

MARINE RESOURCE MANAGERS SIX YEARS ON

Making ships cleaner and saving coral reefs

Preserving coral reefs is a big priority for Ingrid van Beek. She studied Marine Resource Management and now does research on ecosystems in tropical seas. Merijn Hougee, from her cohort, has stayed closer to home. His targets are cleaner shipping and less rubbish in the North Sea.

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On the beach in India I saw how disused ships are dismantled by hand using gas burners. This releases a lot of oil and chemicals. The fires, the smoke, the penetrating smell of metal and burning – it is almost surreal. There is something quite impressive about the sight of such heavy industry and big ships, but it also causes tremendous pollution for people, the environment and marine life,' says Merijn Hougee. He has visited India and China in the course of both his graduate research project and his work. He did his Master's in Marine Resources Management part-time between 2008 and 2013, alongside a job as project leader for the North Sea Foundation. Hougee's thesis was about ship recycling and ecological modernization, a sociological theory based on the assumption that the state and the business world will improve the world together through innovation and market mechanisms. He interviewed shipping companies with a safe, environmentally-friendly policy on ship-breaking, such as Maersk, Grieg and DFDS. 'Regulations, policy, public opinion, pressure from clients and ethical considerations all play a role in the decision how and where to break the ships,' he explains. Besides his job at the North Sea Foundation, he has also been working for the Clean Shipping Index (CSI)

since 2013, currently as interim director. This index helps companies opt for cleaner and lower energy shipping for their products. Affiliated companies include H&M, the Swedish firm Volvo, DSM, Philips, AkzoNobel and the Volkswagen group. 'Of course, price, efficiency and reliability are the decisive factors, but these companies consider the environmental performance of ships when deciding whether to contract a shipper. And that is quite something,' reckons Hougee.

RESEARCH ON BONAIRE

The Caribbean island of Bonaire formed the setting for fellow student Ingrid van Beek's graduate research project. In 2011, she studied the economic value of the coral reef off Bonaire for IMARES, Wageningen UR's Institute for Marine Resources & Ecosystem Studies. 'We wanted to provide insight into the services the ecosystem provides. Certain species of coral break down the energy of the waves, for instance, providing coastal protection. We developed a method of measuring how healthy the Bonaire reef is at 116 places along it, and what its capacity is to deliver ecosystem services.'

Van Beek has now been working as a researcher in tropical marine ecology at IMARES for more than two years. The meth-

od of assessing the value of the reef will shortly be published in an academic article. Meanwhile, she is leading several long-term projects. 'I often need to do a short literature study first so as to be in the picture. There is no fixed routine, you keep on learning and it stays challenging.' She lives on the island of Texel, where IMARES has its headquarters. 'If you walk out of the door, you are by the sea in five minutes. And the atmosphere on the island is friendlier and less hurried than on the mainland.' Yes, this is her dream job, Van Beek agrees with a laugh.

It was a long road that brought her here. After secondary school she studied business economics and became an accountant. 'At that point I was not interested in biology or nature at all. I am a typical late bloomer,' she explains. Inspired by a trip around the world, she worked in financial jobs for Doctors without Borders in Kenya and the Congo. 'Gradually I felt the urge to be more involved with the substance of the work. I came in contact with nature organizations and biologists. At the same time, through my passion for diving I saw with my own eyes how the coral reefs were deteriorating.' After voluntary work at a marine national park on Saba, she took a fulltime degree in Coast and Marine Management at Van Hall Larenstein University of Applied >

‘Good management
makes a reef more
resilient’



INGRID VAN BEEK

Age: 47

Studied: MSc Aquaculture and Marine Resource Management, specializing in Marine Ecology 2009 – 2011

Works: as a researcher on tropical marine ecology and coordinator of the Tropical team at IMARES Wageningen UR



‘We must keep the North Sea intact and where necessary restore it’

MERIJN HOUGEE

Age: 34

Studied: MSc Aquaculture and Marine Resource Management, specializing in Marine Governance 2008 – 2013

Works: as Acting Director at Clean Shipping Index and project leader for shipping at the North Sea Foundation

WHERE DO MARINE RESOURCE MANAGERS END UP?

