To explore the potential of coastal and marine nature to improve the quality of life

Week calendar 2015

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Foreword

In 2050 the world will have more than 9 billion inhabitants. Huge challenges lie ahead of us to feed people without impacting the environments that provide the resources for food production. Marine ecosystems provide many of these essential resources for the benefit of society. Using these resources in a responsible way requires innovative knowledge that smartly integrates technical, environmental and socio-economic approaches.

This is exactly the strength of Wageningen UR (University and Research centre). Together we cover expertise from fisheries ecology to adaptive governance of sea level rise; from aquaculture to sustainable tourism; in temperate, Arctic and Tropical areas. The TripleP@Sea innovation program clearly demonstrates how transdisciplinary collaboration is the basis for new discoveries and innovations, creating successful research, education and societal and economic value for the benefit of society.

This calendar illustrates the versatility and beauty of the work of many, but certainly not all, Wageningen UR colleagues, exploring the potential of coastal and marine nature to improve the quality of life.

Enjoy!

Prof. dr Tinka Murk



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More information about the studies can be found via the calendar 2015 website or the QR codes. For these codes please use the app *Scan*.



When I was working as a UN voluteer on sustainable production of 'salties' in brackish ponds (to circumvent the high juvenile mortality in the wild), I learned to appreciate the rich but vulnerable tropical coastal areas and their relevance for sustainable food supply and economic development. *Prof. dr ir Louise Fresco, president of Wageningen UR*







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2015

The 9 billion people living on our blue planet by 2050 will need the sea. Sustainable seafood production is essential to secure the growing demand for protein-rich food in the world. *Dr Martin Scholten, Board of Directors Wageningen UR, Animal & Marine Science*

January







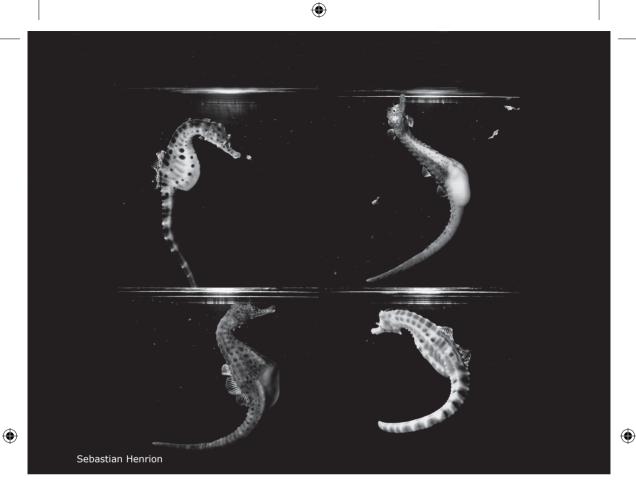
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2015

A camera crew followed researchers during their work on Svalbard near the village of Ny-Ålesund, 1235 kilometres from the North Pole. Their study concerns the effects of new developments on the Arctic environment.

January





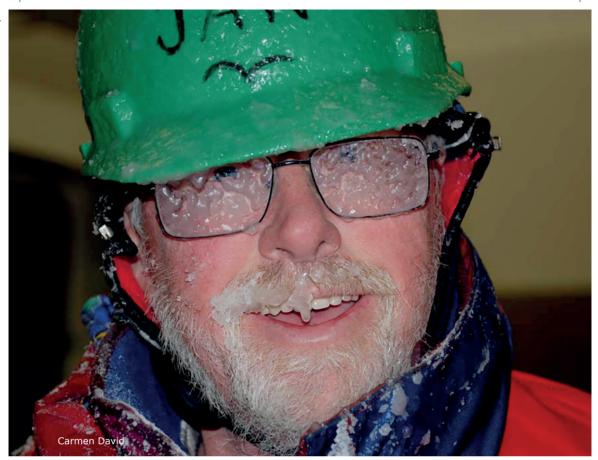


2015

Elegant and complex seahorse manoeuvres captured with high speed cameras. Last year, these beautiful creatures produced more than 100 babies at the animal facilities of Wageningen UR.

January





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week

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2015

The work of Wageningen UR researchers on Antarctica has a wide variety of subjects, from polar sea to ice and from krill to whales.

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January | February



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2015

Small dataloggers fitted on Arctic Skuas by Wageningen UR scientists reveal the impressive migration routes from their (sub) Arctic breeding sites to wintering areas in the South Atlantic.

February







To estimate the numbers of mackerel and horse mackerel in the Atlantic Ocean, fish eggs collected with a plankton torpedo are counted. New DNA-based techniques are developed for easy identification.

