annual Sentinel Ocean Properties: The new WODAP processing chain	Antony C., Zupanski P., Sarter R.	Final
T3	The correction of the salinity effects	Sarter R.	Final
T4	Atmospheric correction and related issues	Sarter R., Antony C.	Final
T5	SEPEC OCS-OESA processing/MSIS	Sarter R., Standa S.	Final
T6	Correction of frontal reflection of the sky data according for the polarisation	Sarter R., Zupanski P.	Final
T7	ISECA Protocol for the validation of Ocean Colour Satellite Data in Case 2 European Waters	Herman V.N., Herman-Vander N.	Final
T8	A regional description of the status for MERIS atmospheric correction: SOP	Zupanski P., Antony C., Sarter R.	Final
T9	The TOC processor to correct above water measurements for the sky dome effect	Zupanski P., Sarter R.	Final
T10	Atmospheric modelling	Van Gail L., Peeters B., Pankaj K.	Final

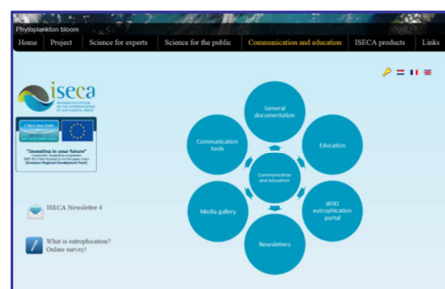
ISECA Official project deliverables and technical notes



