

## Emissions model

Agricultural ammonia emissions less than thought | **p.6** |

## New cell division insight

Plants and animals have same 'compass protein' | **P.8** |

## Overhauling tenure track

'There is a flaw in the career structure' | **P.12** |

# RESOURCE [EN]

For everyone at Wageningen University & Research

no 10 – 30 January 2020 – 14th Volume

**INTERNATIONAL  
EDITION**

## Performing in two worlds

Elite athlete students | **p.22**



# Jan Willem + Leica SP8 fluorescence microscope

WUR researchers work with all kinds of equipment.  
Meet researcher Jan Willem Borst (Laboratory for Biochemistry).

## PROTEIN-WATCHING

Microscopes come in all shapes and sizes. At the Microspectroscopy Research Facility, almost anything can be captured in picture form. This piece of Leica equipment looks surprisingly traditional, apart from all the of apparatus that is not in the picture. The machine Jan Willem Borst is working with is used for fluorescence lifetime imaging microscopy: the lifetime of fluorescent light reveals how proteins cooperate in living cells. A peek over the shoulders of a protein.

📷 RK, photo Sven Menschel

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## ACADEMIC RAT RACE

Many academics, including professors, are most innovative and productive in the first 10 years of their career. Their production and impact often decline after that. The fading academic prowess of established scholars is concealed by the fact that postdocs and young staff members still compile innovative research proposals and continue to cite the established names in their ground-breaking articles.

Tenure track was introduced 10 years ago with the aim of shaking up the old order. Under the new system, talented scientists can progress more quickly to a professorship and they are continually monitored to check they are still on the ball. The new motto is 'up or out', with an academic rat race based on production data. This system is coming in for increasing criticism and the career policy is set to change again, but how? Read the article (p. 22) and join the debate.

*Albert Sikkema, science editor*



**>> It turns out that animals and plants use the same 'compass protein' for cell division. The discovery of this in liverworts shows this system is at least 450 million years old. | p.8**



## WUR WASTE PAPER RECYCLED AS TOILET PAPER

**Waste paper will now come back to campus as toilet paper. This is possible thanks to a new partnership with the companies that collect and process the paper.**

Waste paper has been collected separately on campus for a long while. Only the paper towels in the campus toilets still get dumped with the general refuse. But the system could become even more sustainable by having the collection, transport and processing of the paper in a single short chain and then using the new products in the campus loos.

This new closed paper cycle is what the refuse collection firm Veolia, processing company WEPA and supplier Asito have agreed with WUR. Veolia already collected the waste paper (including confidential documents); it will now also collect paper cups and used paper towels. Asito buys its sanitary paper products from WEPA. The three companies will now work together in a single chain.

WEPA, based in Swalmen in Limburg, will recycle the waste paper as toilet paper and paper towels in line with the cradle to cradle principle. Only paper is recycled, using green energy and as little water as possible. This BlackSatino product line was introduced a while back in the campus toilets.

WUR uses large quantities of paper. Every year, the coffee vending machines get through 3.8 million paper cups, while 17 million paper towels are used in the toilets. A further 277 thousand kilos in waste paper is collected. According to WEPA, WUR will achieve annual savings in CO<sub>2</sub> emissions equivalent to the emissions from 25 company cars thanks to this new chain. The benefits are partly thanks to the cradle to cradle production process, and partly due to savings on transport. **RK**

## GREEN LIGHT FOR SOLAR PARK

**Solar park Nergena, on WUR land near Dijkgraaf, is to go ahead. The municipal council approved the plan last week by a tiny majority. The park will be used to do research on the ecological effects of solar parks.**

The plan to build a solar park in the Binnenveld area not far from the campus met with a lot of resistance. Farmers and nature conservationists are not happy at agricultural land being taken up by solar panels. The divisions were evident when Ede's municipal council had to take a decision on the plan: it was approved by the smallest possible majority of one vote.

### TESTING GROUND

WUR will use the 10-hectare solar park for its Solar Research Programme, which investigates new layouts for solar panels and the ecological effects of solar parks. That these effects exist is clear from a recent small-scale study by WUR students: less sunlight reaches the land underneath conventional

solar panels and the soil is drier. That leads to a shift in the mix of species.

Nergena will function in part as a testing ground. There will be variations in the height of the solar panels and the space between them. Vertical panels will also be tested, along with rotating panel systems that track the sun. Sheep will be kept in part of the solar park to test the effect of grazing.

### HIKING TRAIL

Nergena will be developed by the company LC Energy, which is also building the solar park on Kanaalweg. WUR will lease out the land, which it bought off a farmer who was retiring four years ago. The land has been unused since then. The new solar park will be designed to fit in with the surroundings as much as possible, taking into account the historical lines in the landscape. The park will be crossed by a recreational trail (a *klompenpad*) connecting Bornsesteeg to Dijkgraaf. A new copse will be planted to make the place attractive for hikers. **RK**

## DARWIN CAFÉ ALL ABOUT CRISPR-CAS

The fourth Darwin Café, an initiative of the biology journal *Bionieuws* and *Resource* to celebrate the day on which Darwin was born (12 February), will be all about the revolutionary gene technique CRISPR-Cas. Microbiologist John van der Oost will mark Darwin's birthday with a talk entitled 'The arms race between bacteria and their viruses — from evolution to revolution.' Van der Oost was a key figure at the start of the CRISPR-Cas revolution with his discovery in 2008 that bacteria store a kind of memory of infections by viruses and then use that information in their immune system. In his talk, he will explain how that works, the unprecedented opportunities offered by this new method for genetic modification but also the issues it raises. The Darwin Café will be held on Wednesday 12 February in Café Rad van Wageningen in the town centre. Admission is free but you have to buy something. **RK**



## STUDENT CHALLENGE VISIT TO CHINA POSTPONED

**Student teams taking part in the Urban Greenhouse Challenge (UGC), organized by WUR, have to come up with a design for professional food production in the Chinese city of Dongguan. A site visit was scheduled for February but that has been postponed because of the coronavirus.**

The announcement was made by Marta Eggers, one of the UGC organizers. 'We have postponed the site visit by at least one month. We are keeping close watch on whether the situa-

tion in China improves because we do want that visit to take place.'

The aim of the UGC is to explore the potential for urban agriculture, see what innovations are possible and turn them into feasible concepts. A total of 53 multidisciplinary student teams from universities all over the world registered for the second edition of this challenge. An initial selection round reduced the number to 20 teams. The intention was to send a delegation with one or two representatives from each team to Dongguan in February to collect data. The teams will be told by 24 February whether the site visit will go ahead and if so, when.

Eggers: 'If the situation is safe, we hope to schedule the visit for the week of 30 March. If it's not safe to visit China at the end of March, we'll come up with an alternative plan.' **LZ**

### WHAT DOES CORONAVIRUS MEAN FOR WUR?

WUR says it is closely monitoring developments surrounding the coronavirus. Students and staff returning from China or planning to visit the country are advised to check the sites of the National Institute for Public Health and the Environment (RIVM) and the ministry of Foreign Affairs for the latest information and advice. 'We are keeping a close watch on trips by our students and teachers to and from the infected areas in China and will adopt the procedures recommended by RIVM where necessary. No additional measures are required at present,' says the coronavirus message on WUR's intranet.



## © COLUMN | GUIDO

### Work pressure again

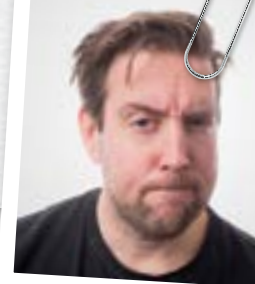
In 2019, the Universities Association the VSNU presented the state of play regarding the Collective Labour Agreement (CAO), and yet again drew attention to work pressure. After an exploratory report in 2016, a study in 2017 and an interim report in 2018, we've now finally reached a conclusion: work pressure in academia is extremely high!

**'The present systems goes on functioning thanks to academics who are always prepared to get the job done'**

I foresee new reports in 2020, 2021 and 2022, all of which will once again point out that work pressure is extremely high and we really should do something about it within the universities. I'm sorry to disappoint you, dear member of the university staff, but the university is not going to be able to close the work pressure dossier. In the corridors you and your peers can be heard saying, 'I'm glad the weekend's come, now I can get round to writing'. Or, my personal favourite, 'Luckily the deadline is at the beginning of January, so I can get down to it properly in the Christmas holiday.'