February



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week





2015

Wageningen UR researchers, fishermen and other private partners currently are building this innovative fishing boat that will enable more sustainable and profitable fisheries.

February





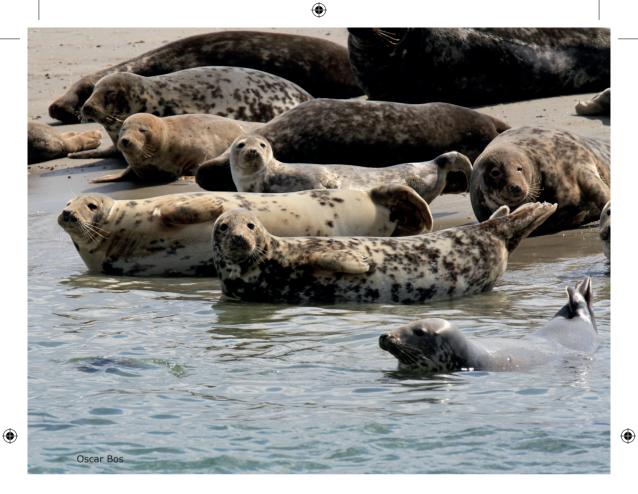


2015

Wageningen UR scientists study the functions of salt marshes, with saline tolerant plants developing in the gradient between sea and land, providing a natural flood protection.

February | March







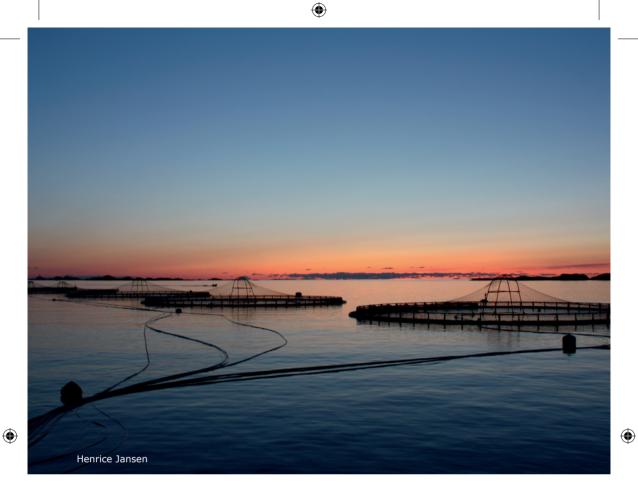
Wageningen UR marine biologists use photo-ID techniques to identify individual grey seals (*Halichoerus grypus*) based on their pelage colour and pattern.

March



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week **10** 2015





Integrated Multi-Trophic Aquaculture (IMTA) systems aim at more sustainable and profitable aquaculture by integrating aquaculture of fish with that of filter feeders (mussels) and seaweed, to further close nutrient cycles.

March



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week **11 2**015





Wageningen UR studies the feasibility of combined uses of marine infrastructures such as multi-use platforms (MUPs), to reduce the pressure of exploitation of the sea.

March



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week **12** 2015



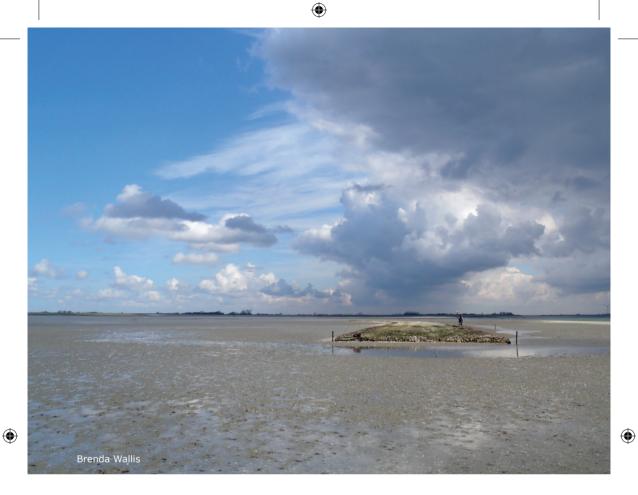


Annual growth rings in the otoliths (ear bones) of a fish can be used to determine the age of the fish. Fish ageing is an important expertise in fisheries science within Wageningen UR.

