

Croeso i rifun Awst 2011 o gylchlythyr SEACMAS. Yn y rhifun hwn....

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SEACAMS ar fwrdd yr RV Noctiluca yn Sioe Gychod De Cymru

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Astudiaeth yn creu cyfleoedd newydd i fusnesau sy'n berchen ar gychod neu longau

Mae SEACAMS wedi bod yn helpu busnesau ar hyd arfordir Cymru sy'n berchen ar gychod neu longau i gynhyrchu busnes o farchnad sy'n tyfu. Wrth i'r ymchwiliadau i dechnegau ynni adnewyddol morol ddatblygu, mae'r galw am arolygon o'r môr yn cynyddu.

Welcome to the August 2011 edition of the SEACMAS Newsletter. In this edition...

Businesses discuss marine projects at SEACAMS' pan Wales launch event



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SEACAMS onboard the RV Noctiluca at the South Wales Boat Show

As an extension of their launch activities this June, SEACAMS attended the South Wales Boat Show at Swansea's new SA1 Waterfront on board the Swansea University research vessel, the RV Noctiluca from 17th to 19th June.

Survey work generates new opportunities for businesses with boats



SEACAMS has been helping companies based around the Welsh coast that own boats to generate business from a growing market. As the exploration of renewable offshore energy techniques gathers pace the need for marine survey work is increasing.

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Businesses discuss marine projects at SEACAMS' pan Wales launch event



Ym mis Mehefin, daeth busnesau ledled Cymru sydd â diddordeb mewn prosiectau arfordirol a morol ar fwrdd llongau ymchwil wedi eu hangori ym Mangor, Abertawe a Gaerdydd. Yn ystod lansiad swyddogol prosiect gwerth £23.6 miliwn sy'n anelu at dyfu'r sector forol yng Nghymru gwelwyd cynllunio ar y cyd rhwng y sector breifat a phrifysgolion i ddatblygu busnesau arfordirol a morol.

Lansiwyd y prosiect SEACAMS yn swyddogol gan Carwyn Jones, Prif Weinidog Cymru, ar fwrdd yr RV Prince Madog yng Nghaerdydd. "Mae'r sector forol wyddonol yn datblygu i fod yn rhan bwysig iawn o economi Cymru a bydd y prosiect cyffrous yma yn gymorth i fwrw ymlaen gyda'r nod o greu swyddi a chynhyrchu buddsoddiad yn y sector. Drwy greu cysylltiadau gwell rhwng ein prifysgolion a'r sector breifat fe allent ymelwa ar eu potensial masnachol i'r eithaf a manteisio ar y cyfleoedd sydd ar gael. Hoffwn weld Cymru yn achub y blaen yn y sectorau newydd yma, fel ynni adnewyddol," meddai Mr Jones.

Roedd y lansiad yn gyfle i fusnesau gael golwg ar y llongau ymchwil RV Prince Madog a'r RV Noctiluca ac i ystyried y cyfoeth o gyfleusterau sydd ar gael i fusnesau drwy brosiect SEACAMS. Ym mhob un o'r digwyddiadau busnes ym Mangor, Abertawe, Caerdydd ac Aberystwyth roedd yna arddangosfa arfordirol a morol boblogaidd lle cafodd busnesau'r cyfle i drafod prosiectau posib gydag arbenigwyr SEACAMS ac i ystyried sut y gallai'r ystod eang o arbenigedd morol a'r cyfleusterau sydd ar gael gan SEACAMS ychwanegu gwerth.

"Roedd y lansiad yn llwyddiannus dros ben, cafodd proffil SEACAMS ei godi ymhlith y gymuned busnes lleol a sefydlwyd prosiectau cychwynnol

In June businesses from across Wales with interests in coastal and marine projects came aboard research vessels as they berthed in Bangor, Swansea and Cardiff. The official launch of the £23.6 million project to grow Wales' marine sector saw the development of collaborations between the private sector and universities to develop coastal and marine businesses.