The present system goes on functioning thanks to academics who are always prepared to get the job done, even if their working day or week is over. As an employer, the university would be crazy to change that system. If an employee can't keep it up, of course they are free to look for another job, but most of them don't do that because secretly they like their jobs at the university too much to do so. And in the discussion about work pressure, that piece of the puzzle gets pushed under the carpet: we love working here. So I'm already looking forward to the end of 2020, when the university will present research results on the extent of the work pressure, when employees will complain about the massive work pressure but will just keep going, and when we will make plans for another study on work pressure in 2021. **G**

**Guido Camps (36)** is a vet and a postdoc at the Human Nutrition department. He enjoys baking, beekeeping and unusual animals.



## BLEISWIJK DEMO GREENHOUSE OPENS

At the start of the week, the minister of Agriculture Carola Schouten and her American colleague Sonny Perdue ceremonially cut the ribbon to officially open demonstration greenhouse KAS2030 in Bleiswijk while Executive Board President Louise Fresco looked on. Not everyone was pleased with the security measures: 'Disproportionate and paranoid. I don't think WUR should consent to all this — don't invite the American minister if that is what it takes... Anyway, opening a new complex is something you should do with your own staff.' **ME**



PHOTO: GERARD-JAN VLEKEKE



## NEW MODEL FOR CALCULATING EMISSIONS

# AGRICULTURAL AMMONIA EMISSIONS 10 PER CENT LESS IN FIELDS

**When manure is spread in fields, the ammonia emissions are 10 per cent less than was thought. This finding is based on new emission calculations by WUR. The researchers used an improved method to analyse ammonia measurements, both old and new.**

In the middle of the nitrogen crisis, the Wageningen researchers Paul Goedhart, Julio Mosquera and Jan Huijsmans have reported on a significant ammonia study. They had actually completed their research before the Council of State shot down the nitrogen programme. Over the past 10 months their study has been double-checked by fellow scientists, before being published this month in the journal *Soil Use and Management*.

## MEASUREMENT MASTS

Since the late 1980s, WUR has been using the integrated horizontal flux method to measure ammonia emissions from manure spread on grassland. In this method, which is also used in other countries, the researchers spread the manure in circles with a diameter of about 50 metres and then install two measurement masts. The first mast is placed in the middle of the circle and measures ammonia concentrations at five to seven different heights. The second mast is placed at some distance downwind from the circle and measures the background concentration of the ammonia in the air.

A device on the mast measures how much ammonia the air contains at different heights, as ammonia con-

centrations decline the higher you get. The ammonia emissions are then calculated based on the amount of ammonia the wind blows away at different heights. To do this, curves are used that relate the ammonia concentration and wind speed to the height. These curves are estimated using the measurements.

## CRITICISM

Over the past five years, there has been criticism of the reliability of the ammonia emission estimates. Critics such as Jaap Hanekamp and Geesje Rotgers have also questioned the effectiveness of low-emission manure spreading. 'We refuted their conclusions in 2017,' say Goedhart and Huijsmans. 'They used the wrong statistical method. There can be no doubt about our findings on the effectiveness of low-emission manure spreading.'

Even so, statistician Paul Goedhart

re-examined the curve that gives the ammonia concentrations at different heights. He found that the curve didn't fit the ammonia measurements that well and so he came up with an alternative curve. He also

**'Our modified model gives lower emissions in all cases when spreading manure'**

allowed for the fact that measurements of higher concentrations are more variable than lower measurements. WUR's 160 ammonia tests were then analysed again with these improvements. That resulted in estimates of ammonia emissions in fields that are 10 per cent lower.

## EMISSION FACTOR

'Our modified model gives lower emissions in all cases when

spreading manure,' says Huijsmans. 'If you use a slurry injector, the emission factor is about 17 per cent, not 19 per cent as we said before. Spreading the manure on the surface gives an emission factor of 63 per cent instead of 70 per cent.' These emissions are averages and only apply if farmers keep to the rules for low-emission fertilizing. The study by Goedhart, Mosquera and Huijsmans was funded by the Dutch Federation of Agriculture (LTO) and WUR.

## DILUTED

In the past few years, Huijsmans has also done ammonia measurements with diluted manure. He was sceptical but it turned out that farmers who mix the manure with water shortly before spreading it get lower emissions. Farmers who mix two parts manure with one part water can reduce their ammonia emissions by about 40 per cent.

AS

Spreading manure with a slurry ► injector gives an emission factor of about 17 per cent rather than 19 per cent.



PHOTO: SHUTTERSTOCK

'Teaching and research are suffering,' ▶  
says WUR lecturer Michiel Köhne.

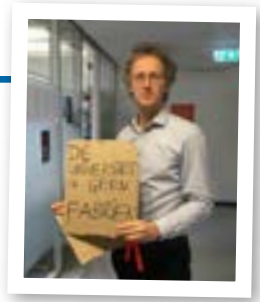


PHOTO: LUKK ZEGERS

## BECKY TO STOP FOOD WASTE

Samen tegen Voedselverspilling, the WUR-led foundation that aims to combat food waste, was at the international green trade fair Grüne Woche last week in Berlin. It launched its new mascot Becky there. 'Becky will work with influencers to persuade Dutch consumers to waste less food,' explains Sanne Stroosnijder, Business Development Manager at Fresh Food & Chains. 'She will do this by giving practical tips such as handy shopping lists and recipes that mean

you don't have to throw away so much.' Becky was developed by the Netherlands Nutrition Centre and is based on the latest insights of communication and behavioural scientists. Families with young children waste most food so Becky was tested first on this group. In a couple of years' time, the researchers will evaluate what effect the campaign has had. The Dutch discarded 34.3 kilos of food per person in 2019, almost seven kilos less than in 2016. **TL**



PHOTO: SANNE STROOSNIJDER

▲ Minister of Agriculture Carola Schouten meets Becky.

## 'LECTURERS ARE BEING BLED DRY'

**With more than 700 reports of systematic overtime at Dutch universities, the protest movement WOinActie called in the Labour Inspectorate on 20 January. WUR lecturers Michiel Köhne and Bram Büscher, both active WOinActie members, support this move.**

Michiel Köhne, who lectures on the Anthropology of Law, is pleased by the fact that people are complaining about the problematic situation in academic work although he is shocked by the numbers. 'Lecturers are being bled dry under the current system, and teaching and research are suffering as a result. It is important to expose this as in the final analysis it's about people.'

### THE SYSTEM IS THE PROBLEM

Bram Büscher (professor of the Sociology of Development and Change) says that many universities have taken steps in the right direction in terms of individual support but he feels it is

the system that is really the problem. 'Over the past 30 years, increasing demands have been made on academia and academics, while the money invested in universities on a per student basis has gone down. At the same time, neo-liberalism has gained the upper hand in the academic system: there is competition everywhere and you have to negotiate as if you are in a "market". We are also becoming increasingly dependent on external funding. Over time, that has led to the current situation of huge pressure on a lot of academics, lots of overtime, all kinds of irregularities concerning publications, PhD factories, intense competition for grant applications with a reduced chance of success and so on.' Büscher acknowledges that there are initiatives aimed at tackling these problems, such as the qualitative evaluation of research groups, but he thinks much more needs to be done. 'And at the right structural, or systemic, level.' **LZ**

## WUR STARTS EDUCATION PROJECT IN IRAQ

**WUR will help six Iraqi universities to introduce climate-smart farming and efficient water use in Iraq. Wageningen experts will be training Iraqi scientists in partnership with the Institute for Water Education (IHE) in Delft and ICRA Global.**

Iraq is one of the Dutch ministry of Foreign Affairs' focus countries. That is why the ministry asked WUR in 2018 to examine the options for development cooperation with Iraq. A high-rank-

ing Iraqi delegation visited Wageningen last year to flesh out that cooperation. The two-year project is intended to resolve several issues at Iraqi universities.

### TEACHING METHODS

Firstly, the participants plan to use the project to modernize the dated teaching methods used at Iraqi universities by introducing group work and practicals into the curriculum. A second project aim is to encourage joint research programmes across the six universities. The Iraqi univer-

sities will send one researcher each to Wageningen to jointly work on an article on water management and climate-smart agriculture. The participants may also develop massive open online courses (MOOCs) as a way of transferring knowledge to other universities and partners.