March







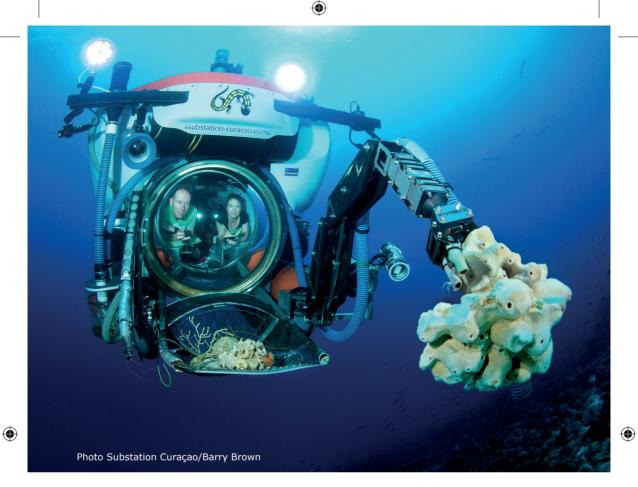


An artificial oyster reef breaks the waves to combat coastal erosion. The reef grows with sea level rise and provides nurseries for marine fish and other species.

March | April









Wageningen UR scientists study deep sea biodiversity and ecological conditions for responsible deep sea activities. Special research vessels are used to gain better knowledge on deep sea ecology.

April

week **15** 2015







Sampling macrobenthos from the intertidal beaches of the 'Sand engine', an innovative method for protection of the Dutch coast. Macrobenthos is studied to evaluate the effects of this new technique on the marine organisms.

April

week **16** 2015







Unfortunately, released balloons are not just fun but also litter the environment. Wageningen UR studies the adverse effects of marine plastic and litter on wildlife.

April

week **17** 2015







The aquacultured Mediterranean sponge *Dysidea avara*, and the millions of microorganisms it hosts, produces compounds that are studied at Wageningen UR as a possible source for new medicines.

week **18** 2015

April | May







Scientists from Wageningen UR develop aproaches to close precious nutrient and fresh water cycles at St Eustatius. This supports sustainable development of tourism, agriculture and aquaculture.

May

week **19** 2015







With increasing demand for high quality protein, seaweed cultivation can deliver an important contribution to food production. Cultivation of seaweed is studied in the North Sea and Oosterscheldt delta.

May

week **20** 2015







Many islands in the Caribbean have become mass tourism destinations. A Tourism Master Plan is being developed to demonstrate alternative sustainable development options for the island of Sint Eustatius as an example.

May

week **21** 2015







Wageningen UR participates in the European ECsafeSEAFOOD project, that aims to establish the link between marine environmental and seafood contamination as a basis for policy and measures.

May

week **22** 2015







European coastal marine ecosystems provide important services that should be integrated for sustainable use. The EU funded project COEXIST studies optimal spatial management thereof.

June



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week **23** 2015





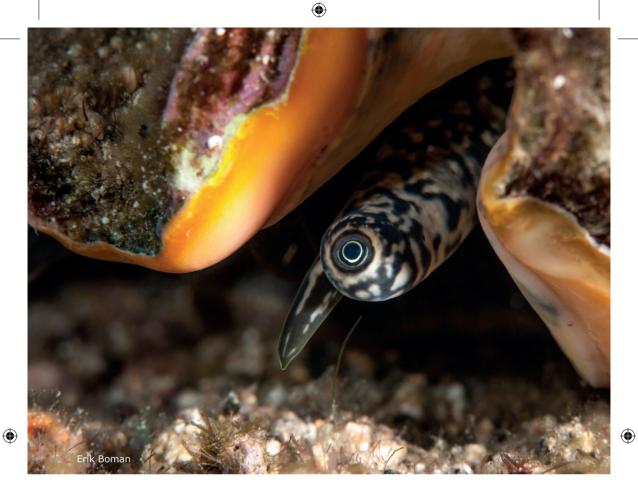
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2015

This drawing shows 16th century fishing with driftnet, dragnet, and baited lines. Wageningen UR researchers also use historical information to reveal anthropogenic influences on the North Sea ecosystem.

