

**Veluwe wolf**

A scavenger as well | p.8 |

**Fragile food supply chains**

Coronavirus threatens trade | p.9 |

**Women professors**

Three views on the m/f ratio | p.20 |

# RESOURCE [EN]

For everyone at Wageningen University & Research

no 15 – 16 April 2020 – 14th Volume



**Studying  
online only**

'I miss the chatter' | p.12

**INTERNATIONAL  
EDITION**

# Marianne + KingFisher RNA isolation instrument

WUR researchers work with all kinds of equipment. Meet Marianne Vahl, an analyst at Wageningen Bioveterinary Research in Lelystad.



## TESTING FOR THE CORONAVIRUS

Since 1 April, Marianne Vahl and her colleagues in the Diagnostics and Crisis Organization department have been performing coronavirus tests. The new KingFisher RNA isolation instrument plays a key role in this. The machine extracts genetic material from swabs taken from someone's throat or nose. That is then amplified and screened for the presence of RNA specific to the coronavirus. When working 24/7, Lelystad can conduct 1500 tests a day (see too page 5).

© RK, photo Wageningen Bioveterinary Research

# >> CONTENTS

no 15 – 14th volume



>> **22**

## LOST IN TRANSLATION

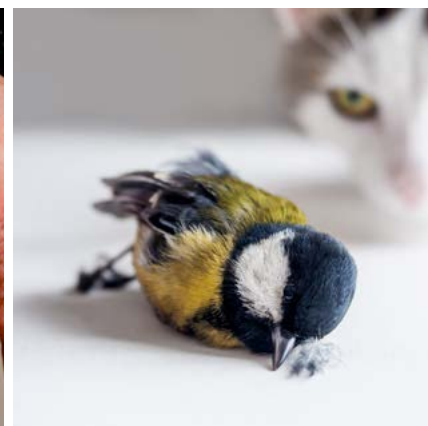
Students see a language barrier



>> **16**

## BABY EELS

Caught by coconut mats



>> **18**

## ANIMAL DILEMMAS

Beyond the welfare debate

### AND MORE...

- 5 Studying seals from a 'flying limousine'
- 8 Measuring plastic in the Rhine
- 10 Researchers stay in Arctic due to coronavirus
- 14 In search of a vegetarian beefsteak
- 26 Students end rent contracts during corona crisis
- 28 Still studying in the Forum

## COMPLIMENTS

The *Resource* editors received a tip: could we perhaps mention the 'impressively smooth introduction of Brightspace'? By no means everyone was enthusiastic about the transition from Blackboard to a new learning environment. Lecturers were (rightly) concerned about how long it would take to get used to the new system and input all their courses again.

So support teams were set up to make sure the transition went smoothly and help teachers transfer their courses, and a phased introduction was used. A brilliant strategy with the benefit of hindsight because when all teaching had to move online in no time last month because of the coronavirus crisis, the Brightspace support teams were already on hand to help lecturers with this major endeavour.

Of course not everything goes perfectly online. Lab practicals, for example, don't work so well via the Internet (see page 12). But the fact that nearly all courses in period five could go ahead 'as normal' (see page 7) shows that all those involved, from the teachers to the support teams, deserve a big compliment.

*Luuk Zegers, editor student and education*



>> [Emergency fund raises 60,000 euros for students via crowdfunding | p.4](#)

## A COUNCIL: WHAT'S IN IT FOR ME?



In a series of four articles, *Resource* talks to members of WUR's various participatory bodies. People have until 22 April to come forward as candidates. The elections will run from 2 to 6 June 2020.

**Part 4 (final part):** Peter Booman, director of Facilities and Services: 'I am very open with the Works Council; that creates trust.'

Directors see the Works Councils as difficult, and share as little as possible with them. Not Peter Booman, though. 'I am very open with the Works Council. I tell them at an early stage what I see ahead of us at Facilities and Services, what my ideas are, and what is giving me a headache. Then they

know that something's got to be done and they can start thinking about it. 'I prefer a strong, involved Council. Sometimes I change my mind. The Council forces me as a manager to think through my plans properly and take the reality on the work floor into account. As a director you have to be careful not to get stuck in your management cocoon. I think all issues that matter to the staff should be addressed. 'Occasionally I think it's whingeing; then I say so. That openness creates trust. We have just changed the way the IT department (150 staff members) is organized, with multidisciplinary teams instead of sub-departments. If the Works Council hadn't had confidence in the management, that would have turned into a reorganization. Now there was confidence and it was a development process. Which is better for everyone.' **AS**



▲ The roundabout at the entrance to the campus in corona times.

PHOTO: ROELOF KLEIS

## CORONA DELAYS RING ROAD EIA

**Presentation of the environmental impact assessment (EIA) for the campus ring road has been delayed by the coronavirus crisis. The report was due to appear this week.**

However, Gelderland provincial authority has not been able to keep to this timetable. It is not clear when the study *will* be presented. The report assesses the effect on the environment of the measures to tackle congestion around the campus. Those measures are either a new ring road around the campus or changes to the existing roads to improve traffic flows. The new traffic forecasts for 2030 *are* now available. The calculations had to be redone because of errors. The new forecasts also take account of the latest information on population growth and job numbers. They show that traffic is set to increase considerably over the next decade.

### BIG INCREASES

The number of car journeys in Wageningen will increase by 5 to 15 per cent depending on the growth scenario. That will cause congestion during the morning and evening rush hours on Mansholtlaan and Nijenoordallee. In the morning, queues on Mansholtlaan from the A12 will stretch back to Bennekom (Van Balverenweg) and on Dienenweg back to the Hollandseweg roundabout. The increased traffic is caused by projected growth in the number of inhabitants of 8 to 14 per cent (3100-5500) and in the number of jobs of 10 to 20 per cent. Many of the new jobs will be on campus. WUR itself is predicted to grow considerably, but so are Born-Oost and Kortenoord Business Science Park. **RK**

## GOLDEN CERTIFICATE TUBE THANKS TO COVID-19

**Mark Roosjen was the 7500th PhD candidate to successfully defend his thesis. He was rewarded with a degree certificate in a golden tube.**

The ceremony was also the first defence in times of coronavirus to be live-streamed. The 7500th defence took place on Monday 30 March. Previous cancellations prevented this milestone from being reached a week earlier. Roosjen's defence took place as scheduled. 'I just wanted it over and done with,' he states. 'Otherwise, it keeps you occupied. Now I can focus fully on my job at the chair group, where I work as a technical analyst.' Roosjen defended his thesis from a meeting room in Helix. 'We were granted permission to use this location.' He held his defence in the presence of just one assistant (the other had called in sick). And this was fine. 'I don't much like being in the spotlight. There was a healthy degree of tension, but that would have been far more if I had been facing an audience.'



▲ Dean Wouter Hendriks displays the golden tube on video.

PHOTO: VIDEOSTILL

### 1920

The 7500th defence took place a full century after the very first PhD defence in November 1920, two years after the Agricultural College was founded. Approximately 300 PhD candidates defend their theses per year. The 5000th defence took place less than a decade ago in 2011, the 6000th defence was in 2015, and the 7000th in the centennial year of 2018. **RK**

## STUDYING SEALS FROM A 'FLYING LIMOUSINE'

**How can you do science while keeping to the 1.5 metres rule? Researcher Sophie Brasseur counted seals from an extra-large airplane. 'Like sitting on the back seat of a limousine.'**

Each year, Sophie Brasseur, a researcher at Wageningen Marine Research, and her colleagues count seals from above the Wadden islands. Brasseur: 'At this time of year the grey seals are moulting and they come on land more, which makes them easier to count. Because there are so many seals, we take photos from the air and count them later at our leisure on a large screen.' As of 1 April, people sitting in an airplane also have to keep 1.5 metres apart. This was not possible in the usual research plane so the pilot arranged a larger plane so that the first count of the year could still go ahead. 'It took a bit of getting used to,' says Brasseur. 'Normally there are several of us researchers piled in together in the small plane. Now there was no one except me right at the back and the pilot at the front. It was like a flying limousine.'

Brasseur flew over the sandbanks in the Wadden Sea and along the islands' North Sea beaches in fine weather on Sunday 5 April. 'It wasn't as quiet as I'd expected on the beaches given the coronavirus measures. I had hoped there would be a lot of seals on the beach because of the lack of peo-



PHOTO: SOPHIE BRASSEUR

▲ Seals on the sandbank between the islands of Terschelling and Vlieland.

ple but that wasn't the case. There were even cars driving on the beach. The worst was Ameland, where we counted 17 cars in short succession.'

### ON THE SANDBANKS

However, the Wadden Sea marinas were deserted and there were hardly any boats on even the busiest shipping route between Vlieland and Terschelling. 'That might have been because of lower visitor numbers or because of the nice weather,' says Brasseur. 'But the seals had gathered en masse on the sandbanks. The coronavirus measures are probably fantastic for the animals living in the Wadden Sea.' The survey results are now being processed. Brasseur is doing that at her home on Texel. **AS**

## EMERGENCY FUND RAISES 60,000 EUROS FOR STUDENTS

**University Fund Wageningen (UFW) has raised more than 60,000 euros for students affected by the coronavirus crisis. The crowdfunding campaign has been a huge success.**

UFW was getting various reports of Wageningen students facing urgent financial problems. UFW's interim director Fusien Verloop heard of students who were no longer able to pay the rent, for example, because they had lost their part-time job. Some international students have not been getting their scholarship money because of the lockdown in their own country. 'We want to help these students in urgent need of money.'

UFW originally had a target of 35,000 euros but far more than that has now been promised. UFW itself donated 1000 euros, as did the board of alumni society KLV. Wageningen Ambassadors, the group of Wageningen alumni in the public eye, has promised 10,000 euros. 'Most donors gave between 10 and 500 euros,' says Verloop. She calls on everyone to make a donation. The campaign will continue until 1 September. **AS**



## COLUMN|VINCENT

### Top predator

I could never have imagined a time when I would frequent the campus with my binoculars because it is so much quieter there than in the water meadows by the Rhine. But then, that's not the only thing that's happened over the past few weeks that I didn't see coming.

So I had parked my bike outside Impulse once again, walked around a bit, and seen the usual suspects. A bunch of oystercatchers and a few starlings. Some coots, looking a bit hunchbacked as usual, as if they've been bent over their computer screens for too long. The pair of swans on the pond – the female already brooding, the male making sure intruders observe social distancing from the nest.

And then, on top of the Forum – a peregrine falcon! It is a regular sight in the sky above the campus, but that doesn't detract from how special it is. The fastest animal on earth, its diving speed more than three times faster than a cheetah, enabling it to catch enormous prey on the wing, even herons. Well, no doubt my readers have known all that for a long time. The peregrine falcon is iconic.

