

**SIMON BUSH:**

# ‘Tuna overfishing is not a purely ecological problem’

**Researcher Simon Bush wants both to protect the tuna and to help fisheries to keep going. ‘Not everyone is happy with our work. That means we are having an impact.’**

TEXT STIJN VAN GILS PHOTO ALAMY

In the corner of his office stands a half-open black bag. Just sticking out of it is a bundle of banknotes in foreign currencies, held together with a paperclip. The table is covered with receipts. ‘For the expense claims,’ says Simon Bush, professor at the Environmental Policy chair group. He has just got back from a work trip to the Pacific Ocean, for his research on sustainable tuna fisheries.

During his stay there, Bush spent most of the time indoors. ‘In my job, being out in the field usually means meeting rooms, where we talk with various stakeholders such as small, local fisheries as well as large shipowners with boats that sail all around the world. For an interview for our study in the Pacific Ocean we went to see an importer in Brabant. More often than not, we don’t see a single tuna during the fieldwork,’ says Bush.

## **TINNED**

There is a lot of pressure on tuna stocks. In market value, tuna fishing is one of the most important fisheries in the world. It includes different species within the

mackerel family, including the yellow fin tuna, the blue fin tuna and the bigeye tuna. All these species are suffering from overfishing. The striped tuna, also known as true bonito or skipjack tuna, is doing a lot better, says Bush. ‘Tinned tuna is nearly always this species,’ he explains. But when

‘We often don’t see a single tuna during the fieldwork’

it is caught, threatened species of tuna or dolphins get caught as bycatch too. Especially when fishing boats use ring nets or fish aggregating devices (objects such as buoys floating on the surface to attract fish) rather than rods.

Overfishing is a hard nut to crack. The Pacific Ocean, where about 60 percent of all tuna is caught, stretches over many thousands of kilometres and dozens of different countries, each with their own system of governance. Many of these local economies are largely dependent on their fisheries. ‘For some islands in the Pacific Ocean, 70 percent of the national revenue comes from tuna fisheries,’ says Bush. And some of the larger fisheries have nothing to gain from becoming more sustainable. ‘They have grown big and rich thanks to this fishing system.’

Bush and his team are studying how agreements on sustainability are reached, and also what effect such agreements have. That approach deviates from the way most research groups outside Wageningen work. ‘They might study what the maximum is that fisheries can catch, and which fishing methods work best to avoid getting unwanted bycatch. But this is not purely an ecological problem. You might know which fishing methods are best, but if they are not implemented, you still can’t do much. There are people working here in >



Wageningen who know what works best ecologically, but we then also look at the policy implementation.'

He tries to get this approach across to his PhD students, most of whom come from the region. 'After getting their PhDs they often carry on in their home countries, where they use their scientific approach to help make the fisheries more sustainable. Agnes Yeeting of the Kiribati archipelago is a nice example. She studied how the fisheries policy in the region has changed over the years. Now she is working for the Department of Fisheries in Kiribati.'

### REACHING AGREEMENTS

Bush is seeing a shift from fisheries policy that is primarily determined by and between governments, to public-private initiatives in which environmental organizations, governments and fisheries enter into agreements to protect the tuna. This might take the form of agreements on better monitoring of how much fish is caught, or on establishing labels, such as the Marine Stewardship Council (MSC) set up by Unilever and the Worldwide Fund for Nature. This label, now found on almost all Dutch supermarket fish, is only granted if fisheries can prove that their fish stocks are being exploited sustainably. Bush is monitoring the developments in the fisheries policy very closely. He is also interested in how the various businesses in the supply chain can collaborate. In the BESTTuna research project, a study was done on the traceability of the tuna that is sustainably fished by small fisheries in Indonesia. 'Previously it was not known exactly how much tuna these fisheries catch, or what species they catch. They are very small fisheries, often with just one boat, so it is very hard to obtain all that data. But between them, they do catch an awful lot of fish.'

Bush was convinced it ought to be possible to obtain data from these fisheries. 'Their fresh fish can reach American supermarkets in no time, so the chain is capable of a complex level of organization.



PHOTO BRAM BELLONI

Simon Bush, professor of Environmental Policy and researcher studying sustainable tuna fishing.

### FUNDRAISING FOR MULTIDISCIPLINARY PROJECTS

The Wageningen researcher Simon Bush is trying to make tuna fisheries more sustainably by examining not just the fishing methods but also how policy is implemented. This is appreciated by policymakers and tuna conservationists, but it is not easy to find funding for this kind of integral approach.