June







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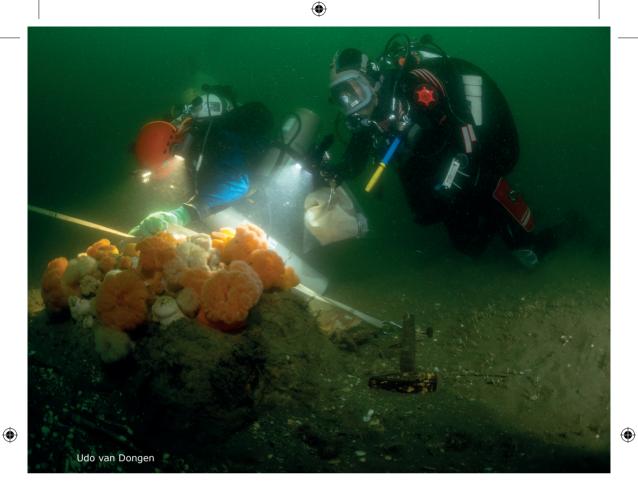
2015

The complex life cycle of Queen conch (Strombus gigas) is studied by Wageningen UR at St Eustatius. Conch is important to local communities for its nutritional and traditional value, and a protected species.

June

TUESDAY MONDAY 15 16 FRIDAY SATURDAY 20 19







26

2015

Wageningen UR studies the rich biodiversity on offshore gas platforms, wrecks and natural reefs in the North Sea. Many species not present on the sandy seafloor inhabit these structures.

June

MONDAY 22 FRIDAY





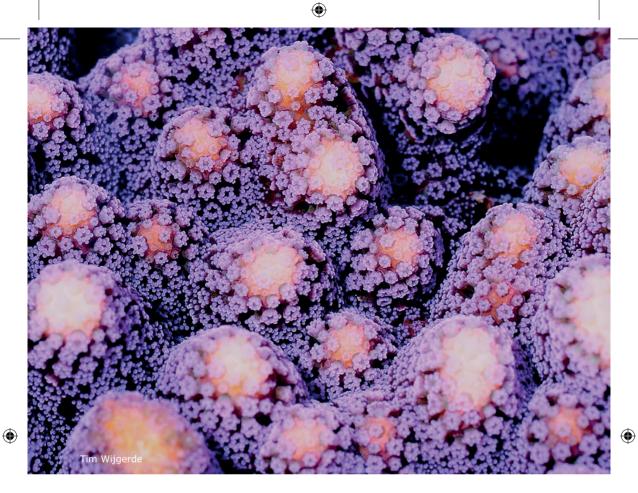


Wageningen UR studies the role of human activities and introduced grazers in erosion of natural vegetation on small tropical islands. The resulting soil degradation and runoff also threatens coral reefs.

week **27** 2015

June | July







The stony coral (*Stylophora pistillata*). Wageningen UR scientists study the physiological effects of environmental factors, including pollution and ocean acidification, on tropical corals.

July

week **28** 2015





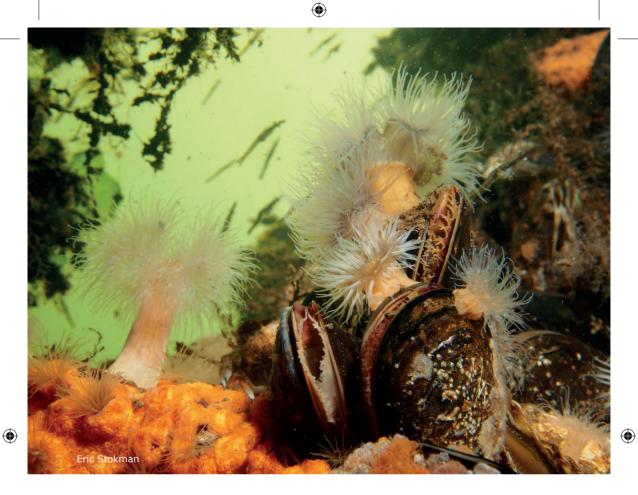


In the Frisian and Groninger mainland salt marshes Wageningen UR monitors sedimentation and vegetation development in order to improve natural dynamics, morphology and biodiversity.

July

week **29** 2015







Marine biotoxins (produced by some algae) can accumulate in shellfish and cause serious health problems in consumers. With a new test developed in Wageningen these toxins can now be detected without using mice.

July

week **30** 2015





Bridge for easy access to old harbour

Sheds transformed into kiosks

Information sign about history of the place

Removal old shed and pavement creation of terrace underneath almond trees

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Present situation and proposal for sustainable tourism development in Croatia. Landscape Architecture can help design more pleasant, but also more resilient coastal areas.

New

week 31 2015

July | August







Favourite recipies shared by international students of Wageningen UR, including seafood recipies, are collected into a new international cook book for every occasion.