The MSc in Marine Resource Management has been going since 2010. Its predecessor was called Aquaculture and Fisheries (2002 – 2010). A total of 138 people have graduated from this programme, and we have information on the careers of 37 of them. Eleven alumni work at a university, and four at a research institute. Five work for an agricultural company, four for consultancy firms and another four in other branches of trade or industry. Three have jobs with associations or organizations in the Netherlands, and two work for the Dutch government. *Source: KLV Wageningen Alumni Network*

Sciences (VHL) in Leeuwarden, which she could complete in two years, thanks to exemptions. In the meantime she worked at the NGO Wetlands International in Wageningen. Van Beek took a minor at Wageningen University, and the academic approach appealed to her. So after working and saving for another year, she did the fulltime Master's in Marine Resources Management. 'Alternating work and studying was hectic, but if you are motivated you can do a lot.'

LOOKING AFTER SHARKS

Merijn Hougee was the opposite of a late bloomer. As a child he was already 'crazy about marine life and everything that lives, crawls and slithers.' Yet his path did not lead him straight to Wageningen either. He dropped out of his applied science degree in Aquatic Ecotechnology at Vlissingen when there was a baby on the way. He worked for a while at a large aquarium, where his tasks included looking after the sharks, and then embarked on a degree in Land and Water Management at VHL in Velp. After graduating, Hougee became a consultant with RPS consultancy group, where he worked for Dutch water boards. But his heart lay with salt water. When he got a part-time job with the North Sea Foundation in 2007, he decided to do the Wageningen Master's in Marine Resources Management. Hougee's main interest was in a market-oriented approach to using the sea sustainably. The environmental economics courses were a particularly good fit with his work. 'It is very interesting to look at how you can make the value of marine ecosystems more tangible for companies. That provided a good basis for discussions at the strategic level – on cleaner shipping for instance.'

From her financial background, Ingrid van Beek was equally interested in environmental economics. During an internship in

Madagascar she helped calculate the economic value of a marine nature reserve. 'I learned how to express the value of nature in monetary terms, and the language of policy-makers. Awareness-raising is very important too. If you tell people about the regulating functions that are fulfilled by nature, you make ecosystems tangible,' she emphasizes. Soon after she graduated, there was a vacancy at IMARES. At the end of 2010, the Antillean islands of Bonaire, Saint Eustatius and Saba became Dutch municipalities, adding a lot of biodiversity to Dutch territory at a blow. 'Research based in the Netherlands really took off. The timing was perfect for me.' Most of IMARES's tropical research takes place in the Dutch Caribbean and is financed by the ministry of Economic Affairs. However, IMARES wants to become less dependent on government funding and seeks more public-private collaboration. 'There are big ambitions for the tropical team. We are acquiring projects in Colombia, Malaysia and Indonesia, for example,' says Van Beek, who coordinates the tropical team.

ALTERNATIVE FUNDING

The North Sea Foundation has always been government-funded and is now hard at work looking for alternative funding sources. 'Getting sponsorship by companies or grants from private funds like the Postcode lottery demands a different approach to a project proposal for a government grant,' remarks Hougee. 'For sponsors your programme must be concrete. It is difficult, for instance, to make something like lobbying for effective regulations measurable.' But the foundation is succeeding in drawing attention to the overfishing and pollution of the North Sea. Since 2001 the foundation and the National water authority Rijkswaterstaat have been systematically analysing the kind of waste washing up on the coast. 'On average 450 pieces of garbage

wash up per 100 metres of beach. They include sweet packets, cigarette butts, leftovers of nets and ribbons off balloons. Nowadays people send up balloons are every wedding. Birds use the ribbons for their nests but their claws and beaks can get caught up in them.'

Then the idea came up of conducting a publicity campaign to draw attention to the garbage problem. The MyBeach Cleanup Challenge was held last year for the first time. Groups of volunteers cleaned up the entire Dutch coast on a tour lasting 24 days. About 600 people took part and there was plenty of media coverage of the event, which will be repeated this year, now renamed the Boskalis Cleanup Tour.

NORTH SEA INTACT

Both alumni feel sure there will be no shortage of challenges in the next few years. For the North Sea, a single vision is needed, says Hougee, with the ecosystem as the starting point. 'At present, the regulations for fisheries, shipping and wind turbines, for example, are very sector-based. We must keep the North Sea intact and where necessary restore it. The fish stocks and the biodiversity have diminished enormously; there is hardly any hard seabed left because of destructive bottom-trawling.'

The state of coral reefs in tropical regions has worsened deplorably in recent decades too. The coral coverage on reefs in the Caribbean Sea has gone down from 50 to 17 percent on average, says Van Beek. Warming, overfishing and acidification of the oceans are posing global threats. 'Corals and ecosystems can adapt to high water temperatures, but the speed at which these changes are taking place is too high. So it is important to make sure there is good management at the local level. Then a reef will be more resilient and able to cope with the global threats.' ■