Bush got basic funding for the research from INREF, the university's Interdisciplinary Research and Education Fund aimed at encouraging interdisciplinary studies in developing countries. The funding for the implementation came from the University Fund Wageningen. It was the first university fund in the Netherlands to start a large donations campaign: Food for Thought, back in 2010. 'With this we facilitated groundbreaking research which can improve the global food supply in a sustainable fashion,' says University Fund director Delia de Vreeze. 'These are socially relevant, multidisciplinary projects which couldn't easily get funding any other way.'

Through Food for Thought, the fund supported 11 projects, among them Bush's BESTTuna study. The money came from 18 philanthropic partners, who donated 15 million euros between them. Bush's project was financed by the Adessium Foundation, which mainly supports projects with a multidisciplinary approach.

The Food for Thought campaign ended in 2018, but a successor is due to start soon. [www.universityfundwageningen.eu](http://www.universityfundwageningen.eu)  
[www.wur.eu/besttuna](http://www.wur.eu/besttuna)

So why would it be impossible to produce the figures?’ The project started by persuading small fisheries to collaborate and provide data on the fish species they catch. ‘To persuade them, you have to be able to show that it is important for their long-term food security not to fish too much now. And that selling fish that they can prove was sustainably fished will generate a better income.’

The researchers developed a system in which the tuna that is caught by small fisheries can be traced throughout the entire chain. Through an app with a barcode, a consumer in, say, the United States can now see precisely where the tuna comes from. The system can also be used to check whether a fishery isn’t overfishing.

Meanwhile, there are several other systems in use which are intended to reduce the pressure on tuna stocks. A lot of fisheries in the Pacific Ocean work with a maximum number of days they are allowed to fish. These tradable fishing rights are linked to an information system with data about the size of the catch on a given day, and this is then used to improve the regulation of the fisheries.

That extra information brings dilemmas with it too: who does all that information that is collected belong to? On the one hand, it should all be freely available, Bush thinks, but data can also be misused. They could, for example, provide illegal fisheries with information about precisely where tuna can be found. And the information could affect the competition among companies. ‘I think this will be the big bone of contention in the future.’

Bush nonetheless believes that public-private partnerships and better traceability can help make fisheries more sustainable. ‘Since fisheries and environmental organizations have been playing a big role themselves, the attitude of the governments has begun to change. At first countries mainly sought to hold on to their maximum catches. Now it is a much more dynamic process which also looks at how much tuna can be caught and by whom.’

## ‘On some islands in the Pacific Ocean, 70 percent of the national income comes from tuna fisheries’

As soon as fish stocks pick up again, those quota can be raised. That has already been done for the skipjack tuna, whose population is going up. ‘Through the partnership they are now studying whether it would be okay to catch more. I am very curious how that process will unfold and how the public-private partnerships will hold up against pressure from influential parties who want to see more fishing. It is clear that influential tuna importers are putting more pressure on the Marine Stewardship Council nowadays, rather than on a government.’

### CRITICAL ATTITUDE

Bush works a lot with fisheries and environmental organizations in his research, partly so as to gather information. As a result, those partners get the chance to learn new things in turn. ‘Our scientific articles are read not only by scientists, but also particularly by environmental organizations. Our research is obviously taken into account when new policy is developed. The stakeholders don’t always like what we do. For instance, we recently published an article about the effectiveness of a label aiming at preventing bycatch of dolphins. It turned out not to be very effective.’ At the same time, that critical attitude ensures that the research gets taken seriously, Bush thinks. ‘What we do is valid and in the end that is appreciated. And if you notice that someone really isn’t happy with what you are doing, that also means your work is having an impact.’ ■

### SUSTAINABLE DEVELOPMENT GOALS CONFERENCE: ZERO HUNGER

Simon Bush’s BESTTuna will be presented this summer at the international conference ‘Sustainable Development Goals, Towards Zero Hunger – Partnerships for Impact’, which Wageningen University & Research is organizing on 30 and 31 August.

The central question at the conference will be how the United Nations can reach its Sustainable Development Goals. These goals, 17 in total, were set in 2015 in order to put an end to major problems such as undernutrition, lack of clean water and the impact of climate change. The goals were set for 2030. The Wageningen conference will zoom in on two Sustainable Development Goals: ‘zero hunger’ (goal 2) and ‘partnerships to achieve the goals’ (goal 17). The conference is split up into various sessions. Researchers who are keen to present their own research can still sign up to give a presentation at one of these sessions. For more information and registration visit [www.wur.eu/sdgconference](http://www.wur.eu/sdgconference)