

EARSC

European Association
of Remote Sensing
Companies



EO Services for the Oil & Gas Industry

Geoff Sawyer , EARSC Secretary General

2nd OGEO Workshop, 8th December 2011, Frascati



What is EARSC?

- EARSC is a non-profit-making organisation created in 1989 as the voice of the European geo-information EO service industry
- Mission & objectives:
 - to foster the development of the European Geo-Information Service Industry
 - to stimulate a sustainable market for Geo-information services using EO data, openly accessible to all members
- Today EARSC has 70 members in more than 22 countries, and is a recognized association worldwide
- Represents European geo-information providers creating a sustainable network between industry, decision makers and users



What does EARSC do?

- To achieve our mission, we focus on:
 - Improving customer awareness and acceptance of Earth observation and remote sensing based solutions
 - Improving market access for our members
 - Promoting our members capabilities
 - Engaging with key organisations (ESA, the EC and others) to make the EO VA sector's views known and acted upon.
- EARSC works with many partners to achieve these goals.



How can EARSC help?

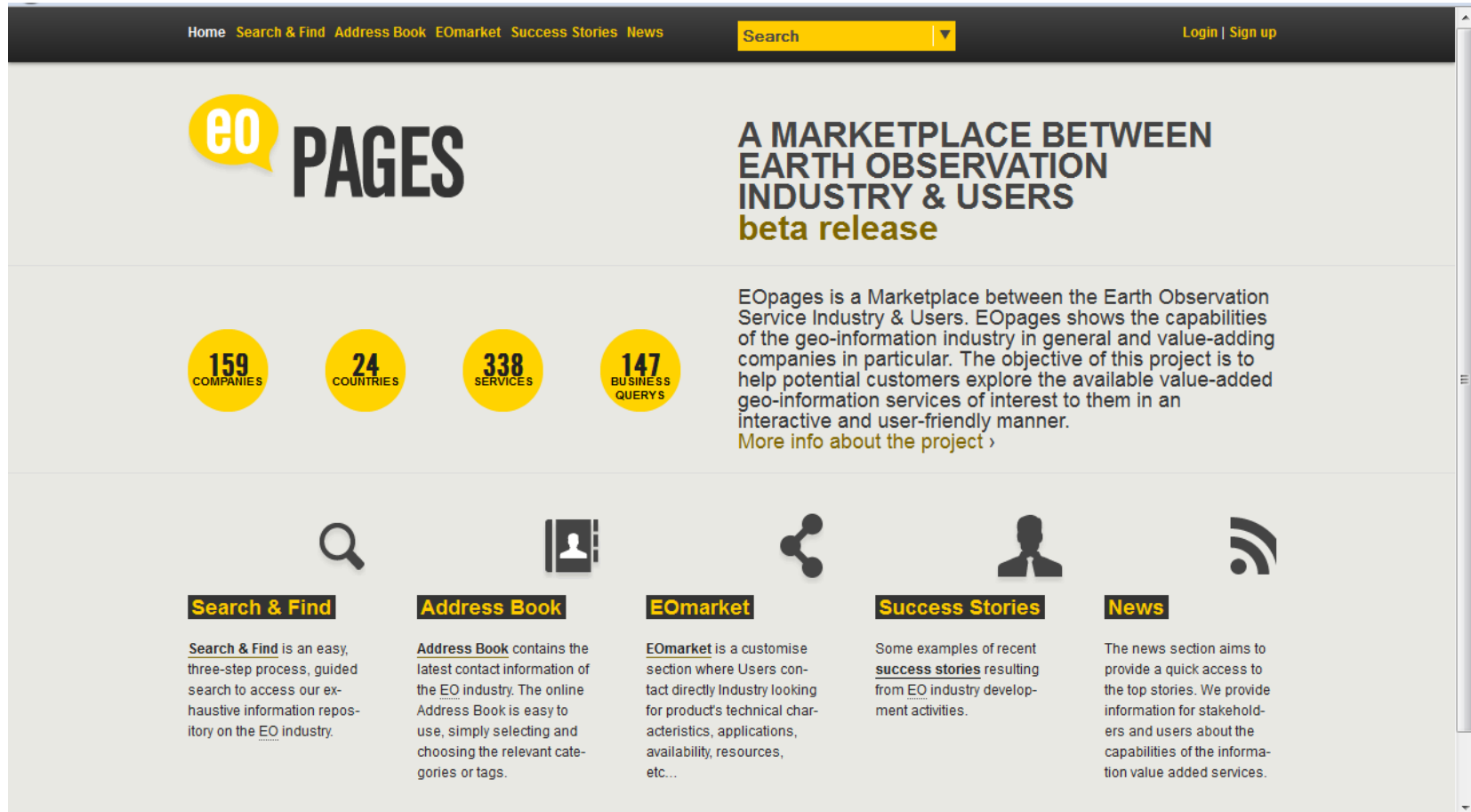
- We can help customers looking for EO services by providing:
 - Bridge to the EU EO services industry.
 - Neutral advice on EO services and what they can do
 - Support to meetings / international fora
 - Assistance to procure future services.