I thought about the newspaper articles about wild animals that are turning up in the middle of cities now we're in lockdown. Real top predators like pumas in Santiago, Chile, and crocodiles in Cancún, Mexico. Fabulous, but temporary. As soon as the lockdowns come to an end, they'll be gone again. Luckily that is not the case with our peregrine falcon. Whether the campus is dead quiet like now, or buzzing with AID participants in August, the top predator on the Forum isn't bothered by any of it. **B**

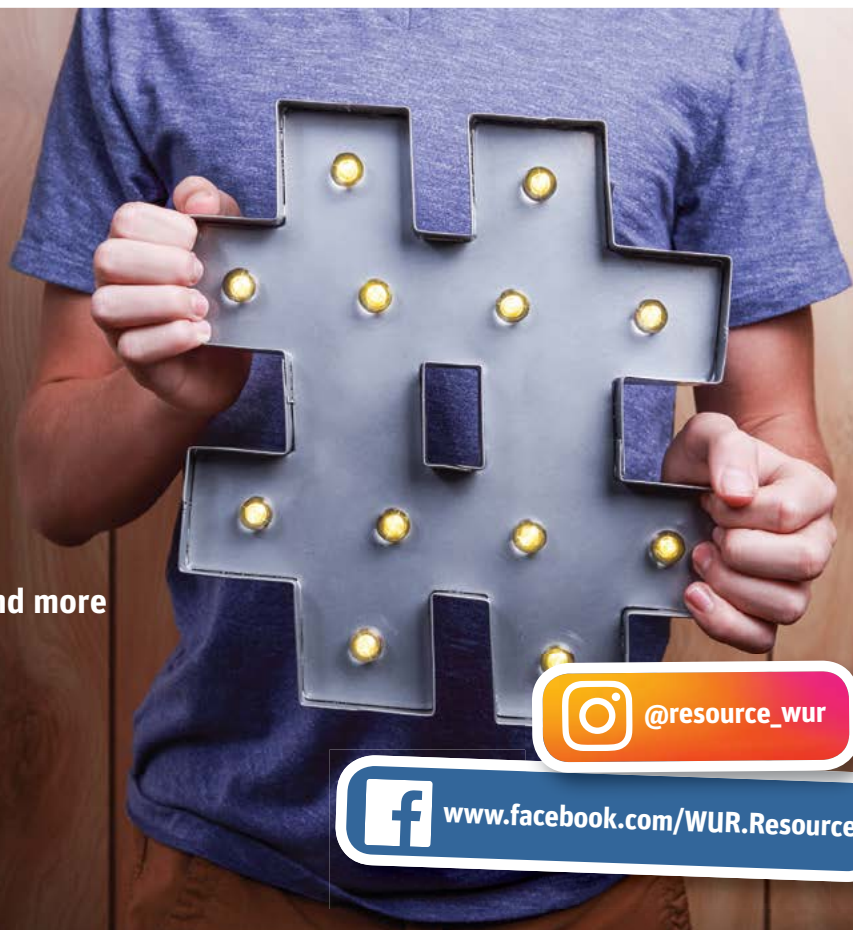
**Vincent Oostvogels (24)** is exploring the delicate interface between nature management and food production through his two Master's programmes, Forest and Nature Conservation and Animal Sciences



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**RESOURCE**  
For everyone at Wageningen University & Research



## NWO LIFT GRANT FOR CO<sub>2</sub> FILTERS AND MORE

**You can filter CO<sub>2</sub> out of the air. And WUR is going to work with Shell to optimize this process. That is one of the four WUR proposals that the Dutch Research Council NWO is going to finance in its LIFT programme.**

Capturing CO<sub>2</sub> is one way of removing the greenhouse gas from the atmosphere. The most common way to approach this is through absorption of CO<sub>2</sub> by specific materials. 'But no one knows exactly what the optimal material for capturing CO<sub>2</sub> and then releasing it again under the right conditions would look like,' says Professor Harry Bitter (Biobased Chemistry & Technology). Bitter is going to study this fundamental process. He will be focusing on the capture of low concentrations of CO<sub>2</sub>. The relatively simple and solid materials of carbon and potassium carbonate (a salt) are used as a 'sponge' or filter. Besides efficient capture, their capacity for desorption of CO<sub>2</sub> (releasing it again) play a big role. 'We don't just want to capture CO<sub>2</sub>, but also to be able to make use of it by making chemicals out of

it,' explains Bitter. This means the filter can theoretically be reused endlessly. 'The problem is, however, that the water that is necessary for desorption has a dramatic impact on the characteristics of the filter. Exactly how that works is something we want to understand better.'

### VITAL PIGS

Chemist Louis de Smet (Organic Chemistry) has received an NWO LIFT grant to make better sensors for detecting ions (charged particles) in solutions. According to De Smet, this is relevant for applications in horticulture (nutrients) and the medical world. The sensors we have currently have a limited lifespan due to pollution and wear and tear of their surface. De Smet wants to tackle these shortcomings with polymers. The remaining two projects focus on the genetic selection of healthy, vital pigs (Martien Groenen, professor of Breeding & Genomics) and the steering systems of light autonomous farm vehicles (Sytze de Bruin, Geo-Information Science and Remote Sensing). **✉ RK**



PHOTO: SHUTTERSTOCK

# RAPID TRANSITION TO DIGITAL EDUCATION APPEARS SUCCESSFUL

**Wageningen teachers experience few problems with offering online education but could use some help in setting up digital exams.**

A survey conducted among course coordinators by the department of Education & Student Affairs produced these results. Last month, after the university was forced to switch to online education because of the coronavirus crisis, WUR conducted a survey among teachers coordinating courses in the fifth period. Of the approximately 300 coordinators, 177 responded. The survey shows that over three quarters of the teachers managed to start their online courses on time, while around 20 per cent experienced some delay. Only two courses were cancelled entirely.

## HOMEMADE

Sixty per cent of the coordinators make use of online classes from the previous year, and more than half use lectures that were newly recorded on campus. A further 40 per cent use videos recorded at home. Over half of the teachers uses Brightspace and Skype to discuss

the content with their students. Eighty per cent of the coordinators indicated they have experienced no obstacles in teaching from home. Still, the crucial question among coordinators is how they are going to administer exams on-

## Only two courses were cancelled entirely

line. According to the survey, 60 per cent need help in setting up the online exams. This support is now being given, says Ulrike Wild, programme director of online education at WUR.

## NO OBSTACLES

Whether online education currently meets the learning objectives remains to be seen. Less than 20 per cent of the coordinators are able to 'fully' transfer all of the learning materials to a digital environment, while 40 per cent are able to do so for 'most of' the content. A significant number of the coordinators (almost 40 per



PHOTO: SHUTTERSTOCK

cent) said they were only 'partially' able to offer their learning materials online. A small group of five per cent cannot do so at all, which suggests the rapid transition to online education could negatively impact the quality of education. **AS**

## Working from home

Professor Francine Govers, who holds a personal chair in Phytopathology, sat at the computer in full regalia on Wednesday 8 April. As one of the university's assistant rectors, she was chairing the online PhD ceremony of Huayi Li.

If you want to see how colleagues are working from home, go to [Resource.wur.nl](https://resource.wur.nl) or [#WURkfromHOME](https://www.instagram.com/WURkfromHOME) on Instagram for more stories. **AS**



# 'CONFIDENCE IN HEALTH CARE ESSENTIAL IN FIGHTING CORONAVIRUS'

**According to a study on the control of the Ebola outbreak in Sierra Leone in 2014, a contagious disease can be fought more successfully if the population has confidence in the healthcare system. A valuable lesson for the fight against the coronavirus.**

Wageningen development economist Maarten Voors and American colleagues researched the influence of Community Care Centres (CCC) in Sierra Leone during the epidemic. These CCCs were essentially small field hospitals with a maximum of eight beds, staffed by local health workers providing information and education on preventing and controlling the Ebola virus. The rural population

trusted these centres more than the larger treatment centres, where over 100 Ebola patients were treated under a much stricter safety regime. In villages that had a community care centre, residents were more willing to get tested, which made fighting the virus more successful.

Researcher Harro Maat of the chair group Knowledge, Technology and Innovation did a quantitative study of the Ebola outbreak. He confirms that faith in the healthcare system played an essential part in decreasing the epidemic.

The lessons from the Sierra Leone situation are relevant to the current coronavirus crisis, Voors states. 'Confidence in health insti-



PHOTO: MAARTEN VOORS

▲ Community Care Centre in Sierra Leone.

tutes is also essential in controlling the outbreak. Without that trust, the sick will go into hid-

ing, making it impossible to get a grip on the outbreak and respond with adequate measures.' **AS**

## MEASURING MACRO-PLASTIC IN THE RHINE

**The oceans are slowly but surely filling up with plastic. A large portion of this plastic is carried to the oceans by rivers. Paul Vriend, Master's student of Environmental Sciences, developed a fast measuring method that can be applied in rivers like the Rhine.**

Vriend used a counting method developed by WUR hydrologist Tim van Emmerik, but modified the method for collecting samples. 'Using nets doesn't work that well in the Rhine, as the concentration of macroplastics is too low. Besides, there is a lot of river traffic; you can't just drop a net in the river for a longer period of time.' On Rotterdam's Erasmus Bridge Vriend ran into another problem. 'Five police vehicles appeared on the bridge, lights flashing. Apparently someone fiddling with nets and ropes on a bridge looks rather suspicious.'

So the net method was discarded. As an alternative, Vriend collected plastic using the Shoreliner, a device that collects waste from the water using a long, floating arm. It is set up in one of the Rotterdam ports and does not interfere with shipping. The plastic thus collected is a good indicator of what comes floating down the Rhine, according to Vriend. It isn't all that much, an average of six kilos per day, but that doesn't mean the Rhine is clean. 'The method we used only measures visible plastic (larger than five cm) that floats in the top 50 centimetres of the water. Smaller plastic particles and plastic that is carried deeper below the surface is not measured. And then there are also a whole lot of microplastics and nanoplastics,' Vriend stresses. In spite of its limitations, the method works fine as a quick way to get a preliminary estimate. **RK**

## VELUWE WOLF IS A SCAVENGER TOO, SHOWS PHD RESEARCH

**Footage from one of PhD student Elke Wenting's monitoring locations casts new light on the behaviour of the Veluwe wolf.**

Wolves are not really seen as scavengers, but more as the providers of carrion. Yet at the Veluwe locations where PhD student Elke Wenting and ARK Nature Development had positioned cameras, it is crystal clear that ravens, foxes, wild boar and a wolf feasted on the carcass of a red deer. The footage also shows

how the wolf, probably the central Veluwe she-wolf GW960f, avoids any risk of confrontation with a male wild boar eating from the carcass by waiting at a distance. The video footage casts new light on the behaviour of the Veluwe wolf and caused quite a stir among the forest rangers in the area. Wenting is doing research on whether carrion and carrion-eaters speed up the nutrient cycle, thus benefitting biodiversity. **ME**



▲ She-wolf GW960f eats from a deer carcass.



## CORONAVIRUS GIVES WILDLIFE EXPERIMENT A BOOST

**The coronavirus crisis is making some nature areas very peaceful. A perfect opportunity to measure the impact of recreation on wild animals.**

In the Hoge Veluwe National park, an experiment with camera traps has been going on since 2013. There are now 70 cameras ready day and night to capture the movements of wild animals. Ecolo-

**'Anyone who can tell a mouse from a mouflon can join in'**

gist Patrick Jansen, with his colleagues and the park, aim to use the photos obtained to answer questions about the wildlife population, the movements of animals, and how they are influenced by humans. And suddenly, there is an opportunity to give the experiment a major new twist.

### FANTASY

Of course, Jansen has sometimes fantasized about what would happen if there were no people at all in the park. But of course that ecological ideal is far from the reality. Until now, at least. The coronavirus crisis has caused a big drop in the number of visitors to the Hoge Veluwe park. 'There are far fewer people and the opening times have been changed, partly in response to that,' says Jansen. 'That means more foraging time by daylight and it is a lot quieter during the day.'

### MORE THAN A MILLION PHOTOS

Jansen is very curious to see the effect of that peace and quiet on wild boar, red deer, mouflons and other animals. But he will have to wait a while. The park ranger is collecting the photos once every six weeks, and then they have to be analysed. And there are a lot of them, explains Jansen. Something passes in front of each of the 70 cameras one and a half times a day on average.

'That might not sound like much, but series of dozens or sometimes 100 photos are taken of everything that happens. Over a year that means more than a million photos. And that is a lot.'

Luckily Jansen doesn't have to process all those images himself. In collaboration with the park management, that has been turned into a citizen science project called Snapshot Hoge Veluwe. Anyone who 'can tell a mouse from a mouflon' can join in.