The First Minister of Wales, Carwyn Jones, officially launched the SEACAMS project on board the *RV Prince Madog* in Cardiff Bay. "The marine science sector is playing an increasingly important part in the Welsh economy and this exciting project will help push forward this growth with the aim of creating jobs and generating investment. Better links between our Universities and the private sector will allow them to fully exploit their commercial potential and make the best of the opportunities available. I want to see Wales taking a lead in these emerging areas, such as renewable energy," he said.

The launch event included opportunities for businesses to board the research vessels *RV Prince Madog* and *RV Noctiluca* to explore the wealth of facilities businesses could access through the SEACAMS programme. At each of the business events in Bangor, Swansea Cardiff and Aberystwyth there was also a well attended coastal and marine sector exhibition where businesses took the opportunity to discuss potential projects with SEACAMS experts and explore how the wide range of marine expertise and facilities available in SEACAMS could add value.

"The launch event was very successful, raising the profile of SEACAMS amongst the business community and bringing forth some excellent initial projects that ultimately can help to establish Wales as a global centre for coastal and marine science and technology," reflects Dr Gay Mitchelson-Jacob, SEACAMS Project Manager. "I am pleased that many businesses came to learn more about the SEACAMS project and how they could collaborate to spearhead future profitable marine ventures. Projects are already underway in Bangor and Swansea with businesses who attended the launch events assisting them to demonstrate innovative effective products through research pilots and feasibility studies."

One of the companies discussing opportunities with SEACAMS is marine ecological consultancy, Salacia Marine. The company provides extensive services from ecological research to habitat mapping and seabed video surveys. Dr. Andrew Woolmer, Managing Director said: "The launch event was a great opportunity to understand SEACAMS' diverse expertise and meet enthusiastic scientists. Salacia Marine is often addressing complex problems for clients that require a multi-disciplinary

a wnaiff helpu yn y pen draw i sefydlu Cymru fel canolfan byd-eang ar gyfer gwyddoniaeth a thechnoleg forol ac arfordirol," meddai Dr Gay Mitchelson-Jacob, Rheolwr Prosiect SEACAMS. "Rwyf yn hapus fod nifer o fusnesau wedi dod ynghyd er mwyn dysgu mwy am brosiect SEACAMS a'r posibiladau o gydweithio i allu arwain mentrau morol proffidiol yn y dyfodol. Mae prosiectau ar y gweill ym Mangor ac Abertawe gyda busnesau a fynychodd y digwyddiadau lansio ac rydym yn eu cynorthwyo i arddangos cynnyrch arloesol ac effeithiol drwy dreialon ymchwil ac astudiaethau dichonolrwydd."

Un o'r cwmnïau sy'n trafod cyfleoedd gyda SEACAMS yw Salacia Marine, ymgynghoriaeth ecolegol forol. Mae'r cwmni yn cynnig ystod eang o wasanaethau ymchwil ecolegol, megis mapio cynefin ac archwiliadau o wely'r môr. "Roedd y lansiad yn gyfle gwych i ddeall arbenigedd amrywiol SEACAMS ac i gyfarfod â gwyddonwyr brwdfrydig. Yn aml, mae Salacia Marine yn delio â phroblemau cymhleth ar ran cleientiaid sy'n gofyn am waith amlddisgyblaeth felly mae'r cyfle i allu cydweithio â SEACAMS a chael manteisio ar yr amrediad helaeth o ddisgyblaethau'n un amhrisiadwy. Rwyf hefyd yn falch fod SEACAMS wedi cydnabod gwerth cefnogi gwyddoniaeth gymhwysol i helpu busnesau i ymelwa ar yr adnoddau morol sydd gennym yng Nghymru," meddai Dr Andrew Woolmer, Rheolwr Gyfarwyddwr Salacia Marine.