Plus Eopages:

- EOpages is a web-based marketplace for users seeking services from the EO Service Industry; a brokerage site bringing together suppliers and customers.

www.eopages.eu

EOpages – home page



The screenshot shows the EOpages website home page. At the top is a dark navigation bar with links: Home, Search & Find, Address Book, EOMarket, Success Stories, News. On the right of this bar is a yellow search box and links for Login and Sign up. Below the navigation bar is a large section with the EOpages logo (a yellow speech bubble with 'eo' and the word 'PAGES' in large black letters). To the right of the logo is the text 'A MARKETPLACE BETWEEN EARTH OBSERVATION INDUSTRY & USERS' in bold, followed by 'beta release' in a smaller, bold, yellow font. Below this is a paragraph describing EOpages as a marketplace between the Earth Observation Service Industry & Users, highlighting its goal to help potential customers explore value-added geo-information services. To the left of this paragraph are four yellow circular icons with black text: '159 COMPANIES', '24 COUNTRIES', '338 SERVICES', and '147 BUSINESS QUERYS'. Below the main content area is a row of five icons representing different website features: a magnifying glass for Search & Find, a person icon for Address Book, a share icon for EOMarket, a person icon for Success Stories, and a RSS icon for News. Each icon is above a yellow header and a brief description of the feature.

Home Search & Find Address Book EOMarket Success Stories News

Search

Login | Sign up

eo **PAGES**

**A MARKETPLACE BETWEEN
EARTH OBSERVATION
INDUSTRY & USERS**
beta release

EOpages is a Marketplace between the Earth Observation Service Industry & Users. EOpages shows the capabilities of the geo-information industry in general and value-adding companies in particular. The objective of this project is to help potential customers explore the available value-added geo-information services of interest to them in an interactive and user-friendly manner.
[More info about the project](#)

159
COMPANIES

24
COUNTRIES

338
SERVICES

147
BUSINESS
QUERYS

Search & Find

Search & Find is an easy, three-step process, guided search to access our exhaustive information repository on the EO industry.

Address Book

Address Book contains the latest contact information of the EO industry. The online Address Book is easy to use, simply selecting and choosing the relevant categories or tags.

EOMarket

EOMarket is a customise section where Users contact directly Industry looking for product's technical characteristics, applications, availability, resources, etc...

Success Stories

Some examples of recent **success stories** resulting from EO industry development activities.

News

The news section aims to provide a quick access to the top stories. We provide information for stakeholders and users about the capabilities of the information value added services.



What do we offer members?

- Support to developing the overall EO geo-information services industry through influencing decision makers.
- Opportunity to network with peers and develop partnerships.
- Access to key information on the market by communications - website, newsletter, directorate, numerous events on both European and International stages.
- Support to promoting company capabilities to a global market.