### SAFE

Iraq is still recovering from the war against ISIS. Some universities are badly damaged, while others face the challenge of tackling Iraqi agriculture's shortage

of water and salinization in cooperation with the country's farmers. As many parts of the country are not yet safe, the training sessions will be held in the Netherlands and the project partners will meet up in the Kurdish part of Iraq, which is safe. Karrar Mahdi, an Iraqi researcher in the Soil Physics and Land Management chair group in Wageningen, is coordinating the project. The participants will receive a budget of 1.3 million euros. One third of this will be for the Wageningen researchers and trainers. **AS**



# PLANT AND ANIMAL CELLS HAVE THE SAME SENSE OF DIRECTION

**An ancient protein that is involved in cell division and is crucial to growth, development and even the prevention of cancer turns out to be almost identical in plants and animals. This has been discovered by WUR biochemists together with colleagues in Cambridge. Their findings will be published in the leading journal *Cell* on 30 January.**

For normal cell division, the cell needs to know where its top, bottom, front, back, inside and outside is in relation to the other cells around it. 'This is crucial to the growth and development of a plant or animal,' says Dolf Weijers, chair

sense of direction – called cell polarity – in animal cells. But in the case of plants, it has long been shrouded in mystery. Weijers is working on solving that mystery. He had a major breakthrough last year when he and his group discovered a new set of proteins that 'tell' the cell what the poles of the compass are. They called them SOSEKI or compass proteins. *Soseki* is Japanese for cornerstone, which is appropriate as the proteins are found in the corners of the cells.

#### AT LEAST 450 MILLION YEARS OLD

'We used to think cell polarity was organized differently in animals and plants,' says Weijers. 'Meanwhile, we have discovered that all

## 'Our research shows that the biochemical basis for directing cell polarity in plants and animals is the same'

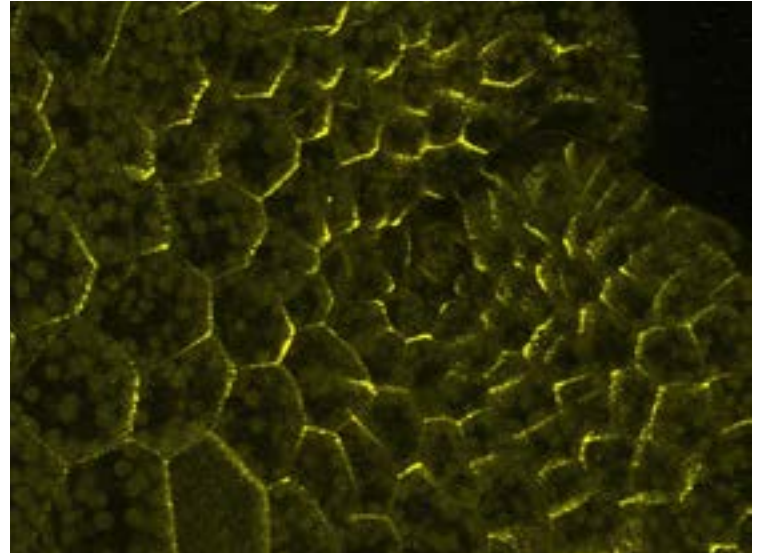
holder at Biochemistry. 'Otherwise a plant won't grow any leaves, or an embryo won't develop. And uncontrolled cell division leads to cancer.'

#### MYSTERY

Relatively, quite a lot is known about the development of this

land plants, even the oldest liverworts, use the same system with compass proteins. That makes it at least 450 million years old!' Even more importantly, the researchers discovered that the compass proteins in plants look and behave very like a compass protein in fruit flies and humans.

They swapped around parts of the plant and animal proteins, and what happened? The proteins worked fine. 'Multicellularity



▲ The SOSEKI protein which tells the cell things like which way is up and which way is down, is found in the corner of the cells.

evolved in plants and animals independently of each other,' says Weijers. 'But it turns out there are many similarities. Our research shows that the biochemical basis for directing cell polarity in plants and animals is the same. The origin of this process can be traced back to the last common ancestor of both plants and animals. So it has not come into existence several times during the course of evolution, as we used to believe.'

#### CANCER RESEARCH

This has important implications, says Weijers. 'Studies on polarity in plants and animals used to be two separate worlds, but turn out to have a common denominator.' This fundamental knowledge opens up new possibilities. 'We always assumed that this system was unique to animal cells, but now we know that one of the proteins that plays a role in the development of

cancer has a function in plants as well. That means we might be able to study certain aspects of the development of cancer, or medicines to stop it, in plants. But we are not that far yet.'

#### FOLLOW-UP

At the beginning of 2019, Weijers bagged an Advanced Grant worth 2.5 million euros from the European Research Council (ERC). He and his team are using that money to gain a fuller understanding of the way the plant compass works. 'We know that the proteins can steer the direction in which the cell divides. Now we want to study how it all fits together. We don't know, for example, what kind of signal is given off through the compass protein, and how exactly that translates into cell division. That is a big adventure because it is largely unexplored territory.'

Ⓜ TL

◀ Even the oldest liverworts use this system of compass proteins, which means it is at least 450 million years old.





# FARMING WITH HUMAN MANURE

**Urban agriculture could make good use of human faeces and urine, shows research by environmental technologist Rosanne Wielemaker. But that is not allowed.**

The sustainable use of valuable mineral resources stands or falls with the closing of nutrient cycles. In this context, Rosanne Wielemaker researched how to connect supply and demand for manure in the city. Specifically, how to link urban agriculture with new toilet designs in the city. This combination is still a theoretical exercise at present. It is not permitted in the Netherlands to use nutrients extracted from human faeces and urine to grow edible products. And what is more, there is no shortage of manure in this country – in fact, quite the opposite. The latter point doesn't deter Wielemaker. 'If you live in a country where it rains a lot, you still don't leave the tap running, do you? This offers possibilities for returning nutrients to agriculture on the smallest scale, with minimal transport costs and losses along the way.'

## HARVESTING PHOSPHORUS

Wielemaker took Amsterdam as an example. With a model she designed herself, she identified places where the most nutrients can be 'harvested', with an emphasis on phosphorus. Countless variables play a role here. Where do people hang out, and for how long, how often do they go to the toilet, and what minerals does that provide? Wielemaker:

'If you want pure urine, for instance, you'd better go to the Heineken Music Hall.' She came up with 193 hotspots where a lot of phosphorus is produced. Those places account for 10 per cent of the city's annual phosphorus load. These are buildings such as the Rijksmuseum, AMC hospital and the flats in the Bijlmer neighbourhood. The model then connected these hotspots with the nearest urban farming locations within the municipality.

## PRECISION WORK

It sounds simpler than it is. Within the borders of the municipality there are 2312 agriculture locations, 43 of which count as urban agriculture. Finding the right match depends on a number of factors. Each form of agriculture makes its own demands on the manure it uses, and each source of manure has its own nutrient composition. Bringing supply and demand together is precision work. And that is where there is plenty of work to be done, according to Wielemaker.

## FINITE SUPPLY

In spite of the difficulties, and for now the impossibilities, Wielemaker still sees a future in the combination of urban farming and urban manure. 'The supply of nutrients such as phosphorus and potassium is finite. In the end we shall need all the available nutrients. In a world that is aiming for circular agriculture, you should close this cycle as well.'

© RK

## URBAN OVER-FERTILIZATION

The fields of urban farmers are severely overfertilized, shows Wielemaker's research on the nutrient management on 25 urban farms. On average, the fertilization level was much higher than the crops needed. In figures: 2.5 times too much potassium, 4.5 times too much nitrogen and 6 times too much phosphorus, compared with the application limits for regular agriculture.



# VISION

## Pig farms closing

**More than 500 pig farmers have applied for a subsidy in order to close down. This is a lot more than the 300 the Ministry of Agriculture, Nature and Food Quality expected when it launched the scheme. Why? Pig Production economist Robert Hoste explains.**

### Are prospects so bleak for pig farming?

'Pig farmers have never earned as much money as they did in 2019. Between 2000 and 2018, the average income per farm was about 40,000 euros, and that suddenly went up last year to an average of 330,000 euros. But don't forget that pig farmers have some bad years behind them, so they need some money to make up for that. What is more, new investments are coming up,

### 'The price of pork won't stay this high for ever'

and the price of pork will not stay as high as it is now for ever. In China, 200 million pigs died or were slaughtered preventively due to African swine fever: that is a quarter of all the world's pigs. So Dutch exports soared as a result. It is expected that the price of pork will still be high for another two to three years. After that, supply will outstrip demand and the price will collapse, I think. So it is important for Dutch pig farmers to invest in the future now.'

### Why are they signing up to stop en masse?

'It doesn't cost anything to apply for this closing-down scheme, so it's a kind of insurance. What if your farm is blamed for causing too much of a bad smell, or swine fever breaks out in the Netherlands too? But I wonder how many farmers will actually make use of the scheme. Farmers who can see all the new regulations coming, and have had enough, will say: great, I can stop now, with no debt. And other farmers will think: I can earn a lot of money in the next couple of years.'

### What does Agriculture minister Schouten want?

'She wants a lot of pig farmers to make use of the scheme so that next year – before the parliamentary elections – she can show that she has reduced livestock numbers in a decent way. It will take at least until mid-April to decide how many farms, and which ones, can participate. If selected farmers change their minds about it, she will have to select other ones, and that will take more time.'