### ROCK POWDER

The long-term experiment with the cameras is due to enter a new phase soon, anyway. In front of half of the cameras, the soil will be enriched with rock powder. Nitrogen pollution has badly impoverished the soil on the Veluwe plateau. Rock powder (aka stonemeal) should improve the mineral balance in the soil, which is expected to impact not just the vegetation but also the way it is grazed by wildlife. **✉ RK**



PHOTO: PARK HOGE VELUWE

## VISION

### Coronavirus crisis reveals vulnerable food supply chain



**Professor of Impact Analysis Ruerd Ruben observes that the coronavirus crisis could affect global food security. There is enough food, but the pressure is mainly on trade.**

#### *The UN is warning of food shortages; is that justified?*

'There is enough food for the short term. There are considerable reserves and in many countries the crops have already been sown, so we won't immediately see a dip in production. The threat comes more from the demand side. Millions of people are losing their jobs due to the coronavirus crisis, purchasing power is going down, and that can affect demand for food.'

#### *Aren't harvests already being lost, in the Netherlands for example?*

'The asparagus harvest in Limburg is highly dependent on Eastern European labourers who are now staying at home. So those growers have a problem. The horticulturalists in Westland, near Rotterdam, have a problem too, but that is because overseas demand for flowers and vegetables has fallen. We are seeing that the trade in food is threatened by the coronavirus measures such as lockdowns and border controls. That can be to the disadvantage of the Netherlands as an exporting country.'

#### *Are closed borders and protectionism bad?*

'Yes, and especially for African countries, where one in five calories are imported. If global trade in food is hampered by control measures and the sealing off of regions, there will probably be food shortages, especially in megacities such as Cairo, Lagos and Nairobi. Those cities have adequate stocks of food at the moment, but they will get finished. That's why it is important that we don't close the borders and do invest in developing countries. Those countries can only maintain their food supplies if we get the coronavirus pandemic under control together, and global trade carries on.'

#### *Which goods can we no longer buy due to trade restrictions?*

'In the Netherlands we might not be able to import quite as much tropical fruit as usual – such as mangoes and bananas. Imports of grains and livestock feed might be affected too. On the other hand, we'll have a surplus of potatoes, chicken and milk, which we export. There certainly won't be a shortage of food.' **✉ AS**

# CORONAVIRUS AFFECTS FISHING COMMUNITIES BOTH ECONOMICALLY AND SOCIALLY

**The coronavirus pandemic could have a huge impact on fisheries, predicts an international panel of researchers.**

Twenty-five researchers from 12 different countries met last week to discuss the social impact of the coronavirus pandemic on the fisheries sector. They are members of the 'social' working group at ICES (International Council for the Exploration of the Sea), an international network for marine scientists.

## BORDERS AND RESTAURANTS CLOSED

Two main problems have arisen for the sector due to the coronavirus crisis. 'Firstly, fisheries are heavily dependent on international trade,' says Marloes Kraan, an anthropologist at Wageningen Marine Research and co-chair of the panel. 'That is now severely hampered by measures such as closed borders and fewer flights.' A second problem is that a lot of the trade is in fresh fish and shellfish destined for restaurants, hotels and cafeterias – a branch that is now closed nearly everywhere. 'It is precisely the



small-scale fisheries that seem to be affected by that,' says Kraan.

## WAY OF LIFE

'The researchers will continue to follow developments. Kraan will soon conduct a survey among fishers to see how they are doing. 'It's not just about the economic impact,' says Kraan. 'For

many fishers, fishing is a way of life. If your business goes bust, it would mean losing a big part of your identity.' Kraan hopes that science can learn from this situation. 'We are looking at which measures different countries are taking and what works, so we can advise governments better on how they can help fisheries get through this crisis.' **TL**

## GRANT FOR ELECTROCATALYSIS

**Lars Kiewidt, a postdoc in the Biobased Chemistry and Technology group, wants to turn side streams into chemicals and other useful materials with the aid of electricity. He received one of six tenure-track grants from the Dutch Research Council (NWO) in March.**

Kiewidt will be using the NWO grant of 900,000 euros to look for catalysts that can convert side streams from the food and agricultural industry into useful compounds. For example, processing potatoes results in a waste stream with a lot of starch, which Kiewidt wants to use to make chemicals. To do this, he needs to develop electrocatalysts that transform the biomass efficiently into the desired materials, for example coatings for the paper industry.

The big challenge for Kiewidt is finding out which electrocatalysts will convert the biomass into useful compounds and what these catalysts should look like. Electrocatalysis — triggering chemical reactions with electricity — is a hot topic in the life sciences. Scientists expect that we will have plenty of green energy in the future but we will face a shortage of oil-based raw materials for the chemical industry. Kiewidt therefore expects the production of chemicals from biomass to become a significant branch in the chemical industry. The NWO grant will allow Kiewidt to research this subject for the next five years and hire a PhD student to help him. **AS**

## KEPT IN ARCTIC BY CORONA

**A new team of researchers was supposed to take over the work of the current team on board research ship *Polarstern*. The corona crisis means this probably won't happen until June.**



'We were supposed to return this week,' says researcher Serdar Sakinan of Wageningen Marine Research. But due to the travel restrictions imposed by various European countries, new scientists are unable to reach the *Polarstern*. For the current team, this means they will be relieved six weeks later than planned. Meanwhile, the research continues as usual. 'The ship has been moored to the ice. Sometimes gusts of wind cause us

to drift off, which makes the research more challenging to carry out. Despite these challenges and the added uncertainties due to the coronavirus, we are moving forward with our research,' Sakinan explains. **TL**

*Resource no. 16 on 30 April will carry a long article about the research on board the Polarstern.*

# POWER CABLES MAY HINDER SHARKS

**Do the electromagnetic fields of power cables of the wind turbine parks in the North Sea hinder sharks and stingrays? A WUR-led consortium funded by the Dutch Research Council (NWO) is finding out.**

Sharks and stingrays can 'see' electromagnetic fields. They make use of this ability to hunt and possibly even to navigate. The power cables of marine wind turbine parks could prove a hindrance. But how great is the effect of the electromagnetic fields surrounding these cables on marine life? This is an as yet unanswered question. Professor of Marine Animal Ecology Tinka Murk leads an investigation to find answers.

## ELASMOPOWER

The project, mainly funded by NWO, is called ElasmoPower, referring to the elasmobranch subclass of fish (sharks and stingrays) on which the research focuses. Currently, sharks and rays seldomly visit the Dutch part of the North Sea. 'And even then, only the smaller species such as the thornback ray. But we hope they will return to the wind turbine parks, among other areas, where the habitat is actively recovering, and no fishing takes place,' says

Murk.

Power cables could present a problem.

Murk: 'The number of power cables and the amount of power transported to land is increasing dramatically, and with it, the expo-

## 'Animals swimming in coastal areas may see a Himalaya of electromagnetic fields'

sure of animals to electromagnetic fields. A preliminary study showed that the field reaches as far as 25 metres on either side of the cable. Animals swimming in coastal areas may see this as a Himalaya of electromagnetic fields, which could cause them to alter their course.'

A study involving eels with transmitters shows they slow down when they approach cables, Murk explains. Shark bites have been found in cables in the ocean. 'It is not clear whether this is aggressive behaviour, or whether the electromagnetic fields cause

them to consider the cables prey. We don't yet know what the effects are exactly, nor what field strengths affect sharks and rays.'

## CAMERAS

'Finding a relationship between field strength and animal behaviour is the first step,' Murk explains. 'And not just in mature animals, but also in unhatched eggs.' At a later stage in the five-year investigation, field studies will be conducted on artificial reefs both near and far from power cables. 'We will monitor animal behaviour with the help of cameras and sensors. And with the help of molecular techniques, we will see if the cables influence the composition of communities.'

## PARTNERS

WUR is conducting this research in collaboration with a large number of partners, including grid operator TenneT, Naturalis, the Noordzee foundation and engineering firm Witteveen + Bos. The latter has also provided a PhD candidate, Annemiek Hermans, who will be working on the project for three days a week. The entire project will cost 1.2 million euros. **OR**

## PROPOSITION

# 'Make internships mandatory for PhDs'

**PhD candidate Kim van Noort spent one month of her PhD period in Oxford. This collaboration brought real benefits and she thinks more PhD candidates should get some experience elsewhere. Her proposition: An internship should be an integral part of the PhD programme.**

'At the start of my PhD research, I attended a summer school. I met someone from Denmark there who told me that Danish PhD candidates have to spend a couple of months working in a different research group, possibly in a different country. A couple of years later I came across her again

when she was doing her internship in Wageningen.

I think that is a good idea as it lets you make new contacts straight away. That has benefits not just for you personally but also for your research group.

## 'It was valuable for me personally and the group'

In my own research, I got stuck at one point because I wanted to use a certain technique in microscopy. I contacted a professor in Ox-



PhD candidates have to include some propositions with their thesis. In this section, they explain their most thought-provoking proposition. This time, it's Kim van Noort of the Laboratory of Nematology, who will be obtaining her PhD later this year (because of the coronavirus) for her research on the production of worm proteins in tobacco plants. The proteins help combat autoimmune diseases and allergies in people.

ford where they have a lot of experience with such microscopy experiments, and I ended up working there for a month. That gave me the opportunity to set up an experiment that would not have been possible in Wageningen. At the same time, my supervisor wrote a new research proposal with the Oxford professor.

This collaboration was incredibly valuable for both me personally and the group. That is why I think it would be a good idea if everyone got the chance to work in a different group for a few months. At present that is not likely to happen unless you organize it yourself, which is an extra hurdle. **OR** TL

Students on the first weeks of online learning

# ‘Focus is a serious challenge’

Because of the coronavirus, all the courses for period five had to go fully online in just a couple of days. Almost all the courses could continue. How are students experiencing the new form of education?

*text* Luuk Zegers and Albert Sikkema

## ‘I got really upset’

**Aarzoo Kohra (22), MSc student of Plant Sciences**

She flew back to India because of the coronavirus crisis. There she is taking two courses from her parents’ home. ‘With one of the two courses, things are good. The teachers are giving web lectures and presentations from home, and we can watch them any time we want. With the other course, on breeding, they use lectures from last year. In these videos the teacher uses a laser pointer and says: “this should be crossed with that.” But it is impossible to see the pointer, so you can’t see what should be crossed with what.’

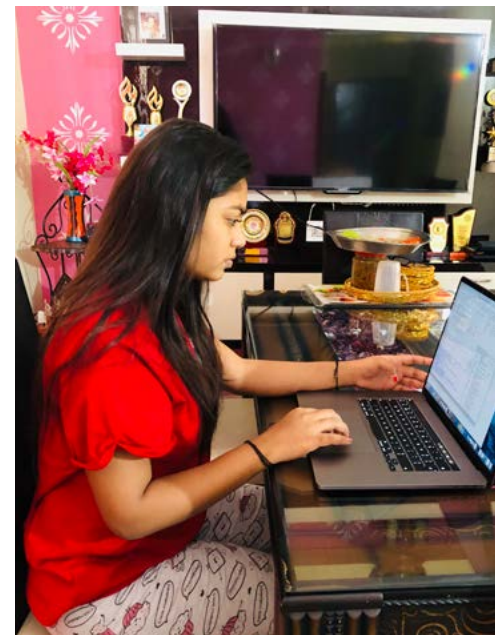
But practicals are a bigger problem, says Kohra. ‘For those, we need a lot of statistics and special software. Many students, like me, have never followed a statistics course. When I registered for this course, I thought I would learn that in class. When you’re in a classroom, you can go to the teacher or ask your friends. Now it is all online, and the guidance is through pre-recorded video clips. I got stuck and wanted to discuss that with the teacher in the virtual classroom, but then the

screen-sharing didn’t work, so my issue couldn’t be solved. I got really upset.’

‘The teachers are amazing, and there’s no doubt they do all they can so we can study and learn. But if we cannot understand the online lectures clearly because the laser pointer is not visible, the microphone is not loud

## ‘If the microphone is not loud enough, we have a problem’

enough, or screen-sharing doesn’t work properly, we have a problem. Normally, this can be solved by discussing it with classmates or the professor. Now, that’s not possible for some classes. This makes it harder to complete assignments properly before the given deadline and get good grades. It puts a lot of extra



stress on us in already stressful times. Can you expect us to keep up the normal pace in these abnormal circumstances? Maybe WUR should allow students to just focus on one course in this period. That would be a great help.’