EARSC and OGEO

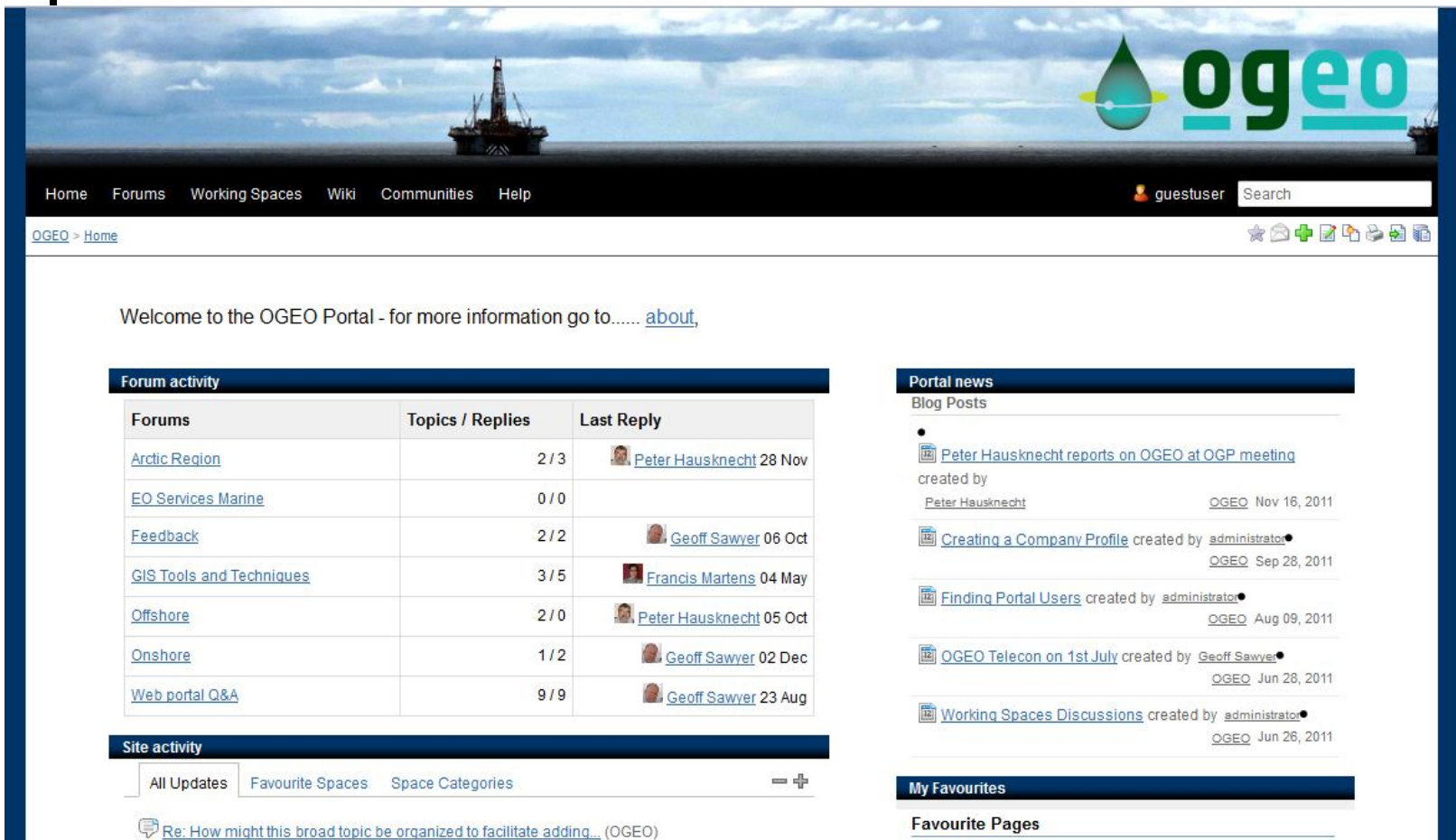
- EARSC is very pleased to be able to work with the OGEO group representing the interests of the EO Geo-information Services sector
- In the year since the first workshop:
 - Provided secretariat for the OGEO working group.
 - Developed the information exchange Portal
 - Established EARSC working group on Best Practice
 - Will look at quality and standards
 - Could examine procurement practices
 - Supported the organisation of the 2nd OG workshop.
- We view OGEO as being a very important initiative to strengthen links between the 2 communities.



EARSC and OGEO – the future

- For the Next Year? We want your views.!
 - Provide examples of best practice?
 - Further develop the OGEO Portal ? Encourage more content.
 - Promote the OGEO Community?
 - Support the O&G Companies / Promote the EO Companies?
 - Work with ESA for new applications opportunities?
 - Encourage participation to O&G projects e.g. JIP?
 - Etc. Etc
- We do not replace commercial relationships with EO service companies.

OGEO Portal



The screenshot shows the OGEO Portal homepage. At the top is a banner image of an offshore oil rig on the ocean. The OGEO logo, featuring a green drop with a white dot and the text 'ogeo', is in the top right. Below the banner is a navigation bar with links: Home, Forums, Working Spaces, Wiki, Communities, Help. On the right of the navigation bar is a user profile 'guestuser' and a search box. Below the navigation bar is a breadcrumb trail 'OGEO > Home' and a row of social media icons. The main content area has a welcome message: 'Welcome to the OGEO Portal - for more information go to..... [about](#),'. Below this are two main sections: 'Forum activity' and 'Portal news'. The 'Forum activity' section contains a table with forum topics, replies, and last replies. The 'Portal news' section lists recent blog posts. At the bottom left, there is a 'Site activity' section with tabs for 'All Updates', 'Favourite Spaces', and 'Space Categories'. Below these tabs is a comment: 'Re: How might this broad topic be organized to facilitate adding... (OGEO)'. At the bottom right, there is a 'My Favourites' section with a 'Favourite Pages' subsection.