August



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week **32** 2015





Deep sea ecosystems house beautiful creatures and larval stadia of economically relevant fish species. Wageningen UR studies the role of dispersants in the increased persistence of benthic oil toxicity.

week **33** 2015

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August



Rene Janssen

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week

34

2015

Monitoring bat activity in offshore wind farms revealed that several bat species, including this Nathusius' pipistrelle (*Pipistrellus nathusii*), regularly migrate over sea. ۲

August





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Wageningen UR supports the Indonesian government in enhancing the availability and accessibility of safe and high quality fish and fish products for the Indonesian consumers. ۲

week **35** 2015

August







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After a 5000 km journey during the first 2 years of their life, the young transparent 'glass eels' reach European coastal waters. Research of Wageningen UR aims at increasing glass eel migration into fresh water ecosystems. ۲

August | September



week **36** 2015





Invasive species such as this Mexican Creeper vine (*Antigonon leptopus*), also called Corallita, overgrows native species at Sint Eustatius. Research by Wageningen UR supports efective management.

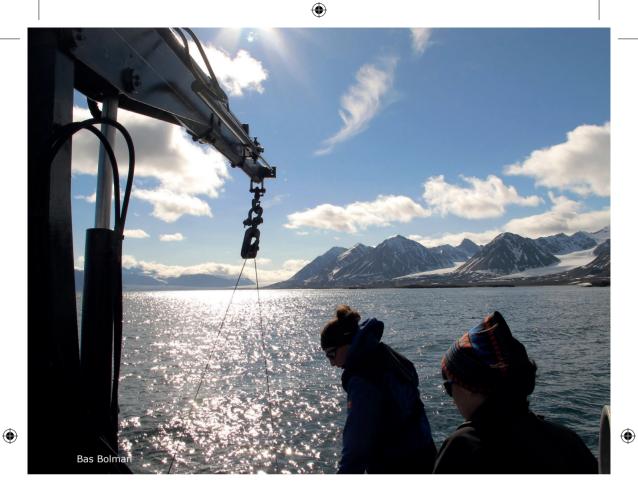
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September



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week **37** 2015





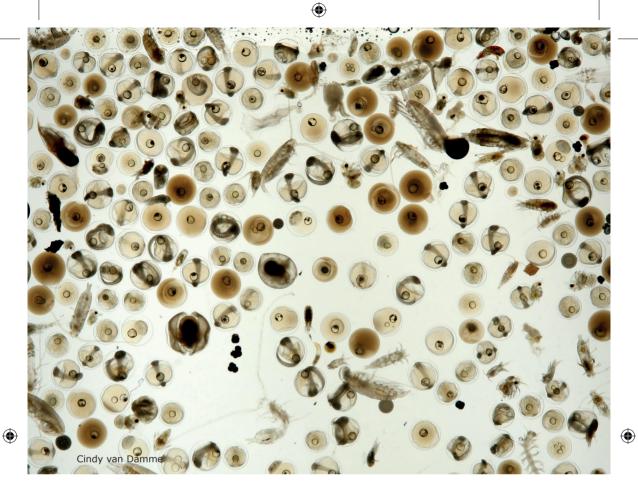
Wageningen UR scientists collect benthic invertebrates in Kongsfjorden bay (Svalbard, Norway) to study environmental changes in this beautiful, but also challenging environment.

September



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week **38** 2015





Microscopic organisms transported via ballast water to other parts of the world can become invasive species. Wageningen UR studies environmentally safe treatment of ballast water from ships.

THURSDAY

24

September



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week **39** 2015





To capitalise on the potential of opportunities for sustainable Arctic Development, Wageningen UR is taking the lead in building international alliances with industries, governments and NGOs.

September | October



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week **40** 2015





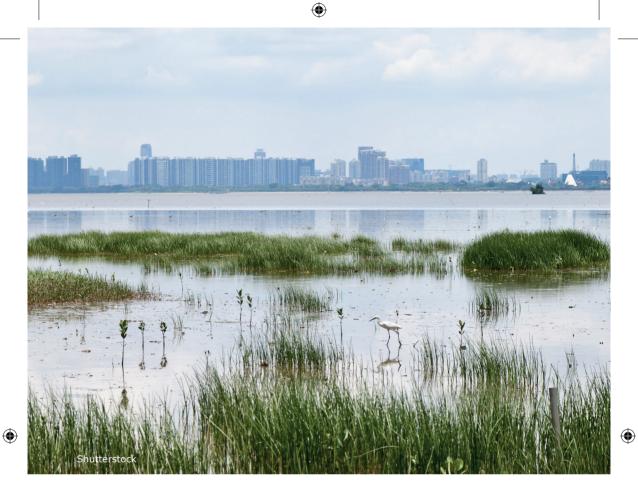
Researchers of Wageningen UR perform a multidisciplinary inventory of the Borkum Reef Grounds in the North Sea, involving SCUBA divers, bottom samples, DNA metabarcoding and drop camera imaging.