© AS

## PLANTS CONTROL OWN ROOT ENVIRONMENT

**Crops and other plants actively manage the species of moulds, bacteria and nematodes in the soil. Organic farmers give them a helping hand.**

The days when we thought plants just waited passively in the soil for whatever would happen to them are long gone. There is an entire community of numerous soil organisms beneath the surface, and plants are fully involved in that community through their roots. Scientists are only just starting to map all those interactions.

At the start of the year, Paula Harkes received a doctorate for her study on the effect that various plants have on the mix of moulds, bacteria, nematodes and protozoa in the vicinity of their roots. Modern molecular techniques enable scientists to get a detailed picture of that soil community. In field trials, she also looked at whether there are differences between organic farming and conventional farming.

### MORE COMPLEX SOIL LIFE

The first conclusion is that there *are* differences and they can be substantial. For example, organically farmed barley has more diverse soil life in all four of the investigated groups of organisms. There is also more interaction between the different groups. The next question is whether that is due to the plant or the farmer's soil management methods. That question received a clear answer in trials with peas.

Organic farming led to a more complex soil life here too but much of that effect could be attributed to the influence of the plant. There were clear differences between the mould and bacteria communities around the roots and elsewhere in the soil. That effect was greater than the soil management effect. Furthermore, long-term organic soil management resulted in much lower numbers of the parasitic root-knot nematode on the pea plants.

### MORE ROBUST ECOSYSTEM

Does that mean organic farming is better? 'We certainly see great diversity in the soil life in organically farmed soils,' says Harkes cautiously. 'I personally think more biodiversity is better. More soil organisms means more interaction and consequently a more robust ecosystem.' But we can't deduce generally applicable rules from this. Harkes: 'I think it's different for each plant species. Each plant is unique and that requires a plant-specific management solution.'

Harkes made another important discovery. When creating a molecular picture of soil life, it is not enough to just look at the total DNA. Much of that DNA comes from organisms that are not active, as becomes clear when the RNA (the 'active form' of DNA) is included as well. 'Many organisms are essentially in sleep mode and don't play an active role in the functioning of the ecosystem.' **RK**



◀ PhD candidate Paula Harkes found a more complex soil life in organically farmed soils.

## CSI ON THE HIGH SEAS

# SATELLITE DETECTS POLLUTING SEA VESSELS

**WUR researchers will be using satellite images to track down seagoing vessels that use dirty fuels.**

The international shipping industry is a notorious source of pollution as the heavy-duty ship's engines emit large quantities of sulphur and nitrogen oxides. To combat this, the applicable rules have been tightened over the course of time. As of this year, the maximum sulphur concentration is only 0.5 per cent, for instance. An even more stringent norm of 0.1 per cent applies in the North Sea. But how do you check compliance?

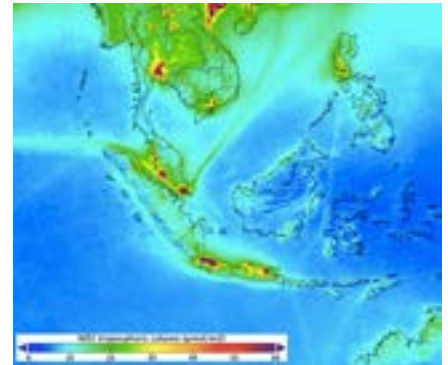
### RISK OF GETTING CAUGHT

Until now, random spot checks were used, explains nature and environmental expert Folkerts Boersma (Meteorology and Air Quality). 'For example, ships in Rotterdam port were assessed by taking samples and examining the logbooks on fuel usage. But that is very labour-intensive, so only a few ships can be checked. I suspect less than one per cent of the ships gets looked at.'

It pays for shipping companies to cheat the system. 'If you're sailing from Rotterdam to China and back, you can save a million euros by not keeping to the fuel rules,' says Boersma. So strict enforcement would definitely improve matters. The Human Environment and Transport Inspectorate thinks the risk of getting caught needs to increase. Boersma and his colleagues at Leiden University believe that can be achieved by using satellite images.

### 'SEEING' SHIPS

Five years ago, Boersma showed that you could use images from the Dutch OMI satellite to track marine traffic based on nitrogen oxide emissions. At that time, the resolution (1 pixel for 13x24 km<sup>2</sup>) was not good enough to 'see' individual ships. But he is getting closer with the sharper images from the new Dutch Tropomi sat-



▲ The average concentration of nitrogen dioxide measured by the Tropomi satellite above Malaysia and Indonesia between April and September 2018. In addition to the cities, the pollution measurements clearly show the Straits of Malacca, the main shipping channel between the Indian and Pacific Oceans.

ellite (1 pixel for 3.5x5.5 km<sup>2</sup>), especially since he now also has detailed data on the ships' positions. He should be able to get what he wants by combining the two data sources. Boersma: 'We know the position and speed of the ships so if we see a plume of smoke taking a certain route, we can be fairly confident that this ship is producing a lot of pollution.' It doesn't mean the ship has been caught in the act: you need inspectors to board it first. But this method should enable more targeted spot checks.

### PLUMES OF SMOKE

That is the simple version. In practice a lot of research is needed to draw the correct conclusions from all the data. Plumes of smoke are constantly moving because of the weather, which in turn disperses the harmful substances. WUR is providing the expertise needed to interpret the images and model the emissions while Leiden is working on the algorithms to connect the pollution to individual ships. Each university will take on a PhD candidate for the project. **RK**



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## PROPOSITION

### ‘No tweeting at conferences’

**While she was working on her PhD, Astrid Bos went to several conferences. She noticed that it is difficult to be open about provisional results if you are afraid they will be used out of context in a public debate. So her proposition is: ‘Twitter thwarts truthfulness at scientific conferences.’**

‘During a conference I attended a few years ago, somebody tried to get a discussion going by making some rather oversimplified statements. That discussion was then continued on Twitter, causing the scientist to be bombarded with tweets because of something that was not actually intended

for the general public. A conference is a place for sharing results with fellow subject specialists. You are often talking about research that has not been published yet. In that situation, it is very good to focus on what didn’t go so well during your research, and the problems you ran up against, because then you can learn from each other. As a young scientist, in particular, you are often unsure about your results. But if that is shared publicly, you’ll be less inclined to talk openly about your doubts. Especially if that is then taken out of context in a public debate. It’s not easy to give the full context in 280 characters. It’s impossible to ban Twitter, but you could



PhD candidates have to include a handful of propositions with their thesis. In this feature, they explain their most provocative proposition. This time it’s Astrid Brigitte Bos, who got her PhD in Environmental Sciences for her study on the best way of monitoring and evaluating the effectiveness of anti-deforestation initiatives.

### ‘You could at least check with the speaker before you put a statement online’

at least check with the speaker before you put a statement online. Especially if it concerns sensitive information. I have seen scientists appealing to their audience on their slides not to share the information publicly. Actually I think that should go without saying. Twitter is a way of provoking discussion, but tweeting during a conference is detrimental to openness.’ TL

## Overhauling tenure track

# Credits or quality

The career structure at the university, tenure track, is being overhauled. The current system relies too heavily on quantitative assessment criteria such as the number of publications or PhD students. WUR is looking for a better assessment system that evaluates the quality of its scientists.

*text* Albert Sikkema and Roelof Kleis *photo* Guy Ackermans

**‘W**hen I started,’ says the Wageningen tenure track professor Sylvia Brugman, ‘promotion from assistant professor to associate professor was the biggest test on tenure track. At that point it is “up or out”: either you get a permanent post in the chair group or you have to look for another job.’

#### SCORING POINTS

In the tenure track system Brugman is referring to, credits play a decisive role. Researchers have to score points with publications in journals. The more prestigious the journal – in other words, the higher its impact factor – the more points you score. But what are we actually measuring that way? According to a group of American cell biologists who drew up the San Francisco Declaration on Research Assessment (DORA) in 2012, the impact factor does not set out to assess the academic quality of an article. That’s because of a flaw in the measurement: by giving journals scores, review articles end up being given the same importance as articles with new insights and breakthroughs. What is more, journals can manipulate their impact factors. It would be better to evaluate the quality and impact of individual articles rather than of the journal.

#### DISTORTED PICTURE

Besides this publication score, tenure track staff are evaluated on their teaching. They are expected to teach 560 hours per year. They need to get high ratings in student course evaluations – at least 3.7 on a scale of 5. But a student eval-

uation is not a recognized method of measuring teaching quality. Typically, not more than 30 per cent of the students fill in the survey, and the results give a distorted picture because only discontented and very enthusiastic students give their feedback. In spite of that, tenure track staff who score 3 or 3.5 are often told their teaching is not good enough.