Home Forums Working Spaces Wiki Communities Help guestuser Search

OGEO > Home

Welcome to the OGEO Portal - for more information go to..... [about](#),

Forum activity

Forums	Topics / Replies	Last Reply
Arctic Region	2 / 3	Peter Hausknecht 28 Nov
EO Services Marine	0 / 0	
Feedback	2 / 2	Geoff Sawyer 06 Oct
GIS Tools and Techniques	3 / 5	Francis Martens 04 May
Offshore	2 / 0	Peter Hausknecht 05 Oct
Onshore	1 / 2	Geoff Sawyer 02 Dec
Web portal Q&A	9 / 9	Geoff Sawyer 23 Aug

Portal news

Blog Posts

- [Peter Hausknecht reports on OGEO at OGP meeting](#)
created by [Peter Hausknecht](#) OGEO Nov 16, 2011
- [Creating a Company Profile](#) created by [administrator](#)
OGEO Sep 28, 2011
- [Finding Portal Users](#) created by [administrator](#)
OGEO Aug 09, 2011
- [OGEO Telecon on 1st July](#) created by [Geoff Sawyer](#)
OGEO Jun 28, 2011
- [Working Spaces Discussions](#) created by [administrator](#)
OGEO Jun 26, 2011

Site activity

All Updates Favourite Spaces Space Categories

Re: How might this broad topic be organized to facilitate adding... (OGEO)

My Favourites

Favourite Pages



About the OGEO Portal

- OGEO Portal is a tool to enable the two communities to strengthen ties and develop a common understanding.
 - Assist O&G representatives to have evidence on what EO can provide to build understanding within their companies.
 - Assist EO services representatives to market their capabilities and to understand the needs of the O&G companies
 - Help both “sides” to speak the same language and improve the efficiency and effectiveness of working together.
- Responds to the request coming from 1st workshop to provide an on-line environment for exchange of experiences and ideas between the two sectors