Mae Salacia Marine a SEACAMS wedi cychwyn archwilio syniadau ar gyfer prosiectau gwahanol gan gynnwys monitro cynefin er mwyn helpu busnesau morol i elwa o'r buddion economaidd gan sicrhau'r effaith leiaf posib ar yr amgylchedd. "Rydym yn ystyried gweithio gyda SEACAMS i ychwanegu gwerth i'n darpariaeth ymgynghori. Drwy gyplu ein harbenigedd ymchwil â'r wybodaeth wyddonol sydd gan SEACAMS dylem allu ehangu ein portffolio ac ychwanegu gwerth i'r amrediad o wasanaethau rydym yn eu cynnig," ychwanegodd Andrew.

approach, so the ability to work collaboratively with SEACAMS utilising a wide range of disciplines is invaluable. It's also good that SEACAMS has recognised the value of supporting applied science to assist businesses to truly exploit the marine resources we have in Wales."

Salacia Marine have begun to explore a range of project ideas with SEACAMS including advances in habitat monitoring to help marine businesses gain the maximum economic benefit from their operations with the minimum environmental impact. "We are exploring working with SEACAMS to add value to our consultancy proposition. Our expertise in ecological consultancy coupled with the research facilities and scientific knowledge available through SEACAMS will allow us to broaden our client portfolio and add value to the range of services we offer," concludes Andrew.



SEACAMS ar fwrdd yr RV Noctiluca yn Sioe Gychod De Cymru

SEACAMS onboard the RV Noctiluca at the South Wales Boat Show



Fel estyniad o'u digwyddiadau lansio ym Mehefin, roedd SEACAMS yn bresennol yn Sioe Gychod De Cymru yn SA1 yn Abertawe rhwng yr 17eg - 19eg o Fehfin ar fwrdd yr RV Noctiluca, llong ymchwil Prifysgol Abertawe. Dyma'r tro cyntaf i Briifysgol Abertawe gael ei chynrychioli yn y sioe, a fynychwyd hefyd gan 250 o gychoed bach, 2 long llynges frenhinol ac 1 llong Rheoli Ffin Prydain. Roedd yr RV Noctiluca yn boblogaidd ymysg ymwelwyr, meddai un ymwelydd, "dyma fy hoff long." Er gwaethaf y glaw, daeth dros 200 o ymwelwyr ar fwrdd y llong er mwyn cael taith o'i chwmpas. Defnyddiodd SEACAMS y cyfle yma i esbonio a hyrwyddo eu gwaith ymchwil i'r cyhoedd, gwaith sy'n anelu at ddarparu cyfleoedd i fusnesau yng Nghymru fanteisio ar y sgiliau, y cyfleusterau labordy a'r arbenigedd ymchwil sydd ar gael ym Mhrifysgolion Bangor, Abertawe ac Aberystwyth.

Roedd staff SEACAMS yn y sioe i drafod agweddau ymarferol gwyddorau morol ac roedd gan lawer un ddi-ddordeb byw mewn dysgu sut, lle a pham mae data biolegol morol yn cael ei gasglu. Ar yr un pryd cafodd darpar fyfyrwyr bioleg a daearyddiaeth y cyfle i gasglu gwybodaeth am gyrsiau israddedig. Cafodd perchnogion cychod lleol gyfle i gael golwg ar yr RV Noctiluca ac roedd llawer ohonynt wedi eu swyno gan yr offer atsain soffistigedig ar fwrdd y llong.

Ddydd Sul y prif atyniad i oedolion a phlant oedd darllediad byw o gamera dan ddŵr wedi ei osod o dan y llong ar wely'r marina. Gwelwyd ambell i sglefren fôr (*Aurelia Aurita*) yn hofran yn urddasol yn y golofn ddŵr yn ogystal â chrancod yn bwyta'r abwyd oedd yn sownd i'r camera. Cafodd y plant gyfle i ateb cwis a baratowyd gan Chiara Bertelli, biolegydd morol SEACAMS. Enillydd y cwis oedd Luke Gregory o Ysgol Sandfields a fydd yn derbyn llyfr Judith Oakley, *Seashore Safaris*.