**‘The impact factor does not set out to assess the academic quality of an article’**

#### PHD FACTORY

But the main focus of Wageningen scientists’ criticism is on the large number of PhD students they have to attract and supervise in order to rise up the ranks. Tenure track staff must supervise a minimum of five or six PhD students to get promoted to associate professor status, and at least 10 to obtain a personal professorship. So everyone on tenure track needs to have their own little ‘PhD factory’ producing a constant stream of publications and citations in top journals.

The falling success rate for research proposals submitted





▲ Tenure track in its current form makes for 'PhD factories' for the continuous production of publications and citations in top journals.

to financiers such as the Dutch Research Council (NWO) and the EU is making it harder and harder for tenure track staff to recruit the required number of PhD students. And the quest for funding is becoming more and more time-consuming and stressful. By way of illustration, Brugman talks about her quest for funding for a research proposal. She first submitted it to a Wageningen Graduate School. After being rejected – six months later – she submitted a revised proposal to the NWO. After another rejection – nine months later – she submitted a further revised proposal to a different NWO fund. This time she was successful. 'The whole process took three years. By that time, your innovative research proposal has already been assessed by three groups working in your field. That detracts somewhat from its innovative character.'

#### FLAW

Tenure track staff are also aware that the Wageningen career structure has been flawed from the start in 2010. If all tenure track candidates successfully progress through the system, in 10 years' time the university will

#### HIGHER UP: HOW IT WORKS

At present, researchers on tenure track can work their way up in five steps from assistant professor (2 and 1) and associate professor (2 and 1) to personal professor. Promotion occurs on the basis of credits or points amassed with research (i.e. publications), education (i.e. student evaluations) and the supervision of PhDs and postdocs. To get promoted to the level of associate professor, Wageningen natural scientists have to accrue an average of 20 publication points per year. You get six points for a publication in a Q1 journal – one of a group of journals that are among the best 25 per cent in their field, based on impact. An article in a Q2 journal – in the second quartile – earns you three points. So an

article in *Nature* gets you 20 points. The further you get on tenure track, the more articles you need to publish in Q1 journals. The professors are also expected to teach a minimum of 560 hours per year. As supervisors they have to accumulate 24 points, and one way of doing that is to be a PhD student's co-supervisor for three years (10 points a year). The criteria become more stringent with each rung on the career ladder, and they vary per science group. Academics up for promotion are assessed by the Broad Assessment Committee (BAC), which considers not only the required credits but also the person's qualities in the areas of acquisition and collaboration.



be made up entirely of personal professors and PhD students, its critics predicted 10 years ago. That is not what a university wants. In the ideal chair group, there is also a role for assistant and associate professors who stay at those levels.

The Executive Board solved that problem in 2016. Tenure track staff were no longer obliged to seek promotion to a personal chair, but could stop at the associate professor level. The Board also sharpened the criteria for becoming a personal professor. This angered tenure track staff

who were aiming at becoming personal professors. But now that the labour market for scientists is tight, this change is starting to work against WUR. Talented academics can see that other universities require fewer credit points to get promotion to personal professor. That might prompt them to apply elsewhere, fear Wageningen's chair-holding professors.

#### WORK PRESSURE

Finally, there is another development that is putting pressure on tenure track staff. The growing student population in Wageningen is pushing up the work pressure for them too. They spend more time on course administration, such as answering emails from students about the timetable, classroom or exam. Tenure track staff who take the time for all this get told by their evaluation committee that they are doing too much teaching and not enough research. 'All together, it's too much of a good thing,' says tenure track professor Kevin Matson. 'You

**'You can't supervise 10 PhD students and write five top publications and deliver excellent teaching.'**





can't supervise 10 PhD students *and* write five top publications *and* deliver excellent teaching. High scores are currently the ticket to promotion. But what is the point of having 10 PhD students if you haven't got the time to supervise them?'

### NOT QUANTITATIVE BUT QUALITATIVE

How do we arrive at a better system of evaluation?

According to the American DORA declaration, articles that are evaluated by colleagues are still the most important indicator of research quality. But those articles should be assessed on their own merits rather than on the ranking of the journal in which they are published. Furthermore, the researcher's peers should also assess other forms of academic output, such as data sets. The DORA declaration also states that universities should broaden their impact assessment. Citations are a sign of impact, but so is the influence of research on policy and practice. This calls for qualitative assessment by experts who can evaluate the research in question, rather than for figures. WUR has signed this DORA declaration, so it wants to act on it.

A second group feels that the tenure track system places too much emphasis on individual research quality, whereas a good academic should also contribute to broader research and education programmes. Partly as a result of this, some argue for evaluating groups from now on, rather than individuals. The idea behind this is: individuals cannot excel at everything, but a group can excel at both education and research. A collective assessment of this kind is in the spirit of WUR's new strategic plan, entitled 'Finding answers together'.

### IN PRACTICE

How can WUR put this into practice? 'WUR already has education evaluations, portfolios and committees that assess the scientists more broadly, so all the elements for a qualitative assessment are already in place,' says tenure track professor Matson. WUR could also consult the University of Ghent, which radically transformed its evaluation policy in 2018. The Belgian university no longer evaluates its scientists using quantitative indicators such as the number of publications in top journals and the number of PhD students, but has opted for a qualitative evaluation. Now, every five years, the researchers write an account of the role they wish to play in their chair group and how they believe their research and teaching contributes to the university. After five years they themselves evaluate what they are proudest of – whether a publication, a course or an application of their knowledge – after which a five-person committee assesses their development.

The biggest advantage of this new evaluation system to date, says the Ghent rector Rik van de Walle, is that it generates much less administration. He does note a few teething troubles, though. 'I notice that people who have to assess our full professors struggle a bit with the role. They used to be able to hide behind impersonal forms. If the professor got a low score for publications or PhD students, it was "the system" that said so. Now you have to

## NEW MEASUREMENT

The way academics are assessed is too one-sidedly based on research production, with very little attention to any other talents. A new way of evaluating and recognizing achievements has been designed to change that. This is the key objective of 'Room for everyone's talent', a joint policy document from the Dutch Universities Association (VSNU) and the country's big research funding bodies NWO, KNAW, ZonMW and NFI.

A new instrument will be used to measure scientists' performance, with a new emphasis on quality rather than quantity. Besides research, quality can be reflected in education, leadership, social impact and – for medical schools – patient care. You can create impact by, say, making research results accessible to society or involving a wider public in science through citizen science. Leadership can be shown in the supervision of students or PhD researchers. Collaboration and the contribution made to the group are central, and not just how the individual functions. Research and education are still important, but you can now score for standing out in other areas too.

The VSNU is going to develop a new assessment system this year, to come into effect from 2021. Each university will use this to draw up its own assessment criteria. The idea behind this new approach to evaluation is to increase the diversity of the people and the career trajectories in academia, says the VSNU. The shift from quantity to quality should also reduce the work pressure. Today's world, with its complex social and scientific issues, cries out for multidisciplinary collaboration among scientists with a range of different capacities, says the policy paper.


argue your case for saying the professor's performance is below par, and that is much harder. It is a culture change, in which the evaluator is also a coach.'

### WATCH THIS SPACE

Van de Walle's advice to other universities is to enter into dialogue with their scientists to discuss alternatives for the score-based tenure track criteria. And that is exactly what WUR plans to do this year. The Executive Board has appointed a committee that will explore the options. That committee, says its chair Arnold Bregt, will take plenty of time and will be holding meetings about tenure track over the coming months. Watch this space. **R**

## JUST LIKE OLD TIMES

For one evening, on 19 January, the average age at W.S.V. Ceres student society was a lot higher than usual. Stichting Durf, the society's charity committee, hosted a New Year's dinner for 55 Wageningen pensioners. The Ceres guests were treated to a three-course dinner and live music. 'It

was well-attended, we were totally full,' says Durf chair Annelot Zondervan (22). 'Some of the seniors got on the dance floor to teach us dances from their youth.' Worth repeating next year? 'Definitely, and maybe even before that.'  LZ, photo Sven Menschel