## ‘Teachers are tackling it well’

Robin Baas (23), MSc student of International Development Studies

‘Up to now my experience of online education is quite positive. But I do miss the face-to-face interaction with teachers. They miss that too, I heard during the Skype interviews with teachers for the Teacher of the Year election, for which I am on the jury.

‘One of the advantages of online education is that people appear to feel more comfortable with asking and answering questions. This situation is also useful for showing us the possibilities we have for distance education. However, I feel that WUR does depend on face-to-face education on campus to deliver true quality.’

Sometimes there are technical problems, says Baas. ‘Maybe the sound is not great, or the teacher forgets to switch on the microphone. But someone will point that out and the microphone gets switched on again.’ Focus is a more serious challenge. ‘You find your thoughts wandering more easily than during

face-to-face classes. But teachers are tackling it well and, together, we must make the best of it.’

## ‘We are seeing what the possibilities are for distance education’

Baas is spending more time on his studies than he was before. ‘Not because the education is suddenly taking place online, but due to the coronavirus measures. They prevent you from getting together with friends, and that makes me focus more on my studies. I read that one extra article for an assignment or report.’



## ‘I miss the chatter’

Sandra Sikkema (23), MSc student of Land and Water Management

‘It took some getting used to in the first week, but it was nice to try out online education. In spite of the speed at which the courses were switched to online only, it doesn’t feel like hastily cobbled together digital education.’ During the coffee break from a virtual classroom Sikkema had a chat with a friend on Zoom. ‘That made it clear to us that campus education is nicer than online after all. We miss the chatter in the coffee breaks and the

interaction with teachers and other students. But it is nice to notice that the teachers do their utmost to make it work as well as possible.’ In the second week there was some bad news. ‘We were supposed to be going to Spain in period six but we’ve heard that is very unlikely to go ahead. A great pity, because students from last year told us it was great.’ It’s a strange idea for Sikkema that there will be no more teaching on campus until the summer. ‘I won’t

see much of my fellow students again, because after the summer most of us are going to start on our theses and internships.’

### DISTRACTED

It feels to Sikkema as though work pressure has increased. ‘That is because all I do is study most of the time. That takes a lot of discipline.’ She sometimes finds it hard to stick to

the planning schedule for the courses. ‘Some days it is easier to stay motivated than others. I notice that I get distracted more easily, especially if we have to watch lectures from last

## ‘Campus education is nicer than online’

year, because there is nothing interactive about it. I prefer live classes and Skype meetings: that way at least you stay in touch with your fellow students and the teachers.’



In the next *Resource* (30 April) we will hear about teachers’ experiences with online-only education. Would you like to share your story with us? Send an email to [resource@wur.nl](mailto:resource@wur.nl)

Read more and join the conversation on social media: Instagram [resource\\_wur](https://www.instagram.com/resource_wur) or Facebook [wur.resource](https://www.facebook.com/wur.resource) #WURkfromHOME

# And now for a vegetarian steak

WUR is making waves in the world of meat substitutes. Three Wageningen research projects recently got funding from an American research fund. Wageningen is a leading light in shear cell technology, but large-scale applications are still in the future.

*text* Albert Sikkema *photo* Niels Blekemolen

Last year, Wageningen researchers submitted three project proposals to The Good Food Institute (GFI), an American non-profit organization that pumps funding from philanthropists into the development of meat substitutes. This fund had not previously financed research in the Netherlands, but at the end of March, all three of the Wageningen researchers received a grant of between 150,000 and 250,000 dollars. 'The Americans are interested in Wageningen's research and in the shear cell technology,' says Miek Schlangen, who is just embarking on her PhD research. She wrote her own PhD proposal and can now carry it out with funding from GFI, supervised by Atze Jan van der Goot of the Food Process Engineering chair group. The shear cell technique that Van der Goot developed in 2010 is a process that shreds (or shears) plant proteins until they are reduced to fibrous structures whose appearance and texture come very close to those of meat. Plant proteins from soya go into a machine (the shear cell) in which they are heated to between 100 and 140 degrees Celsius. As the mixture is shredded in the machine, the proteins end up all in one line, creating a fibrous structure. Since then, the researchers have found out how

to control the tenderness and texture of the artificial meat, depending on the ingredients, the temperature and the pressure in the machine. They can for instance make a 100-gram vegetarian beefsteak using the shear cell technology, and seven-kilo cuts of 'meat' using a scaled-up version of the machine.

## PEAS AND MUNG BEANS

In her PhD research, Schlangen is going to look at whether she can expand the number of ingredients used in the meat substitutes. Up to now, most of them are made of a protein isolate from soya. Schlangen wants to start using peas and mung beans as well, and to look at how mixtures of proteins and other components they contain behave in the shear cell. She wants to find out how best to fractionate the proteins from these pulses to obtain the right structure for a meat substitute. Her goal is to make several, more sustainable sources of protein available for the meat substitutes.

Another of the grants from the American organization GFI went to a former PhD student of Atze Jan van der Goot's, Birgit Dekkers. Dekkers is now the founder and director of Rival Foods, a Wageningen spin-off with a staff of six which aims to market shear cell technology. Dekkers

wants to scale up the production process by developing the world's first compact, easy-to-use shear cell machine. And Rival Foods also wants to expand the range of meat substitutes on offer.

## FISH, CHICKEN AND RED MEAT

Currently, most meat substitutes are hamburgers and sausages – processed artificial meat. Dekkers wants to make high-end culinary products. So she is going to use the American grant to find out how she can imitate three product categories using the shear cell technology: Rival At Sea, a layered product resembling fish; Rival On Land, a heterogeneous fibrous structure resembling red meat; and Rival With Wings, a more homogeneous, finer, soft fibrous structure resembling poultry.

The spin-off is only six months old and is not yet

**'There still isn't a company marketing large slices of meat substitute'**

producing meat substitutes. The GFI grant should enable the company to set up a production unit for vegetarian beef slices. 'There still isn't a company that is marketing meat substitutes in large slices,' says Miek Schlangen. 'That would be of interest to butchers and chefs, for instance. They can then really slice a vegetarian beefsteak off a 10-kilo block.'


Rival Foods hopes to learn from Schlangen's research too. Dekkers: 'We are looking for alternative sources of protein with which to make



meat substitutes. I am very curious to see whether we can soon produce meat and fish substitutes made out of mung beans as well.'

#### ORGANIC WASTE

Marieke Bruins of WUR's Food & Biobased Research wants to go a step further. 'You can make meat substitutes out of soya and peas, but you can also eat those food directly. I want to make meat substitutes out of agricultural waste streams: the stalks and leaves of plants that now end up on the compost heap.' Her project won funding from The Good Food Initiative too. Bruins is going to study whether the proteins from plant waste – from tomato and cucumber plants, for instance – can be used to make meat substitutes. Leaves contain the protein rubisco, which she suspects could be given a very nice meaty structure with a good bite to it, using shear cell technology. 'I'm going to figure out whether the proteins are suitable for use in meat substitute products.'

Bruins wants to know how she can extract the proteins from the waste streams and how she can purify the various protein fractions. Bruins is doing this research together with Elke Scholten of the Physics and Physical Chemistry chair group. 

#### PIONEER IN MEAT SUBSTITUTES


With the grants from The Good Food Company, WUR hopes to maintain its frontrunner position in research on meat substitutes, says personal professor Atze Jan van der Goot. 'We were quick off the mark in Wageningen with research on alternative proteins.' Van der Goot points to the research programme Profetas (Protein Foods, Environment, Technology and Society), in which Wageningen researchers were working on meat substitutes as far back as 2004.

In the same period, researchers at Food & Biobased Research developed new meat substitutes with the help of extruders: a kind of mill that mixes, grinds and sticks together the proteins. This led to the Wageningen spin-off Ojah BV, which has been producing vegetarian chicken chunks using extruders on a large scale since 2009. Many meat substitutes are now made using extruders.

Van der Goot developed the shear cell technology with a view to making other kinds of plant-based meat as well. At the moment, six Wageningen PhD students are working on meat substitutes. The professor wants to use the knowledge generated by the new projects to make the extruder technology more efficient and sustainable. 'We still have a headstart in Wageningen. WUR is *the* centre for meat substitutes and I want to keep it that way.'



## CATCHING BABY EELS WITH COCONUT MATS

Each spring, millions of glass eels (baby eels) migrate from their birthplace in the Sargasso Sea 6000 kilometres away to the fresh water of the Netherlands' inland waterways. That journey involves passing through the locks at IJmuiden, where they encounter the glass eel detector: a climbing wall covered with coconut mats along which brackish water is pumped from the North Sea Canal. The less salty water is irresistible for the eels and they climb up the mat, only to fall into a tray where Bram van Wijk of Visserij Service Nederland fishes them out with a net. Intern Bart van Woerden watches closely. Van Wijk carries out this glass eel monitoring exercise annually in collaboration with Wageningen Marine Research. One of the aims is to work out what may be causing the decline in eel populations.  TL, photo Bram Belloni





‘This is about the human’s experience, not the animal’s experience’

# Animal dilemmas

Pigs that are immune to viruses thanks to CRISPR-Cas technology, hornless cows and dogs in the most exotic shapes and sizes. Humans modify animals to fit their wishes – and the result is not always bad for the animals’ welfare. But that is not the end of the matter either, argues ethicist Bernice Bovenkerk. She thinks the public debate on modifying animals should go beyond a discussion about welfare.

text Tessa Louwerens photos Shutterstock.com

‘**W**e are agreed on the principle that we should consider animal welfare,’ says Bovenkerk. ‘And there are modifications that do not affect welfare. In fact, they sometimes even “solve” something. One example is genetic modification that causes cows to be born hornless, and they injure each other less as a result. Many people have ethical qualms about modifying animals, quite apart from the issue of welfare. But these objections get lightly dismissed.’

In the context of her VIDI research ‘Anthropocene Ethics. Taking Animal Agency Seriously’,

▼ A hornless cow is handy. But is it desirable?



Bovenkerk discussed the four main arguments, publishing her analysis in *Animal Frontiers*.

## INTEGRITY

One oft-cited argument is that modification affects the animal’s integrity. Bovenkerk: ‘People have their own idealized image of how animals should function. In many cases, what we mean by that is how we imagine they would live in the wild. So pigs with docked tails and Belgian Blue cows that cannot give birth without help constitute assaults on the animal’s integrity. But if a dog’s tail is amputated because of a tumour, we don’t usually see that as an assault on its integrity. So the motives for the modification are a factor.’

## ANIMALS AS OBJECTS

A second important argument is that modifications cause us to instrumentalize animals. ‘We fit barns and cows with sensors. Handy, because then cows can be milked automatically. But it also increases the distance between the animal and the farmer.’ According to Bovenkerk, this turns the animal into a living cog in the machine of the system. ‘The question is: should we adapt the animal to the barn? Or the other way round? We breed pigs with CRISPR-Cas that are immune to viruses. That saves pigs’ lives, but there would probably be fewer viruses if we didn’t keep the pigs in such crowded conditions.’

In these situations, says Bovenkerk, the animal

is not an individual but an instrument for reaching our goals. It is thus reduced to its basic functions: a cow is born, eats, drinks, gives birth, lactates and dies. ‘Animals are interchangeable in this system. And that objectification doesn’t only apply in livestock farming. In the world of dog-breeding, a bitch is declared “empty” once her puppies are born.’ The danger, according to Bovenkerk, is that we assume animals have no perspective on their lives and no wish to make the most of them. What constitutes a good life for an animal, any-

## ‘Should we adapt the animal to the barn or the other way round?’

way? Not an easy question to answer, she thinks. ‘Behavioural scientists assume that animals do aim at certain goals in their lives, though not necessarily consciously. Animals also seem to have a range of individual preferences and personalities.’

## GOD AND NATURE

Then there are people who think we should not play God. Bovenkerk: ‘This is not just a religious argument. You can also look at it like this: Evolution has gone through billions of years of trial and error to get to where we are now. How arrogant is it to think that we are going to make some quick improvements on that?’