The Information Search Tool



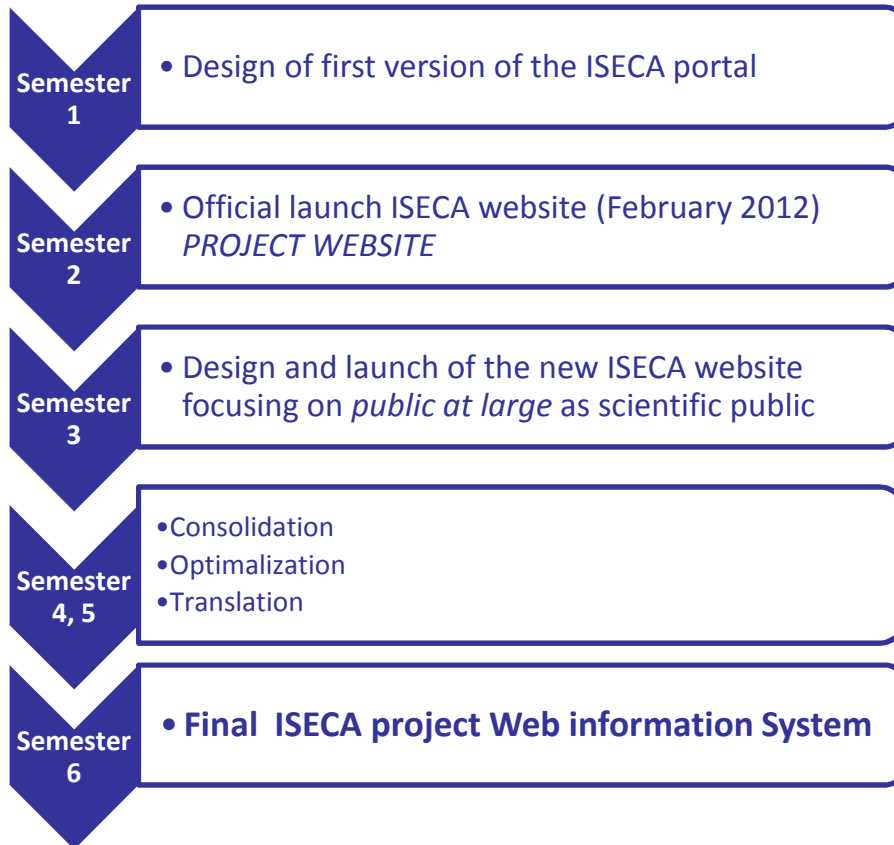
The Web based Application Server



Communication and education tools

## 2. Evolution of the Web Information System during the ISECA project

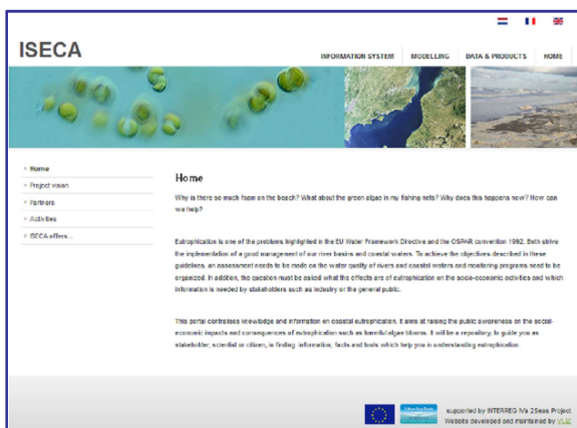
### 2.1 Timeline



### 2.2 Website development during the different semesters

#### Semester 1 (July – December 2011)

- Design of first version of the ISECA portal (FR /NL /UK)
- Content : Project information and demo of the IMIS (Integrated Marine Information System) search interface (datasets, institutes and persons)
- Lay out on hold until finalization of the ISECA logo



First design of the ISECA web portal

## Semester 2 (January - June 2012)

- January - February : Test version to be reviewed intern (by partners only)
- Official launch end of February 2012
- Content : Project information, IMIS Information System, document system, calendar and media gallery



**ISSUE :** The Web Information System functions as a project website! Information must be available for ISECA partners as well as for general public. There is also a need to provide customized information for scientists, stakeholders and the public at large.

## Semester 3 (June - December 2012)

- Design of a new website : new architecture and content, focusing on expertized public as well as public at large
- End of November : Official launch of the new website
- Content : project information, media gallery, document system, online registration and subscription to ISECA newsletters, communication tools for general public (PDF), science for all



## Semester 4 and 5 (January - December 2013)

- Consolidation
- Optimization
- Translation
- Added content : communication (newsletters, educational tools, project leaflets), Web based Application Server (WAS)
- Online tool for participation in survey on public perception on eutrophication updated with socio-economic issues
- First project deliverables

## Semester 6 (January - July 2014)

- Translations finished : three lingual website (French, Dutch and English)
- Insertion of ISECA deliverables and products
- Information system updated with publications relevant to ISECA
- Focus on communication to final event

## End of last semester / project : Final ISECA Web Information System

- Disclosure of all ISECA communication and scientific products and deliverables
- Disclosure of final reports

Foam on the beach: A natural phenomenon?

Home Project Science for experts Science for the public Communication and education ISECA products Links

iseca INFORMATION SYSTEM ON THE EUTROPHICATION OF OUR COASTAL SEAS

2 Seas Seas Zones

"Investing in your future" Cross-border cooperation programme 2007-2013 Part-financed by the European Union (European Regional Development Fund)

ISECA Newsletter 5

The Interreg IV A 2 Seas ISECA Project (July 2011 - September 2014)

A cross discipline and cross border integrated project on coastal eutrophication offering information, education and science to stakeholders and the public at large in the Interreg 2 Seas Zone (Belgium, England, France and the Netherlands)

ISECA Project output

Target public

Scientists Stakeholders General public Educators

PRODUCTS

Information Search Tool

Web Application Server

Official Project Reports

ISECA Final Conference

Communication / Education

Click on the picture to access the product!

The ISECA Web Information System 08/2014 : homepage with entrance to all ISECA deliverables

### 3. ISECA Web Information System (WIS) : Statistics

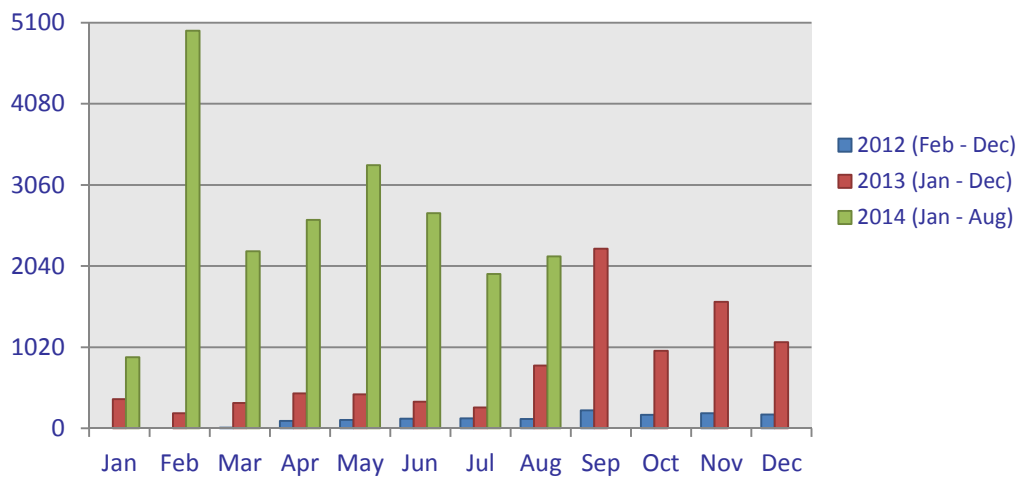
(Source: Awstats.org)