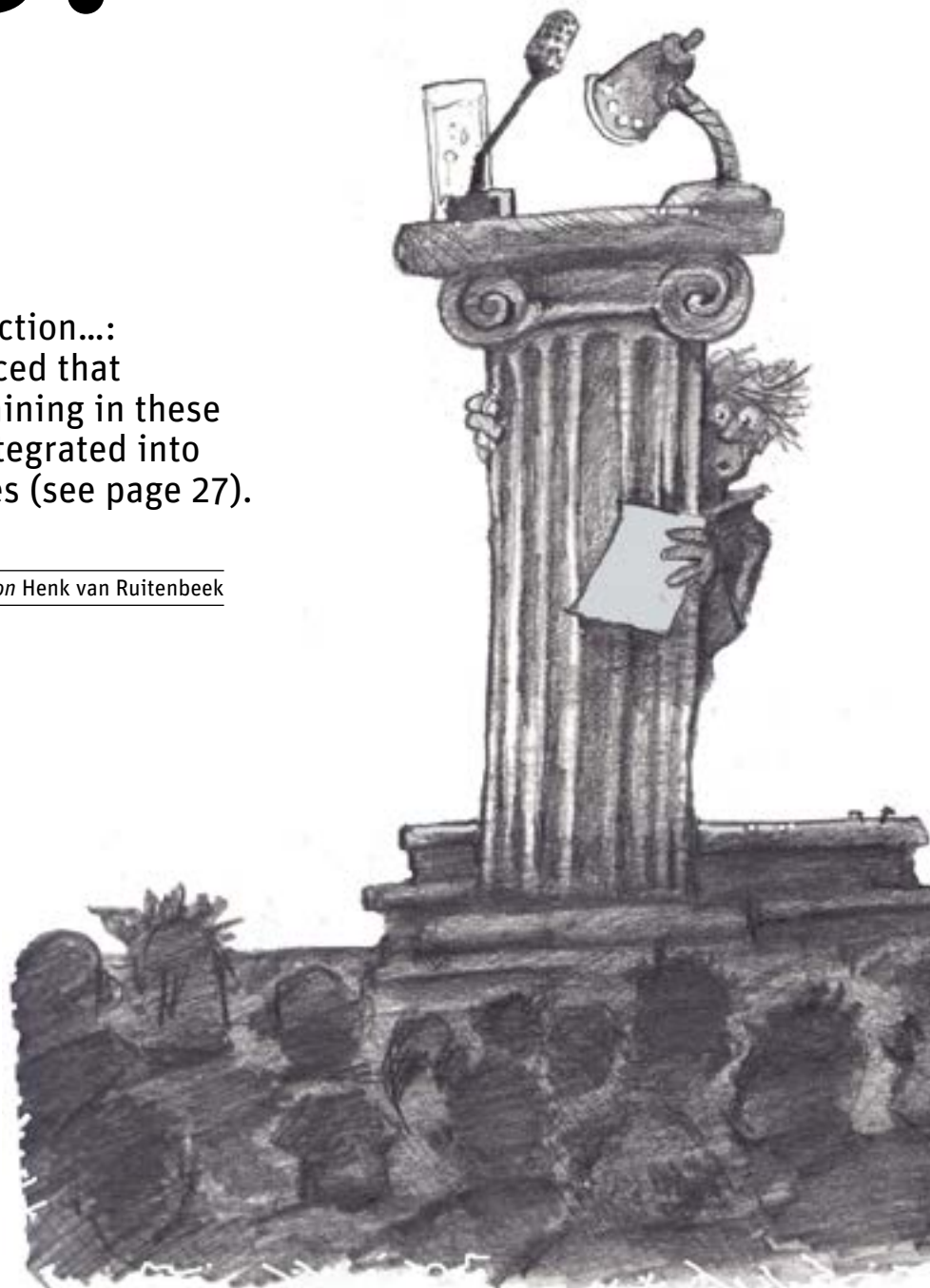




# INVEST IN SKILLS?

Presentations, collaboration, self-reflection...: WUR's Board of Education has announced that Bachelor's students are to get more training in these kinds of skills, and that they will be integrated into existing courses in the BSc programmes (see page 27). Do we like that idea?

*text* Coretta Jongeling and Nicole van 't Wout Hofland *illustration* Henk van Ruitenbeek





## Terence Yvo Rumpff



**BSc student of  
Biotechnology**

'I think it's a very good initiative, actually. Not much attention is paid to all the skills you will need in your career, apart from those of doing research and remembering dry information. I've heard a lot of people complaining about the people they do group work with, for example, because they have no idea how to write an academic paper. **And I think how to collaborate proactively is something quite a few people could learn a lot about.** If someone doesn't know how to work together, it affects the whole atmosphere in the group. I do wonder whether it is feasible to implement it within existing courses, which are often full enough already. It might be handier just to run a separate six-point course that focuses entirely on skills training.'

## Jet Vervoort



**Teacher and study advisor**

'I see the implementation of skills training as an opportunity to streamline, strengthen and expand the existing layers in our education. **I think the degree programmes need to decide for themselves which skills they add to their programmes and which they do not.** That way the skills package is appropriate to that particular professional field. I am working on streamlining skills training in academic writing in the Plant Sciences BSc programme. I talk to other teachers about

## 'Not much attention is paid to all the skills you will need in your career'

the obstacles we encounter in our courses, and where both students and teachers would benefit from more explicit instructions. That is a worthwhile process and it's giving me new energy.'

## Livia Franssen



**BSc student of  
Environmental Sciences**

'I think there is quite a lot of skills training in the courses at present. For example, I often have to write papers and they really are assessed on style and not just on content, so academic writing is already being addressed. But it does vary per programme. One of my housemates is following a programme with a lot of practicals and theory, so she does less academic writing. And when results have to be presented at the end of a course, it's an easy option for me to let someone else do that. In that regard, **it's quite useful for everyone to be forced to practise and learn even the skills that appeal to them less.**'

## Maarten Jacobs



**Teacher of Cultural  
Geography**

'Society is changing all the time, so the relevant package of skills should be reviewed regularly. I think it's a good thing WUR is paying attention to these kinds of skills in the Bachelor's programmes. But then we shouldn't forget about the extra workload that kind of process entails. There are enough students and teachers with burnout symptoms already. When the new skills training is introduced into a course, it is essential that other components are taken out, so that the net workload doesn't increase. A second challenge is the expertise of the teachers. **Not all teachers are at home enough in specific skills to be able to transfer them to students.** It will work well enough for skills like ac-

ademic writing, but maybe not for collaboration or ethical thinking. All in all, I'm afraid that the skills training will not be properly integrated into the courses, and that several degree programmes will have to reinvent the wheel.'

## Merel van Mierlo



**BSc student of Nutrition  
and Health**

'In a pilot of the new trajectory, I've had "collaboration" and "presentation skills" modules over the past year. I found them useful myself, but there was a bit of overlap with other courses. There is a first-year course on presentations, for instance, which was very similar in terms of content. Apart from that, I think skills training is a good addition to the programmes, because you improve your skills in a variety of areas. Many skills are not specifically taught during ordinary courses, but you do need them. **I think it is good to go on experimenting a bit with how it is implemented.** What works and what doesn't? Which skills are really useful?'

## Tjerk Sminia



**Teacher of Organic  
Chemistry**

'When I look back on my own experience as a student, I understand the need for this kind of skills training. **But as a teacher I can't bear the thought of this being added to my workload.** A few of these kinds of skills are tacitly built into the course I teach anyway. Half of the course consists of practicals, in which the students are subjected to quite a bit of pressure. That trains them in coping with stress. And other soft skills such as collaboration are really not desirable in my lab work, in which students need to learn to work independently with chemistry glassware and dangerous chemicals. To me, that is very important. So I would rather make sure the students develop lab skills.' ®





# Shedding light on the rich-poor gap

Seen from space, planet Earth is rather well-lit. And that night-time light can be used as a surprisingly good indicator of the inequality in the world, discovered PhD student Usman Mirza.

*text* Roelof Kleis *photo* European Space Agency/André Kuipers

▲ Dutch ESA astronaut André Kuipers photographed night-time Egypt from his vantage point on the International Space Station.

**T**he lighting in cities and towns produces pretty patterns in the dark. Seen from the air, night-time lighting illuminates the world map. Go one scale higher, and the picture from space is even more spectacular. The Pakistani PhD candidate M. Usman Mirza makes good use of our human 'light footprint' to map income inequality.

#### DRIVING FORCES

Mirza is an economist. And like many economists, the question that absorbs him is why some people are rich and others poor. What explains these differences? What driving forces lie behind inequality? Big questions, which have defeated many a researcher and thinker. Mirza is tackling them from an unusual angle for an economist: that of the Aquatic Ecology group led by Professor Marten Scheffer. This cries out for further explanation.

'I was working as an environmental economist for a think tank in Pakistan,' says Mirza, 'when I saw a WUR advert for a PhD research project on resilience. The contact person was Professor Marten Scheffer. I responded that I was very interested in the subject, but that I was an economist. He said, that is just the job, because I can learn from you too.' After thinking it over, Mirza decided to take on the challenge of being an economist among the ecologists. To balance things out, the environmental economist Andries Richter was appointed as one of his supervisors.