▲ Ethicist Bernice Bovenkerk: 'Nature is not a suitable yardstick for what is "good". A cat plays with its prey. No one will argue that we should do that too.' Photo: Shutterstock.com

An argument that is close to this one is the point that modifications to animals are unnatural. Not because they make things happen that never occur in nature, but because they are brought about by humans. 'Many philosophers find that a tricky issue,' says Bovenkerk. 'Nature is certainly not a suitable yardstick for what is "good". A cat plays with its prey and some animals eat their own young. You won't hear any-

## 'A fallacious argument is still an argument'

one saying we should do that because it's natural. Just as no one says people who wear glasses are bad because glasses are unnatural.' According to Bovenkerk, people often call something unnatural when what they really


mean is that they disapprove of it. 'Philosophers dismiss that as a fallacy. And it is, but we shouldn't ignore this frequently used argument. It is interesting to research what underlies it, and have a conversation about that.'

### WORLDVIEW

The above-mentioned arguments can be traced back, says Bovenkerk, to our worldview and our fundamental values. 'The moral discussion about modifying animals is not so much about how an animal experiences it as about how we humans experience it. How do we as humans want to live in relation to nature and other animals? What is a good life and what makes you a good person? There are fundamentally different opinions on that. By talking about it, you gain a better understanding of each other. Scientists, for instance, think people are not in favour of a new technology because they don't understand it. And that the key to convincing people is to increase their knowledge. But it is often a lot

more complex than that. Some studies show that more knowledge has the opposite effect.'

### PUBLIC DEBATE

At present, such objections are mainly aired in private, says Bovenkerk. 'I think political decisions should be made on the basis of as much input as possible, and these values and worldviews are part of that too – and are more important to a lot of people than welfare arguments. It doesn't mean you have to rush through new legislation. But by only raising welfare-based arguments, you impoverish the debate and you also create a bias that tilts things in favour of the proponents of using new technologies on animals. Many of which do not, incidentally, have a direct negative impact on animal welfare. Let's not blindly use our technologies on animals, but step back now and then and reflect on what that means for our relationship with animals and nature, and whether this is a world we want to live in.' 

# MORE WOMEN ACADEMICS

The analysis of the gender balance among WUR's cadre of professors in the last number of *Resource* calls for follow-up, of course. Because what do we think of the fact that men are still in the majority? And what are our ideas on the pace at which gender diversity is increasing? Three female perspectives.

text Marieke Enter illustration Henk van Ruitenbeek

## Martha Bakker



**Chair-holding professor of Land Use Planning**

'Nowadays I am in favour of positive discrimination. In spite of all the good intentions, far too little has changed in the gender balance in professorial positions. So I don't think it's such a bad idea to make academic vacancies open to women only for a while, as the Technical University of Eindhoven is now doing. We've got to force matters a bit now, so that the new generation doesn't grow up with the unconscious gender bias that is still very much in evidence. Because as long as that is still at work, women do not have the same chance of a nice academic career as men.

Gender bias is simply a fact in the academic world. It means that papers by woman authors are rejected more often than those by men – unless there is a double-blind review – and that women are systematically awarded less seniority than men. **I applaud WUR for using the tenure track to make sure that assessment is more or less objective – and straightaway, we are seeing more women getting higher up the ladder on that trajectory.** But the fact that the proportion of women gets smaller with every rung of the career ladder suggests that there is still a glass ceiling. That might be because at the higher echelons there are still a lot of men who were appointed in times gone by, but it could also

be that the committees in charge of applications and appointments are too subjective, to women's disadvantage. So it is high time all the Appointment Advisory Committees were sent off on gender courses. But a preferential policy would be even better.

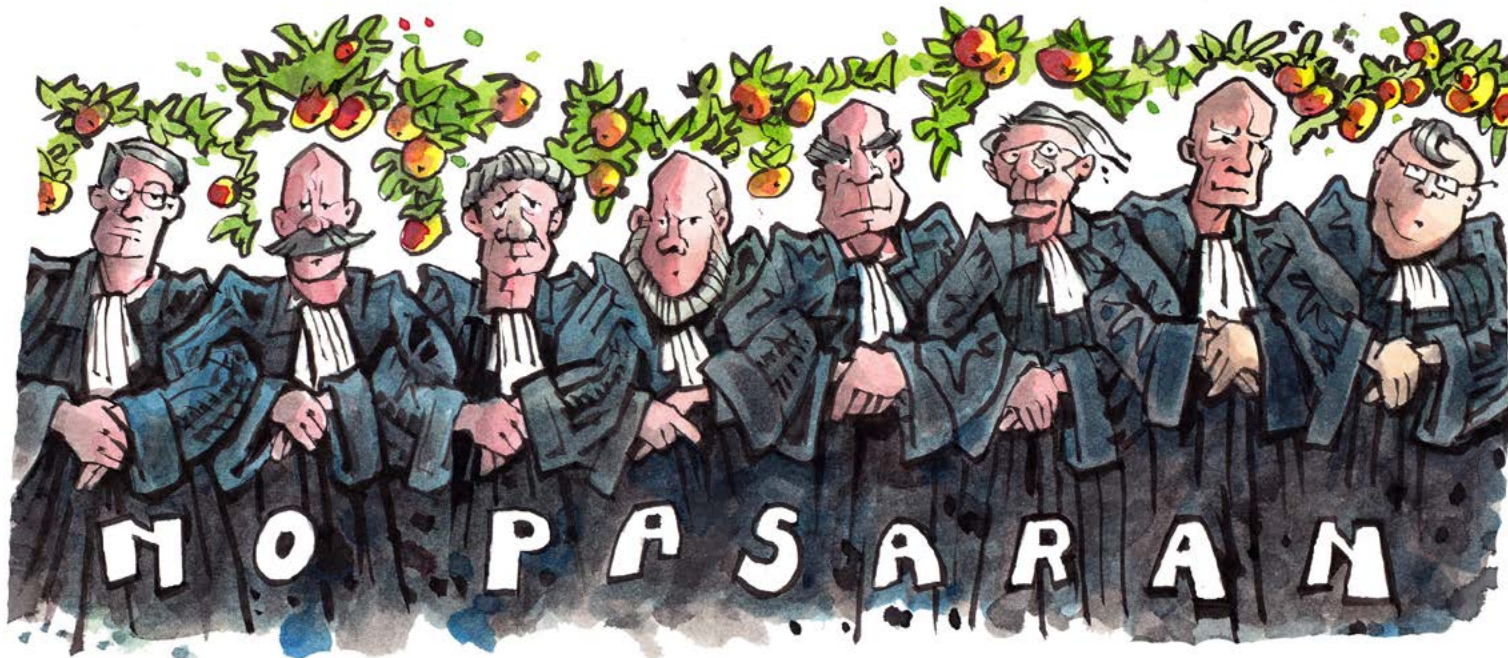
The argument that "we go for quality" as an excuse not to adopt a preferential policy is nonsense, of course. As if quality cannot be combined with being a woman. Women themselves should set aside their objections to such a preferential policy for now. The fear of being seen as a token woman is so unjustified. As a woman you have probably had to prove your worth much more than your male colleagues. So we could do with a bit more self-confidence.'

## Tinde van Andel



**Special professor of Ethnobiology**

'I think *Resource* is right about the relation between the old boys' network and the relatively low number of women special and endowed professors. To become a special professor you need not just a rock-solid track record and an outstanding CV, but also a very good network of influential people who are willing to lobby for you. And men have always been better placed in this regard than women. It is not easy to obtain an endowed or personal chair. For a start, there must just happen to be a lobby in



your field of expertise that is powerful enough to establish a chair. Universities don't hand out such prestigious posts lightly. And another factor is that those chairs are usually financed by external parties, who often already have a candidate in mind. And that is not usually a woman. **That isn't necessarily ill will, but the pattern of men nominating and appointing men is just very persistent.** To break through that, I don't think it's a bad idea to ask the financing parties to put forward more than one candidate for "their" chair in future, and to stipulate that at least one of them must be a woman. And WUR could use the same approach to stimulate a shift towards more cultural diversity among the special professors.'

### Lidwien Poorthuis



**National network of women professors (LNVH)**

'Every year, when LNVH's Monitor of Women Professors comes out, we hold talks with universities about percentages and numbers, as well as about the fact that women with the ambition to become professors still do not have equal starting positions and opportunities with men. That is mainly a question of bias in recruitment and selection procedures. Appointment advisory committees, for example, base their ideal picture of a professor strongly on the male norm. It is sometimes suggested that objective, hard career criteria offer a way of preventing bias and doing something about the persistent lack of gender diversity in

the academic world, but I have my doubts about that. Even objective criteria can inadvertently have an excluding effect on women, and above all, science does itself a disservice if all the professors-to-be must fit one rigid mould. I see more of a future in awareness-raising and knowledge. In training all committee members, for instance. Confront them with their own, often unconscious prejudices, and teach them how they can look at people's qualities in a different, unprejudiced way. There are definitely more roads to Rome than the one that male professors have always taken up to now. I also think it is crucial to educate young scientists in inclusive leadership right from the start. That way you ensure sustainability and you train the scientists of the future to look at the quality of science through a different, more inclusive lens.

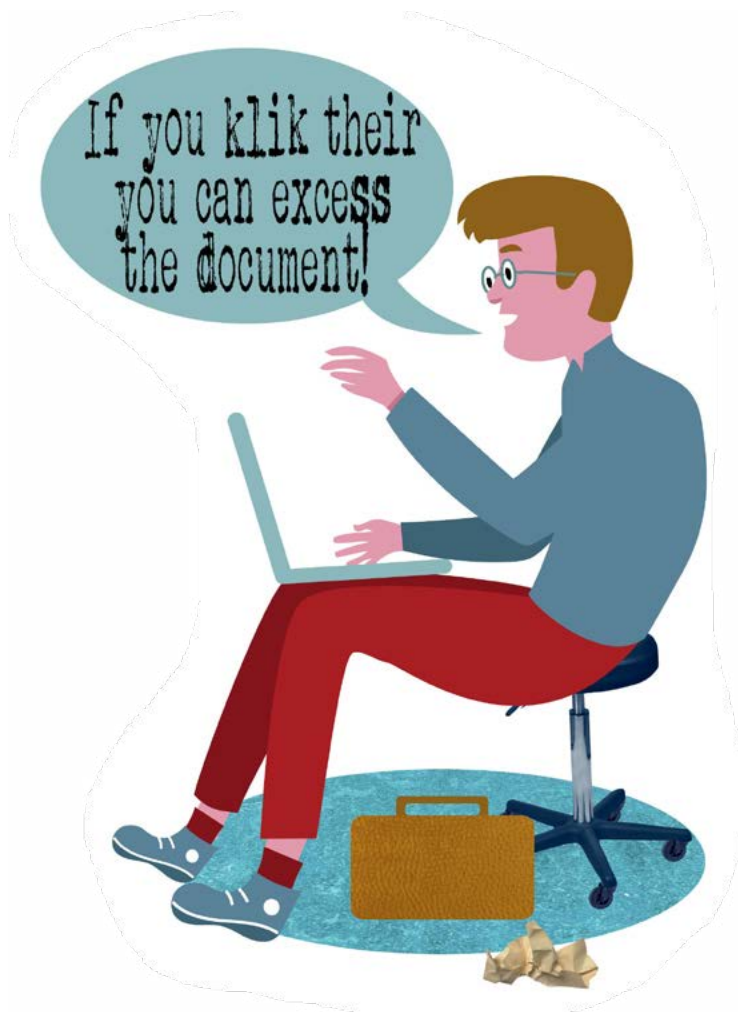
**The leaders of the university have an important role in this, of course. So, for example, only accept appointments by advisory committees who have had training on this – or if not all of them at least the chairperson.** Clear guidelines are indispensable. And intervene if you see undesirable situations arising. I am shocked, for instance, that *Resource* reports that only five women at WUR are special or endowed professors – less than eight per cent. That is way below the national average of 18 per cent in 2016, when we could still analyse those percentages at LNVH. I am very curious to see what WUR is going to do to put that right. With such low percentages, there is almost no option but to resort to crowbar-like measures for opening up the academic world to women.'