Yn dilyn llwyddiant y digwyddiad yn Abertawe, cymerodd SEACAMS ran yn Sioe Gychod Gogledd Cymru ar Stad y Faenol, Bangor rhwng 29ain-

As an extension of their launch activities this June, SEACAMS attended the South Wales Boat Show at Swansea's new SA1 Waterfront on board the Swansea University research vessel, the *RV Noctiluca* from 17th to 19th June. It was the first time that Swansea University was represented at the show, which also played host to over 250 small craft, 2 royal navy ships and 1 UK Border Control ship. The *RV Noctiluca* proved popular with one admirer remarking "*this is my favourite boat*". Despite a rainy start, over 200 people of varying ages embarked the boat for a tour and explanation of its equipment and capabilities. In addition, SEACAMS used the opportunity to explain and advertise their research project to the public, which is aimed at providing Welsh businesses with an opportunity to access the skills, laboratory facilities and research capabilities of Swansea, Bangor and Aberystwyth Universities.

The SEACAMS staff were on hand to chat about practical aspects of marine science, with many people fascinated by how, where and why marine biological data is collected, while prospective biology and geography students collected undergraduate course information. Local boat owners from the Swansea Marina also took the opportunity to have a look at the *RV Noctiluca*, many of whom were enthralled by the sophisticated echo sounding equipment on board.

On Sunday the main attraction for adults and children alike was live feed from a specialised underwater camera and lights set up below the boat on the marina floor. Initial feeds revealed several small moon jellyfish (*Aurelia aurita*) hovering majestically in the water column, but this later switched to crabs feeding on bait attached to the video camera frame. Children were invited to complete the rocky shore quiz devised by SEACAMS marine biologist Chiara Bertelli which was won by Luke Gregory of Sandfields Comprehensive, who will receive Judith Oakley's book '*Seashore Safaris*'.

Following the success of the event in Swansea, SEACAMS attended the North Wales Boat Show at the Vaynol Estate in Bangor over 29th to 31st July. While Bangor University's research vessel, the *RV Prince Madog* was too large to fit on the estate's lake, visitors to the SEACAMS stand were able to admire her in the form of a scale model. SEACAMS sustainability officer, Jo Stroud, was on hand to explain what happens to the plastic we throw into the sea and to give practical advice to businesses on environmental management, equality, diversity and the Welsh language. Adults and children alike were able to show their commitment to the future of our seas by putting their promises onto the Promise Tree. Together both the North and South Wales Boat Shows enabled people to talk about their passion for the marine environment and appreciate how research at Bangor, Swansea and Aberystwyth Universities can help to sustain it.

31ain o Orfennaf. Yn anffodus roedd llong ymchwil Prifysgol Bangor, yr RV Prince Madog rhy fawr i ffitio ar lyn y stad, ond cafodd ymwelwyr y cyfle i edmygu model ohoni ar stondin SEACAMS. Roedd Jo Stroud, Swyddog Cynladwyedd SEACAMS yn esbonio beth sy'n digwydd i blastig rydym yn ei daflu i'r môr ac yn rhoi cymorth ymarferol i fusnesau ar reolaeth amgylcheddol, cydraddoldeb, amrywiaeth a'r iaith Gymraeg. Cafodd oedolion a phlant gyfle i ddangos eu hymrwymiad i ddyfodol ein moroedd drwy roi eu haddewidion ar y Goeden Addewidion. Rhoddodd y Sioeau Cychod yng Ngogledd a De Cymru gyfle i bobl drafod eu diddordeb byw yn yr amgylchedd morol ac i werthfawrogi sut mae'r gwaith ymchwil ym Mhrifysgolion Bangor, Abertawe ac Aberystwyth yn helpu i'w gynnal.