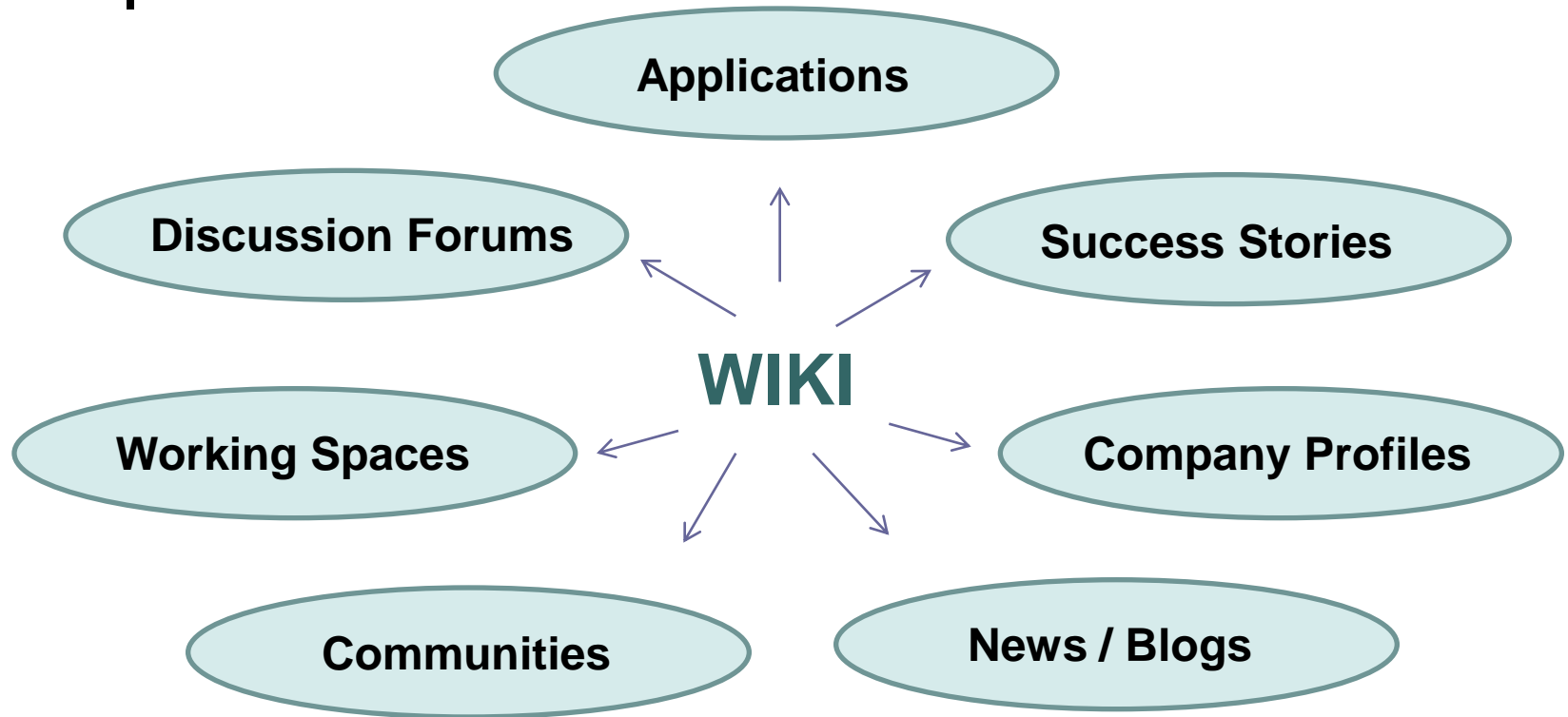


What does the Portal Offer?

- Provides a secure environment for exchange open only to people working in the O&G or EO services industries.
- Forum for exchange of ideas, questions, promotion of company capabilities.
- Communities of interest around common topics eg Arctic, Oil slick monitoring, Multi-spectral techniques.....etc
- Facilities for managing working groups or projects.
- Communications via blogs, forums, communities etc.
- Wiki Information Exchange and Knowledge Management tools.



OGEO Portal



OGEO Portal - Applications

OGEO Wiki > Home > applications > Sea Ice and Icebergs

Sea Ice and Icebergs

Labels: [icebergs](#) [arctic](#) [sea-ice](#) [ice](#)

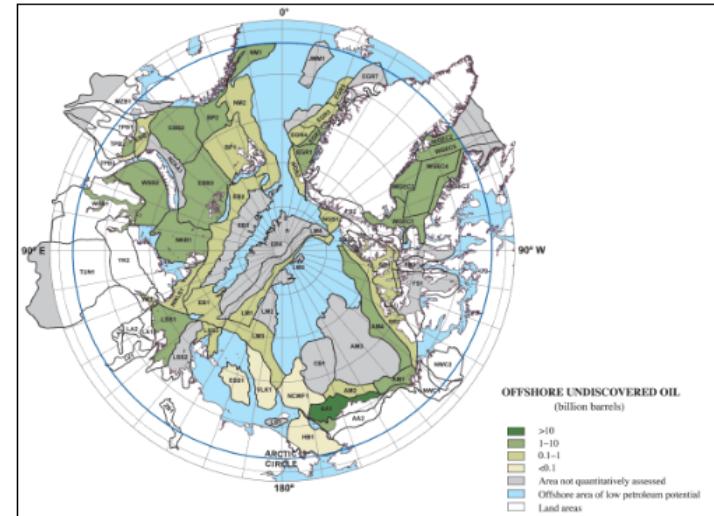
Added by [Geoff Sawyer](#), last edited by [Geoff Sawyer](#) on Nov 17, 2011 ([view change](#))

[Sea ice](#) and [icebergs](#) pose a significant set of challenges for offshore oil and gas, and are becoming increasingly relevant as offshore interests extend into more extreme environments. The Arctic region in particular is becoming a focus for oil and gas activities as surveys suggest the presence of significant resources. According to the [US Geological Survey](#), 30% of the world's gas and 11% of the world's oil deposits are estimated to lie beneath the Arctic regions^[1].

Areas of current oil and gas interest include the Barents Sea (Shtockman), east and west Greenland, and the Beaufort and Chukchi Seas. [Sea ice](#), which is formed from sea water, is not just a challenge in the polar regions. It is also present in temperate areas of oil and gas activity including the Sea of Okhotsk (Sakhalin), along the east coast of Canada and in the Caspian and Bohai Seas. [Icebergs](#) and ice islands, which unlike sea ice are calved from coastal glaciers and ice shelves and are thus formed from fresh water, have a quite different distribution and pose quite distinct challenges to oil and gas operations, particularly around Greenland, along the east Canadian coast, in the Barents Sea and, potentially, in the south Atlantic (Falkland Islands).

Within the Arctic, the pressure to exploit resources in this challenging environment is encouraged by declines in sea ice coverage. The most significant reductions in ice coverage over the last few decades have been in summer, with the result that many areas have been experiencing longer ice-free seasons and/or are becoming more accessible to marine vessels. While this has been creating opportunities for the oil and gas industry, in many Arctic regions sea ice remains a threat even in summer and there is a keen awareness that the challenges of operating in this region remain formidable. Remoteness and harsh operating conditions combined with strict standards on health and safety and protection of the environment create demanding conditions for entry into these areas, with earth observation being an essential and important component of the required package of technology.

Earth observation plays important roles in assessing ice conditions during several stages of



Undiscovered oil in the Arctic region, courtesy US Geological Survey, 2008 [1].