Students struggle with language barrier

# Lost in translation

WUR places great value on collaboration, with group work a part of all degree programmes. And that can be quite difficult if you have to work with students with a shaky command of English. *Resource* talked to four students [see insets] who run up against a language barrier. ‘I used gestures to try to explain what we had to do.’ Meanwhile, WUR is scrutinizing its language requirements for admission.

text Femke Janssen illustration Yvonne Kroese



International students have to have a minimum level of English to be admitted to Wageningen University. Several test results are accepted as evidence of that level, including the TOEFL, IELTS and Cambridge testing systems. All these exams include reading, listening and speaking components. There are minimum scores for each component, and Bachelor's and Master's degree courses require different scores for admission. But there are ways of passing such tests without really having English under your belt, which means there are students walking around Wageningen with only broken English, says Master's student John Doe: 'Research is just about doable then, but writing and collaborating is problematic.' So students feed entire lectures into Google Translate in order to understand something at least. The problem is so big that Doe reckons there are students who get other people to write their theses because their own English is not good enough.

## TACTICS

How can a student with a poor command of English still manage to pass the language tests and get admitted? In the country John Doe (not his real name) comes from, there are special schools that prepare you for the language test. 'You don't really learn English there, but how to pass the test as quickly as possible. In multiple

choice questions, the right answer is often either the longest or the shortest one. And for the speaking test, they have a WhatsApp group. As soon as the first student has finished, they text the group to tell them what the topic is. In the writing test you have to write a piece on a specific subject. These subjects rotate, but the number of subjects is limited. Our teachers advised us to learn texts on the seven most common subjects off by heart. If you fail the test, you just take it again. Most students go on taking the IELTS test until they pass, but that doesn't mean they've actually become good at English. Then they make use of an agency for writing their application letter and a CV, partly because they can't do it themselves, and partly because their parents are so keen for their children to be admitted. And then some of these students get someone else to write their thesis.'

#### CULTURAL DIFFERENCES

Dean of Education Arnold Bregt doubts whether students get other people to write their theses. 'There is very intensive supervision during the process of writing a Master's thesis, and I can't imagine that students can get someone else to write their thesis without their

### 'Some students paste entire lectures into Google Translate'

supervisor noticing.'

As Dean of Education, Arnold Bregt is involved in the recruitment policy on English language skills. He admits that it is possible that some students find ways of getting admitted without really meeting the criteria. He finds it hard to judge the implications of Doe's stories, though. 'When can you really call something fraud, and when it is a smart approach to learning? There are often a number of factors that complicate communication, and cultural differences play a role too.' According to Bregt, it is rare for a student to have absolutely no



English. 'In the 18 years that I've been teaching, I've only had a couple of students who really couldn't speak English at all. I advised them to take a couple of months off to immerse themselves in the English language. They did that, and have since passed.'

#### EVALUATION

Bernadette Dijkstra is involved in course evaluations as a policy advisor on Educational Quality. She agrees that the different levels of English among students is an issue. 'Last year several external degree course reviews mentioned the level of English as one of the differences between the students coming in to do a Master's. But you can't tell from the course evaluations how often those differences are really problematic.' That is because the current course evaluations do not include specific questions about a student's experience of communication in group work, but focus on their evaluation of how the course is taught. Dijkstra: 'The focus lies on aspects such as the method, materials and testing. Aspects the teacher can have an influence on next time around.'

There is no procedure for course teachers on what to do about students whose spoken and written English is

inadequate. Some teachers acknowledge the problem but do not wish to talk to *Resource* about it. It seems to be a sensitive topic. Bregt thinks it is important to discuss it openly because criticism paves the way for improvements. The dean takes the stories that are circulating seriously, even if they are not backed up by data. Together with colleagues, he is doing the rounds in WUR – consulting the AID committee among others – to find out about students' experiences in this area.

### MEASURES

Although there is no solid evidence that the level of English among international students causes problems, there are already plans for revising the current admission requirements. According to Bernadette Dijkstra, WUR will investigate where the language requirements suffice and where they do not – and what exactly the problem is in these cases. And what are the requirements at other universities? Dijkstra: 'We will also look at whether we should adjust the language requirements themselves or, rather, the way we establish whether a student meets them. And what are then the consequences for access to our education, the costs for applicants, etc? It's complicated,' says Dijkstra.

The first measures for improving students' level of English have already been installed. A 'skill set' has been compiled for Bachelor's degree programmes, with Academic English listed as a skill in its own right. The idea is that students should be actively trained in this during



their Bachelor's programme. 'We are still thinking about how we are going to implement this,' says Dean Arnold Bregt. Thought is also being given to Master's students and others who come in with too low a level of English: 'We are looking at applications more critically and if in doubt, we ask to talk on Skype. Usually that quickly makes clear whether someone has the minimum level.'

Bregt is also open to offering English classes in the summer months, a suggestion from students. 'It's incredibly hard for the students themselves if they are not fluent in English. We should make these classes open to everyone, because there are also Dutch students and teachers who have difficulty with English.' Wageningen in'to Lan-

### 'It's incredibly hard for students who don't speak good English'

guages is an organization that can provide support for this. Irene Houkes-Jansen, head of In'to Languages: 'We can help to organize a course to improve students' intercultural skills and proactive English language skills.' Bregt thinks the students have a responsibility too, to discuss problems with their teacher or supervisor. 'I think it's important for students and teachers to discuss the problems they come up against. Only then can something be done about it. It is always possible to talk to course coordinators or even the rector, if necessary. Open communication is the first step towards improving matters.'





## HOW STUDENTS SEE IT...

### ‘Explaining things using gestures’

Tim van Nes (22), MSc student of Environmental Sciences

‘During one class we had a group assignment to do and I ended up in a group of all international students. I’m a native speaker of English, so they all looked to me for help. In the end I spent the whole class using gestures to explain what we had to do. We didn’t even get round to actually working on the assignment.

I’m not the only one this has happened to; I’ve heard from others that they have to deal with fellow students who can hardly speak any English. I’ve heard from some students from eastern European countries that speaking skills were not part of their English test. And that holds them back when they come to Wageningen, where group work is

so important. Maybe WUR should offer English classes for the whole month of August, before classes begin. That way students could get used to the academic level of English that is expected of them.’



### ‘Lectures via Google Translate’

Zoë van der Heijden (22), MSc student of Nutrition and Health

‘At the start of the academic year I had a supervisor on one course who could make himself understood pretty well in English, but his grammar was all over the place. In the next period there was a student in my group who had trouble with English. He said so him-

self. That is not nice for him, but it’s not nice for the rest of the group either, because they have to take over a lot of work. At lectures there are students who copy entire PowerPoint slides and paste them into Google Translate. That shows that some students

really struggle with the level of English. It is important that WUR looks into this. Maybe the admission requirements could be raised or students could get extra language tuition if they can’t cope with the level.’

### ‘Extra work for the rest’

Naomi van den Berg (24), MSc student of Forest and Nature Conservation

‘It’s happened to me several times that someone in my group couldn’t really contribute to our project right from the start, because of the language barrier. Often that becomes clear pretty soon, but it is not easy to talk about it openly. As a group, we tried to make sure everyone could keep up, by checking

several times whether everyone understood everything. You try to make decisions and divide tasks together. And then you check one more time whether everyone knows what is expected of them.

Unfortunately, it has happened a few times that someone still didn’t do what had been

agreed on. Then the rest of the group has to take over that person’s work at the last minute. That is difficult for the person who can’t keep up, and for the rest of the group too, who have to do extra work at the last minute. And in the end, group work is assessed as a whole: everyone gets the same grade.’

### ‘I just sat there in silence’

John Doe\* (26), MSc student

‘When I started in Wageningen I had a very hard time with the level of English. I could follow the lectures to some extent, but the group work was difficult. Because I couldn’t express my ideas properly in English, I just sat there in silence. I felt ashamed. A one-to-one conversation went better, so I tried that, sometimes

using Google Translate. I had to think hard about every sentence I spoke. Group members have to evaluate each other, and I got low grades. That was terrible for me. I got the feedback that I should talk more and louder. The others talked very fast, so I couldn’t follow them very well. But I did want to contrib-

ute. We agreed that if I put up my hand, they would listen quietly to me. But in the end, decisions were taken by the rest and I was told about them afterwards. I’m a sociable person and I like group work. If my English had been better, I would have participated much more actively. But I couldn’t do that then.’

\*John Doe is an alias

## IN OTHER NEWS

### CANCER

Researchers at the Dana Farber Cancer Institute in Boston developed a blood test for tracking down cancers at an early stage. The test detects abnormalities in loose bits of DNA in the blood. The abnormalities spotted betray which cancer is proliferating in the body, and where. The test detects over 50 different cancers.

### RECORD

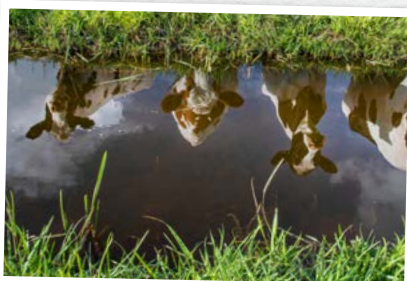
The athletics tracks of today are not optimal for running the 200 metres race. The bends are too sharp, French mathematicians at the Sorbonne have calculated. On a track with shorter straight sections and more gradual bends Usain Bolt could have run his record race 0.04 of a second faster. A straight line would be even faster, but that would make stadiums too big.

### LONERS

Outsiders are the guarantee for the survival of the species. This remarkable conclusion comes from ecologists at Princeton who studied the slime mould *Dictyostelium discoideum*. Loners do not participate in the reproduction behaviour of the species. Which pays off if the rest go under collectively. The decision about who is excluded is taken jointly – though how is not clear. Conclusion: even outsiders play their part.

### OLD

Women live longer than men, on average. Is that the same for other mammals? Yes, shows research at the University of Southern Denmark. On average, a female wild animal lives 18.5 per cent longer than a male. An even bigger difference than among humans. So maybe old wives' tales get their name just because not as many men live to tell their tale.



# Students end housing contracts during coronavirus crisis

**Figures from student housing provider Idealis show a higher number of cancelled contracts this spring than last year. Students are moving back in with their parents.**

In the first quarter of 2020, 677 contracts were terminated at Idealis: 173 more than in the same period in 2019 (504). In the second quarter of 2019, a total of 583 tenancies were ended; in 2020, the score is 463 just one week into the quarter. Idealis spokesperson Hellen Albers: 'When they terminate their contract, students don't say why, so we can only go by the figures. But it is quite clear they are going up, so the coronavirus is definitely having an impact.'

### ONLINE VISITS

But the allocation of rooms continues through Room.nl, says Albers. 'If students plan an evening for prospective new housemates to visit, we advise them to do it online. Anyway, we are already noticing that there is less response to what we have on offer; there are more rooms empty at the moment than last year.'

Student Rijk Dersjant is going to give up his room. 'I was living with four housemates. We had different ideas about how we should deal



▲ Student Rijk Dersjant is at his parents' house for the time being, and plans to give up his room.

with the crisis. Some of them couldn't imagine not having any more contact with other people, so we agreed that we shouldn't have different groups of friends at the house at the same time, and that a maximum of two people could visit at one time. Personally I didn't think that was strict enough, but it is within the rules and I can't decide for my housemates how they should live. So I decided to go and stay with my parents in Culemborg.'

### SUDDENLY OVER

Once in Culemborg, Dersjant realized he didn't actually need to be in Wageningen again. 'Periods five and six are both entirely online. After that I'm going to do my Master's in Maastricht. I have almost definitely got somewhere to live there.'