October



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week **41** 2015





Wageningen UR collaborates with industry exploring opportunities to reduce the need for fresh water by using saline water where possible, and improve water reuse and water storage in green infrastructure.

week **42** 2015

October







Coastal tourism in the Caribbean depends on, and is strongly impacted by, climate change. Scientists of Wageningen UR investigate how tourism stakeholders can adapt.

week 43 2015

October







Eco-engineered coastal defense can be integrated with sustainable aquatic food production. Wageningen UR has extensive experience with such 'Building with Nature' approaches.

October | November



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week





For the EU project BENTHIS, researchers and crew aboard the R.V. Simon Stevin, North Sea, study effects on the seafloor life of experimental innovative bottom trawling.

November



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week **45** 2015





Green sea urchin (*Psammechinus miliaris*), one of the marine species cultured at Wageningen UR to study the influence of environmental contaminants on early development and metamorphosis using bioassays.

November



week **46** 2015





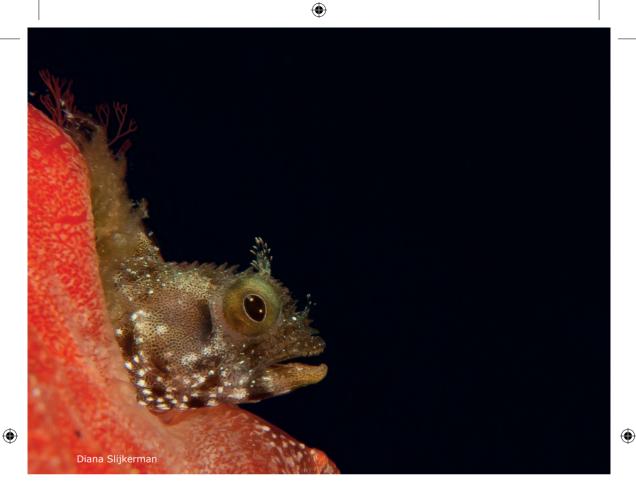
These marine bacteria are used by scientists of Wageningen UR for anaerobic treatment of high salinity wastewaters, to enable closure of industrial water cycles even under challenging conditions.

November



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week





week

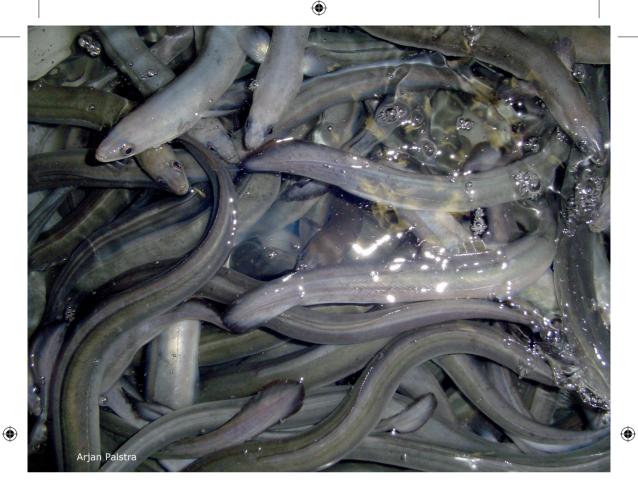
48

2015

Responsible use of the rich marine biodiversity of the Dutch Caribbean could support sustainable economic activities for these islands. This 2 cm small blenny is found in a historical wreck at St. Eustatius.

November







Scientists of Wageningen UR are consulted frequently for their expertise on a variety of fish and shellfish diseases. This includes study of common eel parasites, bacteria and viruses in open waters.

week **49** 2015

November | December







This Elkhorn coral (*Acropora palmata*) species is currently endangered. Wageningen UR scientists contribute to science-based guidelines for long-term reef management in a changing environment.

December



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week **50** 2015





Wageningen UR studies adaptive governance of marine policy and user communities to increased cruise tourism and oil and gas exploration that result from climate change in the Arctic.

December



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week **51** 2015





With SE Asian partners Wageningen UR researchers work to create incentives for governments and private parties to create innovative and equitable management arrangements in Pacific Tuna fisheries.

December









week

53

2015

Wageningen UR scientists aim at improving climate models in order to predict sea ice retreat as well as the role of ocean warming in aggravation of extreme weather conditions.

December