OGEO Portal – Success Stories

[OGEO Wiki](#) > [Home](#) > [Success Stories](#) > [Monitoring Dredging Plumes and Water Quality](#)

Monitoring Dredging Plumes and Water Quality

Labels: [success-story](#) [woodside](#) [eomap](#) [edit](#)

[2](#) Added by [Geoff Sawyer](#), last edited by [Geoff Sawyer](#) on Oct 18, 2011 ([view change](#))

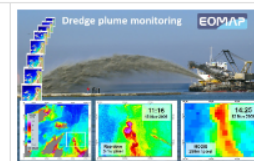


[Edit](#) [Share](#) [Add](#)

[Tools](#)

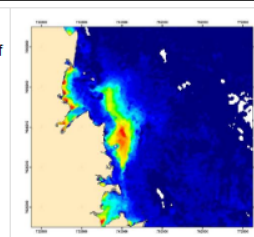
Project Background

[Woodside Energy](#) needed a dredge monitoring solution to satisfy regulatory requirements. Starting in October 2007, satellite based turbidity mapping offered a solution and operationally generated maps were delivered on a regular basis. The coastal water monitoring area is located in North Western Australia and water turbidity products were delivered on average every two days for more than two years for an area of 1000 sqkm. These data sets complemented the localised, point based environmental monitoring strategy of [Woodside's](#) PLUTO LNG development project with spatially resolved distribution maps. Dredging operations support new pipeline laying activities and the shipping channel expansions. The Service provider was [Eomap GmbH](#).



Issues and Needs

The large size of the required water quality monitoring area (~1000 sqkm) needed to be covered in regular intervals, allowing for a high frequency during dredging operations. The movements and size of the dredge plum had to be detected and quantified consistently in terms of turbidity with an adequate spatial resolution. The creation and fading of plumes, their potential impact on adjacent coastal areas, and the impact of natural factors such as re-suspension due to tidal currents and storms needed to be quantified for the environmental assessment. Conventional methods using insitu sensors of turbidity allow a point wise, vertically resolved measurement of turbidity and suspended solids, but not an area wide coverage with a clear classification of natural or man made turbidity sources. An increased number of insitu sensors would not only just increase cost, but also require regular maintenance and together with conventional airborne monitoring would increase HSE risks substantially.



Solution

Satellite based monitoring allows a sustainable service provision without any direct HSE risks. Physics based retrieval algorithms ensure the consistent and operational generation of quantitative water quality maps. Additionally, flexible client defined temporal and spatial resolutions and back-up solutions can be implemented if satellite sensor independent processing technologies are applied. These requirements were fulfilled with the established EOMAP processing technology. Within the monitoring program, various other remote sensing sources were integrated for verification, using the hyperspectral airborne HYMAP sensor and the multispectral satellite sensors IKONOS, RapidEye, MERIS, MODIS Terra and Aqua. The product evidence shows consistent and well calibrated turbidity data, comprising spatial resolutions between 3 and 250 meters and a frequency of up to two records per

OGEO Portal – Company Profiles

[OGEO Wiki](#) > [Home](#) > [OGEO Companies](#) > [Woodside](#)



Woodside

Labels: [woodside](#) [ogcompany](#) [australia](#)

Edit Share Add ▾

Added by [Geoff Sawyer](#), last edited by [Geoff Sawyer](#) on Sep 13, 2011 ([view change](#))

Tools ▾

Profile

Woodside is an independent Australian oil and gas company playing a key role in supplying energy to our region.

We are one of the world's leading producers of liquefied natural gas, helping meet the demands for cleaner energy from Japan, China, Korea and other countries in the Asia Pacific region. Woodside was formed in 1954, focused initially on oil exploration off Australia's south coast.

Major natural gas discoveries off the Western Australian coast in the 1970s changed the company's direction, and today Woodside is one of the world's preeminent producers of LNG. We operate the A\$27 billion North West Shelf Project, which in 2009 celebrated 25 years of natural gas production and 20 years of LNG production. We pride ourselves as a stable and reliable supplier with a focus on delivering on our commitments. Woodside's production of LNG continues to grow, with first LNG cargo from the Pluto foundation project estimated for March 2012. We are already planning for an expansion of our Pluto project, and are seeking to develop a further two LNG projects – Browse in Australia's Kimberley region and Sunrise off the northern coast.

Woodside also maintains a portfolio of non-LNG projects. We produce natural gas, liquefied petroleum gas, condensate and oil for customers in Australia and elsewhere. With our large natural gas resource base, Woodside is a sought-after provider of cleaner energy. We seek excellence in environmental performance, and aim to ensure that wherever we operate, the local community benefits from our presence.