As soon as that's confirmed, I shall give up my room in Wageningen.' It feels weird to Dersjant that the coronavirus crisis has ended his

**'A lot of people I used to interact with daily, I won't see again'**

time in Wageningen so prematurely. 'It is very strange. A lot of people I interacted with daily, I won't see again for a while. Once all the measures are withdrawn, I am going to give a nice party. And I haven't left Wageningen completely, as I'm going to do a combined Master's: Human Movement Sciences at Maastricht and Nutrition & Health in Wageningen.' **LZ**

## Globus festival moves to September

The first edition of the Globus festival was scheduled to take place on campus on 13 June. But due to the coronavirus crisis, all events on campus are prohibited for the time being. Cancellation is out of the question, however. 'We need something to look forward to in Wageningen', says Bachelor's student Environmental Sciences Marijn van der Meer. He is one of the initiators of Globus. 'I am busy emailing bookers and managers to check for availability in September and October. The definite date depends on the artists. We hope to be able to set it up for Saturday 12 or 19 September, before the fall.' **LZ**



# No internship costs Lin 1500 euros a month

**Shih-Hsuan Lin (25) from Taiwan was supposed to start his internship, the final stage in his Biobased Sciences Master's, in April. But he can't because of the coronavirus and that is costing him a lot of money.**

'I have contacts with a research facility where I would be able to start,' says Lin. 'But no one can start an internship there at the moment because of the coronavirus crisis. Tuition fees for non-EU students are about 18,000 euros a year so each month costs me 1500 euros.' There is the rent on top of that, because although Lin is staying in Taiwan for now, he hasn't cancelled his rental contract. 'I will need somewhere to stay when I come back for my internship.'

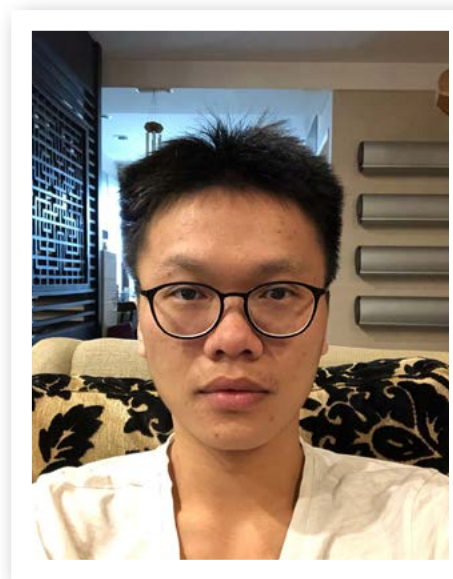
## INTERNSHIP IN CHINA

WUR has offered Lin and other students unable to start internships a break in their studies so that it doesn't cost them tuition fees.

But that creates a new problem for non-EU students: their visa becomes invalid immediately. 'So you can withdraw from your course but you don't know for sure whether you will be able to continue later. I'm not withdrawing as I want to complete my degree.' Student

**I'm not withdrawing as I want to complete my degree'**

Service Centre head Ingrid Hijman knows of other cases like Lin's. 'Unfortunately there isn't a ready-made solution that works for everyone. First we look at whether there is an alternative to the internship, for example a second thesis.' Another option is an internship in their home country, says Hijman. 'Some Chinese students have found internships in China. Visas are not an issue then.' **LZ**



For a longer version of this article, see [www.resource.wur.nl](http://www.resource.wur.nl)

## MEANWHILE IN... INDIA

**'Everyone should cooperate to fight this virus successfully'**

**In India, home country of MSc Biotechnology student Isha Mahajan (24), the government ordered a nationwide lockdown, limiting movement of the entire 1.3 billion population. In the following days millions of people travelled to their rural hometowns.**

'A lot of people, including the many daily wage workers, left the cities after the lockdown was announced. Not only for financial reasons. Family is very important for Indian people, so during this scary time everyone prefers to go back to their hometown and to stay with their parents or in-laws. The Indian travel pattern reminded me of Italy. After COVID-19 blew up in Lombardy, a lot of people wanted to go back to their hometowns in the south of Italy as soon as possible. There is a lot of contradictory information about the current situation in India circulating the internet. The media makes it seem like people are not following the regulations, while my friends and family tell me that that is not actually the case. I hope they are correct, because if we want to fight this virus successfully, everyone should cooperate.

In India working outside of the house has become very difficult. My mom told me that



PHOTO: DANIEL PRUDEK / SHUTTERSTOCK.COM

the whole area will be locked down when there is a positive case of COVID-19 in a certain area. No one will be allowed to go in or out of that area, except people working in vital fields such as the food industry or medical services.

I really love how Indian people help and support each other during these difficult times. For example, the prime minister suggested that everyone turns off their lamps at 9pm for nine minutes and lights a candle or a diya (an Indian style oil lamp) – just to show that people are all in this together.

I feel very involved with the whole situation, because my loved ones are in India. But I can't do much about it, only encourage people to stay at home as much as possible and abide by the regulations set by the government.' **EM**



MSc Biotechnology student Isha Mahajan (24) is from India, where her family and friends live under a mandatory nationwide corona lockdown.

YOU

## (STILL) ON CAMPUS 'I CAN'T STUDY AT HOME SO I GO TO THE FORUM EVERY DAY'

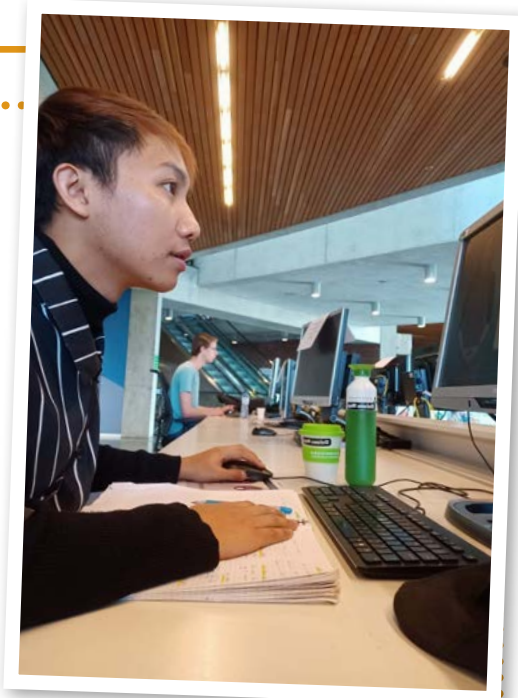
**Master's student of Food Technology Stefanus Mega Prabawa (26) from Indonesia decided to stay in Wageningen during the coronavirus crisis. He mainly fills his days with studying in the Forum. 'Every day, from eight in the morning until seven in the evening.'**

'It's a long flight back to Indonesia,' Prabawa says. 'The city where I come from is closed off, so even if I were to go back, I still wouldn't be able to visit my family. So I decided to stay here and study.' Even though all education has moved to online only, Prabawa still studies on campus. 'I can't work at home. I'm not productive there. So I study in the Forum every day, including weekends. I always go to the same spot, right in front of the library. Only one in three PCs is still working, to ensure that students stay more than 1.5 metres apart.

So there are not a lot of people there.' Prabawa takes his lunch break from midday to one o'clock. 'Sometimes in front of the computer, but on sunny days I go and sit by the lake to chill a bit. I Skype with friends during the break — we may not be together

### 'Even if I were to go back, I wouldn't be able to visit my family'

but we can still have lunch together.' After a long day studying, Prabawa likes to eat dinner with friends. 'Most of the time I eat alone now, but sometimes we have dinner together. But only with two or three people and we keep our distance. These dinners are important to



me, otherwise I would go crazy.' Prabawa is sad that the education switched to online because of the coronavirus. 'We have practicals that we need to do in the lab, but that's not possible now. So we study via YouTube. I think these practicals are important for Master's students. I came a long way to experience these things live. If everything switches to online only, I might just as well have stayed in Indonesia.' **ILZ**

## 'The Asian students form a long, orderly queue'

### DIARY OF A CARETAKER

Eugene van Meteren works for Idealis as a caretaker. He writes about his experiences for *Resource*. You can read all his columns on [resource-online.nl](http://resource-online.nl).



**It is getting quieter and emptier by the day in and around the Idealis flats. But at the end of a quiet Tuesday, caretaker Eugene van Meteren suddenly hears a commotion.**

On 16 March, Prime Minister Mark Rutte addressed the nation on television, radio and various livestreams. Our country is in the grip of the coronavirus. Together with the rest of the world. On 23 March, stricter extended measures were announced, which Rutte described as an intelligent lockdown. Meanwhile, 90 per cent of Idealis staff are working from home, but of course our residents can reach us by telephone and email.

After the decision on the intelligent lockdown, there was still some activity in and around the building where I work, but now it is getting slower, emptier and quieter by the day.

Normally the carpark is full of cars; now there are hardly any — just one lonely car with an Italian number plate. I assume the owner is unable to return to their family in their home country.

It is dead quiet in the office too, and the only sound I hear is the telephone or the sound the

computer makes when an email comes in. This Tuesday I see hardly anyone all day, but at about five o'clock in the afternoon there is a sudden commotion.

I can hear voices, and I see lads and lasses of Chinese origin, all wearing face masks, gathering outside. I am curious, and wonder what's going on. Here comes a white van, with the text *Asian Snacks, Fresh Fruits & Vegetables* on the side. The students form an orderly long queue of at least 20 metres. The van owner slides the door open and hands a package of food to the first person in the queue. And so it goes on.

### 'Here comes a white van, with Asian Snacks, Fresh Fruits & Vegetables on the side'

At the same moment, along comes a car with compliance officers in it. They get out and give instructions that everyone should keep one and half metres apart. The students comply politely and take a step backwards. It is a bizarre, surreal scene. But it is the reality nowadays. **B**

Wageningen Master's students do internships and thesis research all around the world, getting to know their field and other cultures. Here they talk about their adventures.

# 'Always a lovely smile'

'Indonesia is plagued by annually recurring peatland fires, a problem I've been following for years. So when I got the chance to do a six-month study in Indonesia, I got in touch with as many of the organizations involved as possible. And with success, so I could do an internship at the World Resources Institute (WRI), which tries to document restoration work and monitor the fires online so as to gain a fuller understanding of the peatland fires.

## A METROPOLIS

My department at WRI was located in the business hub of Jakarta, in one of the many office tower blocks. To my great surprise, it turned out to be on the top floor with a fantastic view over the city. In this great metropolis, the smartphone has become a basic essential, mainly due to Gojek. That is an app with which you can do practically anything in a single click: deliver food, order a taxi, do online banking and chat.

## THE COUNTRYSIDE


Life in the city was totally different to life in the field. I flew over to South Sumatra twice, and collected my data in the Indonesian countryside there. During the fieldwork we got up early and I rode pillion on a scooter, going into the plantations or the forest with a group of local colleagues.

I walked to the designated locations to measure groundwater levels and take soil samples, wading through canals and balancing on tree trunks.

## HARD REALITY

During my time in Indonesia, new peatland fires occurred, making it too dangerous to go into the field in September. I could finally set off in October, but once I was in the field, I experienced for myself how bad the visibility can get. One of the research locations had been changed into a lunar landscape by the fires. The terrible sights I saw brought the importance of this work home to me once again.

## HOSPITALITY

The lovely smiles in Indonesia are what has stayed with me. Everywhere I went, people smiled and that always made me feel welcome. During my fieldwork on South Sumatra, I went with a colleague to a village five hours' drive from a big city. We had the honour of staying with the mayor, and were welcomed to the village like guests of honour. In the evening, the whole village came to visit us, and I was served all sorts of things and asked all sorts of questions. On the last evening, the mayor wanted a photo taken with me, to frame and hang on the wall.'  MVS



## THE WORKS

**Who?** Thomas Westhoff (20), BSc International Land and Water Management  
**What?** Internship at the World Resources Institute (WRI)  
**Where?** Java and Sumatra (Indonesia)

Do you too have a nice story about your internship or thesis research abroad? Email [resource@wur.nl](mailto:resource@wur.nl)



# Things I could write about

There are lots of things *Resource* blogger Donatella Gasparro could write about these days. She really struggled to choose one. So she decided to give you a list of items and topics she considered commenting on, without actually doing it. Here we go:

**1** I could write about how after only two weeks of online meetings, lessons, events, gatherings, yoga and dance classes, I have had **enough of Zoom**, Microsoft Teams, Bongo, Skype, all online meeting platforms and computer screens.