Astudiaeth yn creu cyfleoedd newydd i fusnesau sy'n berchen ar gychod neu longau

Survey work generates new opportunities for businesses with boats



Mae SEACAMS wedi bod yn helpu busnesau ar hyd arfordir Cymru sy'n berchen ar gychod neu longau i gynhyrchu busnes o farchnad sy'n tyfu. Wrth i'r ymchwiliadau i dechnegau ynni adnewyddol morol ddatblygu, mae'r galw am arolygon o'r môr yn cynyddu. Mae arolygon o'r amgylchedd morol yn rhan hanfodol o'r ymchwiliadau i effeithiau unrhyw weithgaredd ar y môr neu'r lan ac fe allai fod angen nifer o wahanol fathau o longau i'w cynnal yn effeithiol. Gall yr arolygon astudio bob math o bethau, o sefydlu pa fath o fywyd gwylt sy'n byw mewn lleoliad arbennig, sef archwiliad-eco, i astudio effeithiau posib digwyddiadau'r dyfodol, sef asesiad effaith amgylcheddol. Mae amrywiaeth yr arolygon morol yn rhoi cyfleoedd i berchnogion longau neu gychod o feintiau gwahanol. Pan fydd angen arolyg geo-technegol i astudio safleoedd yn agos i'r lan, yna mae cychod â gwaelod bas yn berffaith.

Mae SEACAMS wedi paratoi gweithdy undydd er mwyn amlygu'r farchnad posib ar gyfer llogi longau neu gychod o fewn y sector yma. Mae'r diddordeb yn y gweithdai yn tyfu gyda chynrychiolwyr o 18 busnes yn bresennol yn y 3 gweithdy cyntaf a gynhaliwyd rhwng Ebrill a Mehefin. "Mae bob gweithdy wedi ei deilwra ar gyfer 10 unigolyn er mwyn iddynt gael dealltwriaeth ymarferol o'r gwaith astudio a sut i gynhyrchu busnes o fewn y farchnad yma. Mae'r cynnydd mewn diddordeb yn ein gweithdai yn ganlyniad i'r ffaith bod pobl yn sylweddoli potensial gwaith arolygu ar ôl mynychu'r sesiynau," meddai Nicole Esteban, rheolwr prosiect SEACAMS sy'n arwain y sesiynau.

Mae'r amrediad o arolygon sydd ar gael yn cynnig cyfleoedd i fusnesau sy'n berchen ar gychod neu longau o bob maint. Does dim gofyn prynu unrhyw offer cyfalaf drud yn ychwanegol i fod yn rhan o'r farchnad hon. Yr unig beth mae rhai cleientiaid yn gofyn amdano yw cwrch neu long i'w ddefnyddio fel platform, tra bod gan eraill diddordeb mewn

SEACAMS has been helping companies based around the Welsh coast that own boats to generate business from a growing market. As the exploration of renewable offshore energy techniques gathers pace the need for marine survey work is increasing. Environmental marine surveys are an essential part of investigating the effects of any off-shore or inshore activity and can require a diverse range of vessels to conduct them effectively. Surveys can range from establishing the marine life in a particular area, often known as an eco-audit, to investigating the potential effects of future activities, known as environmental impact assessments. The diversity of marine surveys holds opportunities for owners of vessels of different sizes. Where geo-technical surveys are required to investigate sites close to the shore line, boats with a shallow draft are ideal.

A one day workshop has been constructed by SEACAMS to highlight the potential market for chartering vessels to this growing sector. Interest has been growing in the workshops with delegates from 18 businesses attending the first three workshops held between April and June. "Each workshop is tailored for a maximum of 10 delegates to give them a practical understanding of survey work and how to generate business in this market. The increasing interest in the workshop has resulted from delegates realising the potential for survey work after attending," reflects Nicole Esteban, SEACAMS project manager who is spearheading the sessions.

The different types of survey work available present opportunities for businesses with all sizes of boat. Entering this market does not require investment in any additional expensive capital equipment. Some potential clients simply need a boat as a platform to operate from, while others are interested in a more comprehensive proposition where scientific equipment is provided. "These workshops provide companies with all the information they need to know to win business from this potentially lucrative sector. The workshops cover the wide range of surveys undertaken, the legalities of chartering your boat in this market and the best ways to promote your business," explains Nicole. "While some businesses may just offer their craft, local knowledge of the waters and expert boat handling skills, we also show businesses the types of survey equipment they might wish to purchase or rent to add value."