#### GINI INDEX

Scheffer and his group are making a name for themselves with their research on the resilience of complex systems. Such systems are characterized by their ability to transition between two different stable states. An example would be a pond that is sometimes clear and sometimes murky. Mirza was interested in the resilience of poor people, through which rich people become poor and vice versa. 'In the process I stumbled upon the topic of income distributions. That interested me even more: how incomes are distributed and how you can look at that from the complexity perspective.'

The standard way of measuring income inequality is the Gini index. This is a score between zero (everyone earns the same) and one (one person has everything, the rest have nothing), which indicates the degree of inequality in an income distribution. In Western countries where income data is plentiful, such calculations provide a realistic picture of the inequality. But in countries that are less well organized, the statistic is imprecise. In search of an alternative method of measuring inequality, Scheffer and Mirza came up with night-time light, inspired by a *Nature* paper on poverty in which Google street view images were used to map poverty in a neighbourhood. Mirza: 'That set us thinking: could satellite images or data sources be a way of measuring inequality? And that's how we ended up with night-time light as a possible indicator for income distribution.'

#### LIGHT FOOTPRINT

The light-based Gini index draws on two facts. Mirza: 'First, rich people tend to live close to other rich people. And second: the rich have a greater light footprint, as their activities use more light. This distinction between rich and poor applies in most countries. Rich people live in bigger houses in well-lit neighbourhoods. Poor people live in shanty neighbourhoods or even tented camps with less lighting. In general people's light footprint

increases with their incomes. That is not a one-to-one correspondence, but there is a definite correlation.' The calculation is essentially quite simple. Mirza divided the amount of light on a square kilometre by the number of people living there, obtaining the amount of light per person. From the distribution of those values over a particular area, region or country, you get the light-based Gini index.

## 'In general people's light footprint increases with their incomes'

#### STRIKING RESULT

But it is not quite as straightforward as it sounds. 'Remote sensing data are often messy and imprecise,' says Mirza. 'We exclude areas where nobody lives, such as industrial estates, and areas that are unlit, such as forests and deserts.' But the result is striking. The light-based Gini score is pretty much in line with the incomes-based Gini score. 'More work needs to be done on this, of course, but the method is promising and provides us with a reasonable estimate, which is a starting point for policy makers and further research.'

So it seems that nocturnal light is a good predictor of inequality, especially in places where the rich and the poor live in very separate areas. Mirza: 'And that often happens in countries which are under-developed and for which little or no income data is available.' The big advantage of the light-based Gini, according to Mirza, is that the figures can be compared across regions. 'I make a standardized calculation using the same light data source for all regions. The income Gini is based on data provided by governments themselves, which vary in quality and method. That makes the figures less accurate and independent. The second big advantage is the spatial component, which you can relate to other environmental indicators such as land use or the availability of water.'

#### COMPLEX DYNAMICS

Mirza is convinced that there is no simple set of rules with which the dynamics of inequality can be described. 'But this new approach of measuring inequality will provide researchers and policy makers with new insights into the complex dynamics of inequality.'





## Top athlete and student

# Performing in two worlds

Annemiek van Vleuten and Jan-Willem van Schip are two familiar names of ex-WUR students who combined their studies with top sport – cycling in their case. Now too, WUR has several student athletes who are aiming for world titles and Olympic qualification.

*text Rijk Dersjant*

Officially, there are currently 29 Wageningen students who are also top athletes. You count as such if you can produce a ‘top sport letter’ with which you qualify for help from the university in planning and possibly postponing practicals and exams that coincide with training abroad or with competitions. Of course you don’t get that letter handed to you on a plate. Students who do an Olympic sport can be recommended to the Dutch Olympic Committee, the NOC\*NSF, which assesses whether you should be given this status. For sportspeople who do a non-Olympic sport, the assessment is done by both their sports association and the university. Only students with an Olympic status have the right to financial support. At the moment, that is the case for 21 out of the 29 student top athletes at WUR.

### PERFORMING IN THE CLASSROOM

Top sport coordinator Henri ten Klooster, head of WUR’s Sports Centre, supports the student athletes. ‘The crux of pursuing top sport at the same time as studying is the combination of on the one hand, a sport you take to a high level, and on the other hand, a degree programme you like. There was a time when top athletes chose a degree subject that was as

closely related to their sport as possible, even though they would have much preferred a different subject. The universities in the Netherlands wanted to change that.’

How does it work in practice, combining top sport with university? ‘Top athletes don’t have to worry about lectures. They can watch those later. We mainly help them with rescheduling practicals and group work,’ says Ten Klooster. ‘That doesn’t excuse the athletes from their responsibility for organizing their sporting commitments and their studies properly. Students who go abroad for their sport can still work on group assignments at a distance.’ And according to Ten Klooster, top athletes sometimes have to rearrange their sporting schedule too. ‘When they are back in the Netherlands, they are expected to catch up on the lectures and practicals they have missed.’

The striking thing about students in top sport is that, according to Ten Klooster, they don’t have much trouble keeping up with their studies. ‘Student top athletes have to plan well, because combining a study with top sport requires a lot of discipline. It also means finding a balance in what they can and cannot handle. That is different for every sport. Cyclists, for example, have to put many long hours into training. So athletes sometimes choose to take just one course at a time. But there are other effective ways of combining your degree with your sport. I remember the former cyclist Sanne van Paassen, who took a management course for which she set up a professional cycling team. She arranged sponsors, payments, a medical team and PR, and on top of all that she had to perform herself as number four in the world. That was very interesting to watch.’



**‘Students in top sport seem to have remarkably little trouble with their studies’**

**Henri ten Klooster, top sport coordinator**





**‘Partly because of aches and pains, I don’t know if I can go on doing this sport for very long’**

**SANNAH BOER**

PHOTO: BART TREUREN

## ‘I want to go on in the academic world later’

**To understand 20-year-old Sannah Boer’s sport, you might need to search a bit on YouTube. She does wheel gymnastics, in which the gymnast does all sorts of exercises inside a big wheel, called a *Rhönrad* in Germany, where the sport originated. In 2016, at the age of 16, she became world champion in the ‘spiral’ discipline. Nowadays she combines her sport with a Bachelor’s degree programme in Nutrition and Health.**

She is small but bursting with energy; so much is clear as soon as you get chatting with Boer. ‘I’m a perfectionist. More a doer than a thinker,’ she says with a grin. ‘I like to get good grades, although that doesn’t always work out.’

Her perfectionism is soon obvious when she talks about her studies and her sport. ‘On the way to the World Championships in Japan I was working on a group assignment. It was nearly impossible. My training takes up a lot of time, and that makes it hard to combine my sport with my studies. Nowadays, I give less priority to my studies and I don’t let disappointments bother me. I should spend more time studying, but I can’t always give it priority. I do think that’s a real pity. Luckily my parents nudge me in the direction of my text books sometimes.’

Boer thoroughly enjoys wheel gymnastics. A friend introduced her to the wheel and within three weeks she was scouted for the national

team. ‘I quickly progressed to the national and then international level. There are not many gymnasts who do wheel gymnastics in the Netherlands. There are far more abroad – especially in Germany. I have to fund it all myself because the sport is not sponsored. I once started a crowdfunding campaign to be able to go to the World Championships.’

It will be at a later stage that her degree subject will play a bigger role in her life. ‘I really do wheel gymnastics because it’s such fun but, partly because of aches and pains, I don’t know if I can go on doing this sport for very long. At the moment, sport comes first, but later I want to go on in the academic world.’

# ‘I have learned to live with that pressure’

**Koen van Roekel, 21, is living proof that pursuing a sport at top level on top of a degree does not have to lead to postponing graduation. He combines his Master’s in Animal Sciences with a career as a professional korfball player. He finished his Bachelor’s degree in three years. Which is remarkable, because he says he puts his sport first.**

**‘Korfball has been a priority since my secondary school days’**

**KOEN VAN ROEKEL**

‘In the short term, sport comes first, yes,’ says Van Roekel, who plays korfball at the national level at DVO in Bennekom. He also enjoys NOC\*NSF status because he is in the national youth team Jong Oranje. ‘I hope to have graduated in two years from now, and to be in the Dutch national korfball team. With the status of an international, I should be able to make a living that way. And at the same time, I want to get some part-time experience in my field as an animal scientist, so I don’t end up at 30 trying to launch a career with no experience. So I do think about my future, but korfball has been a priority since my secondary school days. I just like it more.’

Van Roekel manages his time carefully. ‘I train with Jong Oranje every Monday, which means I can’t attend classes that day. I try

to watch the lectures I’ve missed on Tuesdays. The training with my club is in the evenings, so that does not affect my studies. If I fall behind, I catch up during the self-study week. I don’t find it hard to motivate myself for that.