Portal Content

[Monitoring Dredging Plumes and Water](#)

[Quality](#)

[Woodside](#)

Company Operations

Woodside Operations are.....

Users





















[Peter Hausknecht](#) : Company Moderator

[Marcel Maron](#)


OGEO Portal - Communities

www.ogeo-portal.eu/browsepeople.action?atl_token=29da7b60914d96725eca40645310bddc7635d1f6

confluence langu

 Geoff Sawyer geoff.sawyer@ears-c.org	 Han Wensink han.wensink@bmtargoss.com	 Jirabox jirabox@idalko.com
 Jerry Helfand jerry.helfand@exxonmobil.com	 Jim Clarke jim.clarke@uk.bp.com	 Juan Jose Exias juanio@efimera.com
 Karin Schenk schenk@eomap.de	 Kim Charles Partington kim.partington@polarimaging.co.uk	 Marcel Maron Marcel.Maron@woodside.com.au
 Mark Nightingale Mark.Nightingale@shell.com	 Martin Evans meev@chevron.com	 Martin Insley ma_ins1@tulloil.com
 Monica Miguel-Lago secretariat@ears-c.org	 Nurgul Amanova Nurgul.amanova@ncoc.kz	 Ola Grabak ola.grabak@esa.int
 Peter Hausknecht peter.hausknecht@woodside.com.au	 Richard Evers Revers@spatialenergy.com	 Roger Abel roger.abel@ncoc.kz
 Scott Hills SJHills@chevron.com	 Thomas Heege heege@eomap.de	Send Email to Richard Evers

OGEO Portal – Discussion Forum



The screenshot shows the OGEO Portal Discussion Forum interface. At the top, there is a navigation bar with links: Dashboard, Home, Forums, Working Spaces, Wiki, Communities, and Help. On the right, a user profile for 'Geoff Sawyer' and a search bar are visible. Below the navigation bar, a breadcrumb trail reads: OGEO > Home > Forums > Arctic Region > Ice Management System initiative by Barents 2020 project. The main content area features a post titled 'Ice Management System initiative by Barents 2020 project' with a green plus icon and an 'Add Comment' button. The post is labeled 'None' and was added by 'Nurqul Amanova' on Nov 18, 2011. The text of the post discusses the initiative's goal to create a state-of-the-art overview of ice management practices for the Barents Sea, mentioning the project team's interest in developing international standards for safe exploration and production of oil and gas. It also notes that regulations may vary across different countries and governments.

Dashboard Home Forums Working Spaces Wiki Communities Help

Geoff Sawyer Search

OGEO > Home > Forums > Arctic Region > Ice Management System initiative by Barents 2020 project

Ice Management System initiative by Barents 2020 project

Labels: None

Added by [Nurqul Amanova](#), last edited by [Nurqul Amanova](#) on Nov 18, 2011 ([view change](#))

+

Is anyone aware of this initiative? (<http://www.dnv.com/resources/reports/barents2020.asp>)

What they are trying to do is to create a state-of-the-art overview of ice management practices, as a part of a safety/regulatory assessment for the Barents Sea. The project team would like to follow-up with developing international standards for safe exploration, production and transportation of oil and gas. This could be beneficial to expand to other areas where activities (design and operations) are dependent on ice conditions. Such areas, for example, as Caspian Sea, which is surrounded by 5 countries. Of course regulations may not be similar in different countries/governments and approaches differ, but certainly standards and best practices in safety can't be overestimated.

1 Comment



[Peter Hausknecht](#)