#### 3.1 Unique visitors and numbers of visits for the WIS

##### 3.1.1 Yearly numbers of unique visitors and website visits

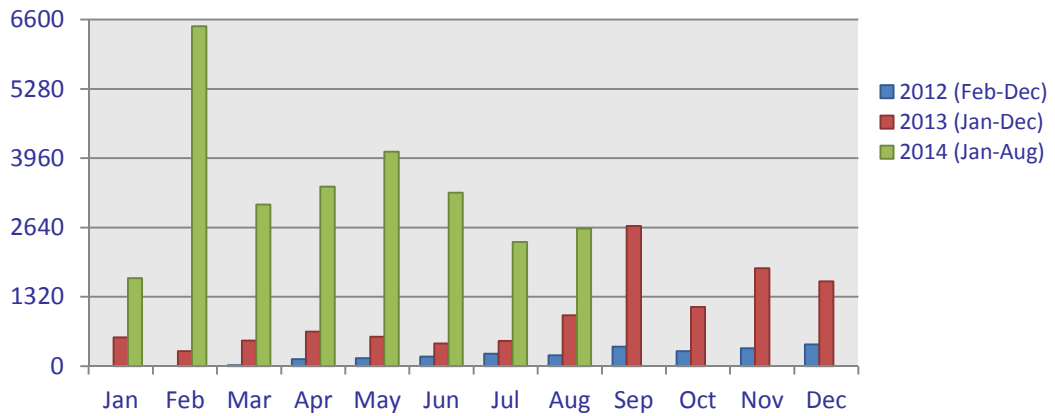


##### 3.1.2 Monthly numbers on unique visitors



Year	Minimum	Maximum	Average / month
2012	8 (Mar)	227 (Sep)	134
2013	191 (Feb)	2258 (Sep)	753
2014	893 (Jan)	4999 (Feb)	2607

### 3.1.3 Monthly numbers of visits



Year	Minimum	Maximum	Average / month
2012	17 (Mar)	410 (Dec)	233
2013	282 (Feb)	2671 (Sep)	973
2014	1672 (Jan)	6474 (Feb)	3377

### 3.2 Detailed analysis on monthly web visits and unique visitors : link with ISECA communication events

#### a) 2012





The number of unique visitors increased more or less linearly during the first year the ISECA web portal was online. The year maximum was reached in September (227). During summer 2012 Nausicaá organized several times the Why does the sea foam? activity for public at large (many sessions in July and August) where the website was also promoted. In November the ISECA portal received 190 unique visitors and 342 visits with an average of 11 visits per day. The number of visits was highest on the 28<sup>th</sup> November (21) when the first info day of the ISECA project was organized in Nausicaá, Boulogne-Sur-Mer (France). After launching the second version of the ISECA website end of November, 410 visits (year maximum) were counted in December 2012.

## b) 2013



The website visits of 2013 can be divided in two groups : semester 1 (January - July) and semester 2 (August - December) when the ISECA portal reached for the first time almost a 1000 visits. The ISECA project leaflets were distributed from May 2013 during all events where partners were involved and all time available in the National Sea Centre of Nausicaá. During the summer of 2013 (June - October) Sea Life Blankenberge provided project folders to their visitors.

### January 2013

In January 544 visits were made with an average of 17 visits per day. The maximum per day was 98 on the 08<sup>th</sup> January. This was also the day that the first ISECA newsletter was spread to the whole ISECA contact list (white and yellow pages).

### February 2013

Minimum website visits (282) and unique visitors (191) for 2013. No communication events or activities were organized this month.