The one day workshop not only presents information from key people in the sector on how to get into this market place, it also gives boat owners a taste of what's involved in conducting a marine survey. "Boat owners experience a survey in action during the workshop. We take them out on Swansea University's research vessel, RV Noctiluca, to show them what is involved, so they have a good understanding of what services their boats might best be suited to providing," says Nicole.

darpariaeth fwy cynhwysfawr lle mae offer gwyddonol yn cael eu darparu. "Mae'r gweithdai yn darparu'r holl wybodaeth sydd ei angen i gwmnïau allu ennill busnes yn y sector proffidiol yma. Mae'r gweithdai yn trafod yr amrywiaeth o arolygon sy'n cael eu cynnal, yr ochr gyfreithiol i logi eich cwch yn y farchnad a'r dulliau gorau o hyrwyddo eich busnes," esboniai Nicole. "Efallai bod rhai busnesau ond yn cynnig eu cwch, eu gwbyodaeth leol am y môr a'u sgiliau trin cwch, ond rydym hefyd yn awyddus i ddangos i fusnesau y math o offer cynnal arolwg y gallent eu prynu neu eu logi er mwyn ychwanegu gwerth."

Nid yn unig y mae'r gweithdai'n cyflwyno gwbyodaeth gan bobl allweddol yn y sector a dangos sut i fod yn rhan o'r farchnad ond maent hefyd yn rhoi'r cyfle i berchnogion cychod gael blas ar y gwaith sy'n gysylltiedig â chynnal arolwg morol. "Mae perchnogion cychod yn cael gweld arolwg ar waith yn ystod y gweithdy. Rydym yn mynd â nhw allan ar long ymchwil Prifysgol Abertawe, RV Noctiluca, i dangos y gwaith sy'n cael ei wneud er mwyn iddynt gael dealltwriaeth bellach o ba wasanaethau allai eu cychod eu cynnig," meddai Nicole.

Mae Dan Worth, perchennog 'Razorbill RIB Charter and Marine Services', sydd wedi ei leoli yng Nghilgerran, Sir Benfro yn defnyddio tri chwch chwythu â gwaelod anhyblyg. Dechreuodd fasnachu ddwy flynedd yn ôl ac roedd 80% o'i fusnes gyda chleient mawr oedd yn cynnal arolygon morol, er ei fod hefyd yn cynnig triapiau deifio a gwyllo bywyd gwyllt. "Er bod gennym gleientiaid yn cynnal arolygon morol yn barod, cymerais ran yng ngweithdy SEACAMS er mwyn cael darganfod pa fath o waith archwilio pellach oedd ar gael yn yr ardal. Mae'r gweithdy wedi bod yn amhrisiadwy gan ei fod wedi rhoi dealltwriaeth gadarn i mi o'r mathau eraill o arolygon sydd ar gael, y sefydliadau sy'n gofyn amdanynt a'u gofynion. O ganlyniad rwyf wedi ehangu fy rhestr o gleientiaid," meddai Dan.

Bydd mwy o weithdai yn cael eu cynnal eleni yn Abertawe ac ym Mangor yn ystod mis Hydref a mis Tachwedd. Mae'r gweithdai wedi eu hariannu felly mi fyddant am ddim i berchnogion llong sydd eisiau dod.

Er mwyn archebu eich lle ar weithdy yn Abertawe, cysylltwch â Seacams@swansea.ac.uk

Er mwyn archebu eich lle ar weithdy ym Mangor, cysylltwch â Seacams@bangor.ac.uk

Dan Worth, owner of Razorbill RIB Charter and Marine Services, is based in Cilgerran in Pembrokeshire from where he operates three rigid hull inflatable boats. He began trading two years ago and 80% of his business was with a large client undertaking marine surveys in addition to offering dive and wildlife watching charters. "While we already have a client base in marine survey work, I attended the SEACAMS workshop to explore what other survey work was available in the area. The workshop has been invaluable in giving me a better understanding of other types of surveys, the organisations wanting them and their requirements. As a result I have already widened my client base," states Dan.

Further workshops will be run later this year in Swansea and Bangor during October and November. Boat businesses wishing to attend a workshop should contact SEACAMS to book a place. Workshops are funded, so there will not be a charge made to boat owners wishing to participate.

To book a place on a workshop in Swansea contact Seacams@swansea.ac.uk

To book a place on a workshop in Bangor contact Seacams@bangor.ac.uk