Nov 28, 2011

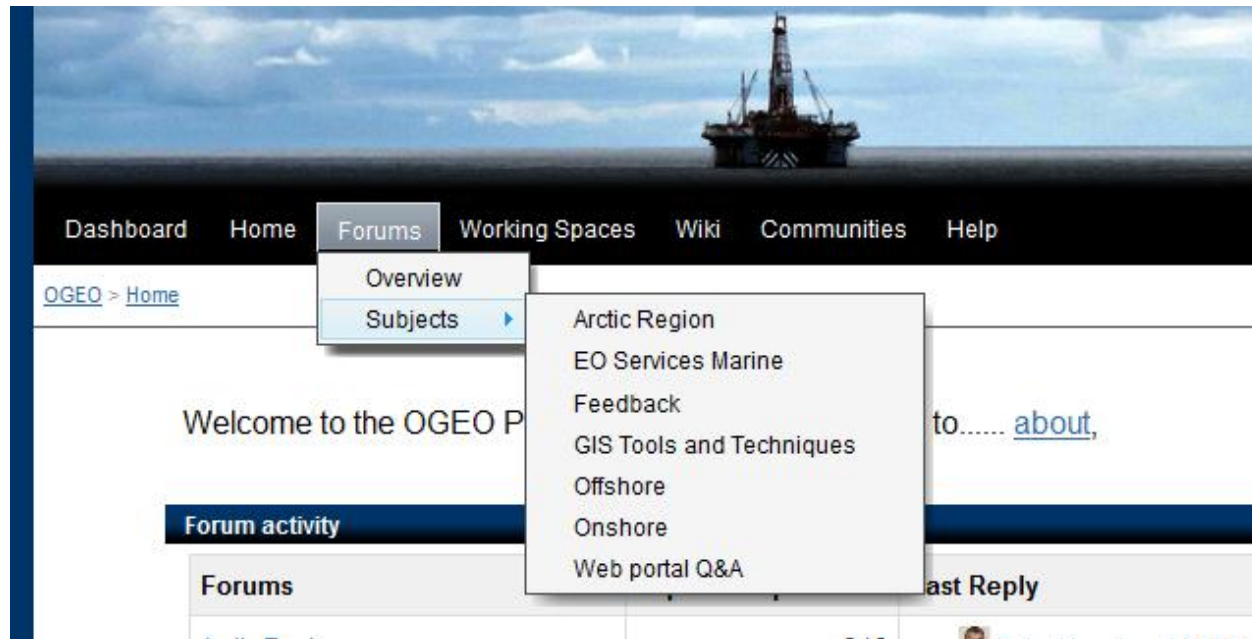
We are working in warmer waters - hence I had not heard of this report - but it looks very usefull and a good document.

At the upcoming workshop in Frascati we will have paper by : Des Power, Standards and Guidelines for the use of Satellite based ice information in the Oil and Gas Sector - an ESA supported initiative. Should be usefull and interesting to compare.

[Edit](#) | [Remove](#) | [Reply](#)

[Add Comment](#)

OGEO Portal - Navigation



Provides many ways to navigate and find information.










OGEO Portal – Home Page

Forum activity

Forums	Topics / Replies	Last Reply
Arctic Region	2 / 3	 Peter Hausknecht 28 Nov
EO Services Marine	0 / 0	
Feedback	2 / 2	 Geoff Sawyer 06 Oct
GIS Tools and Techniques	3 / 5	 Francis Martens 04 May
Offshore	2 / 0	 Peter Hausknecht 05 Oct
Onshore	1 / 2	 Geoff Sawyer 02 Dec
Web portal Q&A	9 / 9	 Geoff Sawyer 23 Aug

Site activity

All Updates Favourite Spaces Space Categories

-  [Re: How might this broad topic be organized to facilitate adding...](#) (OGEO)
by [Geoff Sawyer](#) (02 Dec)
-  [Meetings](#) (OGEO Wiki)
by [Geoff Sawyer](#) (02 Dec)
-  [The OGEO Working Group](#) (OGEO Wiki)
by [Geoff Sawyer](#) (02 Dec)
-  [Minutes OGEO WG Telecom \(12\) 29th November 2011](#) (OGEO)
by [Monica Miquel-Lago](#) (01 Dec)
-  [Water quality monitoring](#) (OGEO Wiki)
by [Karin Schenk](#) (01 Dec)
-  [Water depth mapping](#) (OGEO Wiki)
by [Karin Schenk](#) (01 Dec)
-  [Technology of aquatic optical remote sensing](#) (OGEO Wiki)
by [Geoff Sawyer](#) (01 Dec)
-  [applications](#) (OGEO Wiki)
by [Geoff Sawyer](#) (01 Dec)
-  [Sea floor mapping- satellite based benthic habitat mapping](#) (OGEO Wiki)
by [Karin Schenk](#) (01 Dec)


Portal news

Blog Posts

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OGEO Aug 09, 2011
-  [OGEO Telecon on 1st July](#) created by [Geoff Sawyer](#)
OGEO Jun 28, 2011
-  [Working Spaces Discussions](#) created by [administrator](#)
OGEO Jun 26, 2011

My Favourites

Favourite Pages

There are currently no pages on your favourites list. You can add pages to this list by clicking  from the Tools menu on the page you're viewing.

My Communities

You are currently not a member of any communities.

Top contributors

User	Edits	Comments	Labels
Geoff Sawyer	297	14	50
administrator	139	1	18
Monica Miquel-Lago	125	1	10



Conclusion

- Open now for new registrants
- We want feedback to guide future developments.
- Try it out and give us feedback on your views.

www.OGEO-Portal.eu

- We also look for moderators to help with specialist areas. Let us know if this could interest you.