**2** I could also write about the fact that I **graduated** on Monday 30 March and how anticlimactic, boring, unceremonious and funny it was – as it will be for all those graduating in the next couple of months. But it sure makes for an interesting story to tell our future grandkids: ‘In corona times your grandma graduated in slippers!’

**3** I could comment on Idealis’ brilliant email that was sent to all students and how they suggest **avoiding showering** every day to save money and ‘to pass corona on-to’ them if we have it in our student house.

**4** Or on how even in the happy Droevendaal bubble, the semi-quarantine is driving us a little bit insane, and all the weird things that six people living together 24/7 come up with, from kitchen experiments to **garden gnomes** running around on skateboards.

**5** I could also write, at length, about the funny measures adopted by some shops. One can only enter with a trolley to distance oneself from others. And the staff are not wearing any mask or gloves at all. And, by the way, **you’d need four carts** around you to actually distance from people from all angles.

**6** I could happily talk about flowers, buds, leaves and bumblebees - and **spring** which happens anyway, exploding right here, right now, totally unaffected and unimpressed by humanity and its peculiar dramas.

**7** I could make a list of **words and expressions** we’ve used in the past weeks more than ever, such as pandemic, exponential curve, intensive care, quarantine, and ‘can you hear me?’

**8** I could elaborate on how I have resigned myself to certain ideas: that the world as we know it is collapsing, that the markets are crashing (and how bad this is – or actually very good?), that the **future is a mystery**, and that we actually cannot do much about it. So yeah, enjoy the ride (inside).

**9** I could write an essay on how I deeply hope **this crisis will give us insights**, hints on what’s important in life, on what directions to take, on what stress is and if it’s really worth it, on our relationship with ourselves and others, on the use of technology, on our work, on ‘free time’, on freedom, justice, borders and peace. On what doesn’t just fill - but more importantly, fulfils. **📖**

## BLOG



Donatella Gasparro graduated on Monday 30 March as an MSc student of Organic Agriculture; she hails from Italy.

## Competition: come up with a name for the new teaching building

Students and staff are invited to think up a name for the new teaching building, which will come into use in 2021.

The competition has some clear guidelines. The submission must be a Latin or Greek word of four to six letters. That word must have a clear link to the life sciences, education or features of the building itself (sustainable, daylight in all rooms, energy efficient, vegetation indoors, low maintenance, flexible layout).

Participants can send their ideas, including a brief explanation, by email to [my.nameproposal@wur.nl](mailto:my.nameproposal@wur.nl), with the idea for the name as the subject. You do need to take action quickly as the deadline for submissions is 18:00 on 24 April.

You can find more information about the competition on [resource.wur.eu](http://resource.wur.eu) **📖 LZ**

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## In memoriam

## Diego Gallegos-Tejeda



On 19 March we received the sad news that our PhD student Diego Gallegos-Tejeda had passed away two days earlier. Around the end of September 2019, Diego and his wife decided to go to their native country, Mexico, together with their newborn son Marcelo, to seek further medical treatment for Diego's aggressive disease. He was full of hope to return to Wageningen and to continue his PhD studies as soon as he felt better. Unfortunately, this hope has not been fulfilled. We will miss Diego as a colleague

and friend, we will miss his presence, determination, admirable energy and positive attitude to work and life. Diego worked at the Laboratory of Food Microbiology on a TKI project, jointly executed with Danone Nutricia Research, investigating dual species co-fermentation processes at the physiological and molecular levels, with the final aim of steering and optimizing the fermentation process. Just before he left Wageningen last year, he made a breakthrough discovery about the way these microbes interact, thereby providing leads for enhancing the dairy fermentation process and product functionality. His ambition was to return to

Mexico after obtaining his PhD at Wageningen University and use the knowledge and fermentation technology expertise he obtained to boost the Biotechnology sector in Mexico. Our heartfelt sympathies are with his wife Evelyn, his son Marcelo, his parents and parents-in-law and all his family. We will stay in contact with them and wish them all the strength they need in coping with this great loss.

*Eddy Smid, Tjakko Abee and Marcel Zwietering, on behalf of all colleagues and students of the Food Microbiology chair group*

## In memoriam

## Otto van Laar



We have received the very sad news that our colleague Otto van Laar passed away on Wednesday 8 April. Otto was born on 17 November 1961 and worked for years in the construction sector. Since 2010, he worked for Facilities and Services as a caretaker in several different WUR buildings, most recently in Radix. Otto was a quiet, hardworking colleague who enjoyed his job. He was one of the few people who was able and willing to work in nearly all our buildings, not just during the day but also in the evening and at the weekend. Otto became seriously ill at the beginning of January, and it was soon clear that treatment was not possible. Otto was only 58 when he died. Our thoughts and sympathies are with Otto's whole family. We wish them strength in the time ahead of them.

*On behalf of colleagues at Facilities Support, Brigitte Fransen*

## In memoriam

## Andries (Dries) van Wagenberg



Professor A.F.G.M. (Andreas) van Wagenberg (71) passed away on 10 March 2020. Between 2000 and 2010 he was professor by special appointment of Facility Management (FM) at the Business Management and Organization chair group, which was called Management Studies in those days. The foundation Facility Management Nederland appointed Van Wagenberg as professor by special appointment on the strength of his directorship of the Research Centre Facility Management. Before that he had been professor of FM by special appointment for four years at the Technical University of Eindhoven. As the first professor of FM in the Netherlands, he was very eager to give the new Facility Management sector a sound academic foundation. Chair-holding professor Onno Omta got to know Andries and

found him an extremely likeable man, who supervised between five and 10 students for their final thesis on FM. Director of Education Edwin Kroeze recalls how Andries was always a very active teacher of FM, and was closely involved in recruiting good applied sciences students to this academic degree option, which is still unique in the Netherlands. Meanwhile, Andries supervised PhD students in the Netherlands, Austria and Finland, including Thomas Mudrak and Herman Kok. 'I remember Andries as very passionate about FM, especially in a social context,' says Kok. 'In FM education and research, I am building on what Andries started.' Even after his Wageningen period, Andries remained active nationally and internationally, especially wherever work was going on to boost the standing of FM as a discipline. After all, FM was his passion in life.

*Emeritus Professor Onno Omta, Edwin Kroeze, Herman Kok, Geoffrey Hagelaar and Emiel Wubben.*

# >>TYPICAL DUTCH

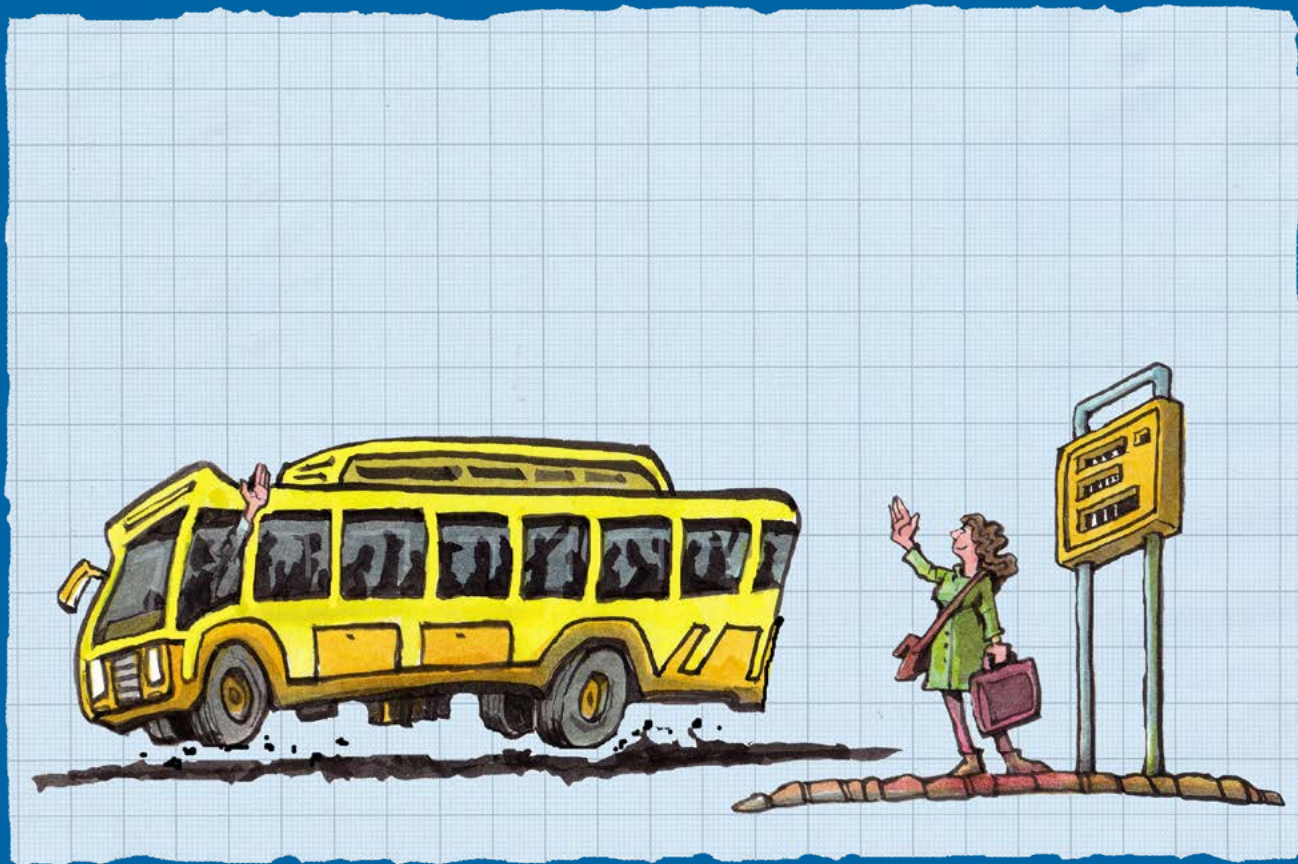


ILLUSTRATION: HENK VAN RUITENBEEK

## The smart bus

**The first time I took the bus here in Wageningen, I didn't know the city yet. I had just arrived from Italy, where traffic and travel are frenetic.**

Whenever I travel to a new country and have to use public transport I always plan in advance which bus, train or metro I should take and I check the number of stops before mine to be sure I won't get off at the wrong one. Once I had landed in the Netherlands, I downloaded the mobile apps of NS and OV9292 so that I wouldn't have any problems travelling by myself. The day came when I had to take the bus. Before getting on I waited for some other people to enter first to see how to get a ticket and what to say to the driver.

I was surprised to see everybody greeting him; usually in Milan you don't say anything to the driver when getting on the bus. Probably because many more people have to get on, all the doors of the bus open and there is no time even to say 'Good morning'. In Milan, life is always very frenetic.

Once I had bought the bus ticket, the first obstacle had been overcome. The next step would be to avoid getting lost. I sat down holding my phone and staring at the OV9292 app, ready to count the stops before mine, when I finally noticed a huge screen hanging just in front of me. The best invention I had ever come across! Not only could I read the names of all the bus stops (which isn't always the case in Italy), but I could even see what time I would reach each stop. Amazing! And even more amazing was the fact that the time could change if there was a delay.

I couldn't believe my eyes in the face of such organization!

**🇮🇹 Beatrice Rocchi, MSc student of Applied Food Safety, from Italy**

**'In Milan you don't say anything to the driver when you get on the bus'**

*Do you have a nice anecdote about your experience of going Dutch? Send it in! Describe an encounter with Dutch culture in detail and comment on it briefly. 300 words max. Send it to [resource@wur.nl](mailto:resource@wur.nl) and earn 25 euros and Dutch candy.*