### April 2013

The maximum of the first semester of 2013 was reached with 654 visitors and 440 unique visitors. On the 17<sup>th</sup> of April an invitation for participation to the online questionnaire was send out to the whole ISECA contact list. The daily average visits of the ISECA portal for this month was 21. Outliers are 57



visits per day on the 17<sup>th</sup>, 36 on the 18<sup>th</sup> and 35 on the 19<sup>th</sup> of April i.e. shortly after the online invitations were spread.

### June and July 2013

No communication activities or events organized in the frame of ISECA. This is reflected by a low number of visits and unique visitors for these two months.

### August 2013

For the first time the ISECA portal reached almost 1000 visits per month (968). Outlier was the 22<sup>th</sup> with 479 visits while the monthly average was 31 visits per day. During this and previous month visitors of Nausicaá were challenged to participate in the Why does the sea foam? and plankton activities in the frame of ISECA.

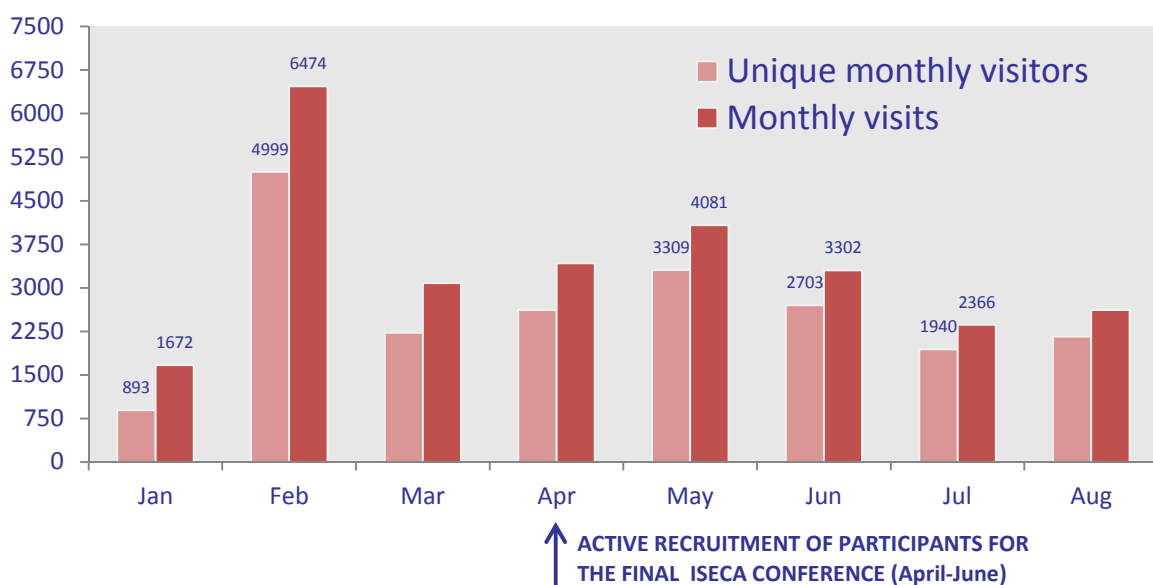
### September 2013

This month the maximum amount of unique visitors (2258) and visits (2671) was reached (for the second semester as well for 2013). The daily average was 89 visits. Info days were organized in the UK (PML and Nausicaá (3-5 September)) and Belgium (VLIZ, 19<sup>th</sup> of September). This month had two spectacular outliers on the 12<sup>th</sup> (892) and on the 20<sup>th</sup> (1271). On the 12<sup>th</sup> and 26<sup>th</sup> of September VLIZ participated in the “Zee op de Korrel” event organized to educate coast guides and teachers (Beach Lab Tool demo).

### December 2013

In December 1613 visits were counted with an average of 52 visits per day. On the 12<sup>th</sup> of December the VLIZ communication department placed another call (Facebook and website) for online participation to the ISECA survey. Nausicaá used several social media to gather more participants to the online questionnaire. On the 14<sup>th</sup> December VLIZ cooperated in the coastal guide seminar (140 participants). During this event the Beach Lab Tool was demonstrated. The maxima for these month were on the 12<sup>th</sup> (74), 17<sup>th</sup> (99) and 18<sup>th</sup> (82).

### **c) 2014**



## January 2014

Minimum amount of unique visitors (893) and visits (1672) in 2014. No communication activities organized this month.

## February 2014

Maximum amount of unique visitors (4999) and visits (6474) in 2014 with an average of 231 visits per day. Nausicaá launched invitations to the 20<sup>th</sup> March public debate and during this month a very big effort was also done in inviting participants to the online questionnaire via social media as well as email contacts. The 2Seas Interreg IV A Joint Technical Secretariat (JTS) encouraged people to fill in the questionnaire via their website by launching a call on the 7<sup>th</sup> of February. Two major outliers for this month : 06<sup>th</sup> (1645 visits) and 07<sup>th</sup> (2945 visits).

## March 2014

In March the ISECA portal counted 3079 visits with an average of 99 visits per day. The maxima per day were on the 19<sup>th</sup> (157) and 20<sup>th</sup> of March (143) when Nausicaá organized a public debate in the frame of World Water Day with special focus on eutrophication and ISECA.

## April 2014

Speakers for the final ISECA conference were recruited and in the middle of this month a first round of invitations were spread to the whole ISECA contact list.

## May 2014

The second monthly maximum of 2014 with 4081 visits and 3309 unique visitors. A second conference invitation email was spread to the ISECA contact list and other networks. VLIZ also published an article on eutrophication in the VLIZ Grote Rede, nr 38, hereby promoting the ISECA final conference.

## June 2014

2703 unique visitors and 3302 visits were registered this month with an average of 110 visits per day. A last personal invitation call was done to a more expertized public on the 13<sup>th</sup> June. The 27<sup>th</sup> of June Nausicaá launched a press release to announce the ISECA final conference which was held the 30<sup>th</sup> June and 1<sup>st</sup> July 2014. The maxima of visits per day was on the 18<sup>th</sup> of June. This day the Marine and Coastal Policy Forum was organized at PML. On the first day of the final conference (30<sup>th</sup> June) 79 visits were made to the ISECA portal.

## July 2014

On the second day of the final conference (01<sup>st</sup> July) 85 visits were made to the ISECA web portal. In July 2366 monthly visits were counted with an average of 76 visits per day. The amount of unique visitors decreased this month compared with June (1940).

## August 2014

During this month there was a small increase again in unique visitors (2162) and amount of visits (2618).

### 3.3 WIS hits

Year	Total hits (1995528)	Minimum	Maximum	Average / month
2012 (Feb-Dec)	147370	3459 (Aug)	33010 (Nov)	14737
2013 (Jan-Dec)	645598	14744 (Jun)	123272 (Oct)	53800
2014 (Jan-Aug)	1202560	127920 (Jun)	213099 (Feb)	150320

### 3.4 Top 10 of WIS PDF downloads

1. ISECA Final Conference : Programme (60)
2. Newsletter 5 (43)
3. ISECA Final Conference : Practical Info (21)
4. Newsletter 4 (20)
5. What is ocean colour? (15)
6. Beach Lab Tool (14)
7. Modelling marine and coastal eutrophication (13)
8. Satellite and Ocean colour Activity (13)
9. *Phaeocystis* and foam on the beach (13)
10. Why does the sea foam activity (long version) (12)

### 3.5 Most popular WIS pages during the ISECA project

1. Information System (ISECA product)  
<http://www.iseca.eu/en/results/information-system>
2. Newsletters and multimedia (Communication Product)  
<http://www.iseca.eu/en/communication>
3. What do you know about eutrophication? Survey (Science for all)  
<http://www.iseca.eu/en/science-for-all/what-do-you-know-about-eutrophication>
4. What is eutrophication ? (Science for all)  
<http://www.iseca.eu/en/science-for-all/what-is-eutrophication>
5. Project Activities (General project information)  
<http://www.iseca.eu/en/about/activities>

## 4. General conclusions

41017 visits were made during the period March 2012 until August 2014 so the Web Information System (WIS) was an important tool used for both internal as external communication. The ISECA consortium managed to build a portal that satisfies the needs to find the information suitable for public at large as well as for scientists. ISECA partners disseminated their expertise by translating it in an “easy to understand” way. Thanks to the development of communication and education tools a big effort was made to learn people more on eutrophication, its causes and consequences in a pleasant and easy way. This tools are also aimed at raising public awareness on the human impact on water quality in general. Access to the WIS will be maintained when the ISECA project is finished.