In fact, for me there are a lot of performance moments. I’ve learned to live with that pressure and get good energy from it. After lectures, I often have to go straight off, although I do sometimes have time to sit on the sofa and watch a series.’ And student life? ‘Well, you often hear that it’s the best time of your life, and maybe I miss out on that a little bit. But I get top sport instead, and the discipline to keep that up comes from me.’



KOEN VAN ROEKEL

PHOTO: EDWIN SONNEVELD



**‘I think it’s all a question of balance, although it will always be difficult to combine to sport with studying’**

**EMMA OOSTERWEGEL**

## ‘At the moment I would give up almost anything for athletics’


**At the athletics World Cup in Qatar last summer she suddenly found herself among the world’s top athletes. The 21-year-old heptathlete Emma Oosterwegel probably surprised herself the most when she set a new personal points record and came seventh overall. ‘Only since last year have I truly realized that I can achieve top level.’**

This is in sharp contrast with Oosterwegel’s early days on the Bachelor’s degree programme Soil, Water, Atmosphere. Her fanaticism caused her to go through a difficult patch in both her studies and her sport. ‘I wanted to study fulltime, but I had to attend a lot of sessions on my programme. I didn’t pass all my

courses and it wasn’t going well with my sport either – I got an injury.’ She decided to change her approach in her second year. ‘I started spreading my studies more. I didn’t take two courses in every period, and that made more time for athletics. I wanted to do my BSc in three years, but it wasn’t possible to do that in combination with athletics. Now I don’t worry anymore about when I will finish my degree. There’s no hurry.’

Remarkably, from then on Oosterwegel started to score more points in the heptathlon. ‘I think it’s all a question of balance, although it will always be difficult to combine top sport with studying. During one of my training programmes, for instance, I was taking a course

that was very time-consuming. I could study for a couple of hours in the morning, but I found it difficult to study in that environment. It’s a lot easier to do so at the university. Luckily, keeping the balance has got easier since then.’

And nowadays, the emphasis seems to have shifted in the direction of athletics. The Olympic Games take place in Tokyo this summer, and Oosterwegel is keen to compete. ‘At the moment I’m in a good position. I’m in 15th place in the global rankings and the top 24 get invited to the Olympic Games. It’s important that I am actually placed in the coming season, though. Not that I am neglecting my studies for it, but at the moment I would give up almost anything for athletics.’ 

## IN OTHER NEWS

### STUPID

Strongly left- or right-handed squirrels cannot learn as fast as members of their species without such a preference, shows a study by the University of Exeter. Pronounced handedness is often seen as useful in evolutionary terms. Specialization is efficient and leaves brain capacity for other things. But that doesn't apply to squirrels. Are they just stupid, or are we smart?

### SHARKS

Everyone's seen a dog swim. But a shark that walks? Well, they exist. And researchers from the University of Queensland have just discovered four more of them off the coast of Australia and Papua New Guinea. That brings the total number of species to nine. The sharks graze on the seabed and use their fins like legs. No one knows yet what the fins taste like.

### DANCE

Whether we are dancing to the blues, jazz, pop, metal or country, we are identifiable. Finnish researchers at the University of Jyväskylä reached this conclusion after an experiment in which they had a computer analyse footage of dancing people. The computer could not identify the genre of the music, but never failed to identify the individual that was dancing. So after the fingerprint and facial recognition, we'll get, 'just do a little dance, please'.

### PLAYFUL

Given a ball, wolves are just as playful as dogs. This surprising conclusion was reached by scientists at Stockholm University. Wolf pups fetch balls thrown for them – behaviour that was hitherto thought to have been learned due to keeping humans company. That assumption can be consigned to the rubbish dump of science.



# Who will be the Teacher of the Year?

**Voting for the Teacher of the Year of 2020 starts soon. Between 10 and 21 February, all WUR students can vote for their favourite teacher.**

The Teacher of the Year Award is given by the University Fund Wageningen. Students can all select three teachers for the prize. All students who have been at WUR for longer than a year will receive an email about that soon. The 15 teachers with the most votes will get onto the longlist. All longlist teachers will be interviewed by a student jury made up of eight students of different nationalities

and on different degree programmes. They will draw up a shortlist of the best five teachers and then decide on the overall winner.

Shiv Vasa (22), an MSc student from India, is on the student jury. 'I signed up for the jury because I want to understand their perspective. The interaction with teachers here is different from how it is at home. Wageningen teachers are very approachable. That is quite interesting for me.'

This year the student jury is looking for a teacher who encourages

▲ Last year Fred de Boer was selected as Teacher of the Year. Who will be his successor?

teacher  
of the year  
AWARD



interaction: someone who is both enthusiastic and approachable, says Vasa. 'And I like it when teachers feel free not to just stick to the curriculum but also to talk about current affairs in the real world.' 🗨️ LZ



PHOTO: GUY ACKERMANS

## Argo invites all of Wageningen to regatta



**On King's Day, the student rowing club Argo is holding a regatta for all in Wageningen, thus breathing new life into an old tradition. From 1970 to 2005, these boat races were held every year on (at that time) Queen's Day.**

'Everyone in Wageningen can join in,' says Argo secretary Erik Mulder Smit. 'We want to bring people together and strengthen our links with the town and its residents. You don't have to have any rowing experience. In the runup to the

day of the race, we'll hold a couple of clinics to explain how the boat works.' The Oranje Rowing Regatta takes place on 27 April on the harbour canal in Wageningen. The winner will be crowned king of the canal. On the quayside there will be a festival with food stalls, an open podium and typical King's Day games. 🗨️ LZ

To sign up for the Oranje Rowing Regatta, send an email to [oranjeroeregatta@wsr-argo.nl](mailto:oranjeroeregatta@wsr-argo.nl) or go to [www.wsr-argo.nl/oranje-roei-regatta](http://www.wsr-argo.nl/oranje-roei-regatta)

## Student psychologists open for appointments

**The temporary closure for new appointments at WUR's student counselling service has been lifted. New students are being accepted but will have to wait six to eight weeks for an appointment.**

At the end of 2019, the team of student psychologists was short-staffed, precisely at a time when there were a lot of extra requests for appointments. This made for an exceedingly long waiting list, and the team deciding to stop making new appointments. They have now reversed that decision, but it's good to be aware that waiting times for appointments are six to eight weeks. 'We expect to catch up fast,' says Door van der Sloot, student welfare manager at the Student Service Centre. The team will soon be reinforced with two new psychologists, growing from 3.2 FTEs (fulltime equivalent) to 4.8 FTEs. 🗨️ LZ



# More skills training for Bachelor's students

**Wageningen Bachelor's students are to be given more guidance and training in academic skills, including presentation and reflection skills, WUR's Board of Education has announced. The training will be integrated into existing courses in all the BSc degree programmes. The programmes have until 2024 to have this up and running.**


Today's labour market demands more than just a knowledge of your discipline. As well as the appropriate degree, employers are looking for strong 'skills' such as the ability to present, to collaborate and to cope with stress. Some degree programmes already integrate these kinds of skills in their courses, but not all the programmes have explicit learning goals for them. And that is something WUR wants to change.

Skills training is to become a systematic element in all BSc programmes, woven into existing courses but with specified learning goals. A list of the skills that will come in for more attention has been drawn up by the Board of Education, and includes academic writing, ethics and self-reflection. Programme committees will work out the curriculum for the various soft skills together, and determine the skills level to be aimed at. They will find out which skills are already addressed in the Bachelor's courses, and where there is room for more training. The programmes can decide for themselves which skills they prioritize over the others, thus preserving their own character.

The plan to pay more attention to soft skills has come out of Bachelor's student course evaluations. It was partly in response to these that skills



training was included in the education vision of 2017, in which WUR described how it wanted to proceed in developing the quality of its education. Skills training is one of the three objectives in the education vision, and the first to be worked out practically. The others – more activating education and personalized trajectories for Master's students – will follow at a later stage.

*Curious to know what students and teachers think? Read about that on page 18.  NvtWH*

## MEANWHILE IN... THE UK

### 'Everyone outside London feels neglected'

**Since the Brexit referendum on 23 June 2016, when 52 per cent voted to leave the European Union, the United Kingdom has been through turbulent times. After multiple rejected deals, postponements and two new prime ministers, it seems Brexit Day will finally arrive on 31 January. PhD candidate Henry Payne (who voted remain) is happy that things are coming to an end: 'I sometimes feel like the musicians on the *Titanic*.'**

'For many people, this whole Brexit process will probably look like cheap television with a lot of drama. However, it is more complicated. The fact that it is so politically destructive is because it is not a left/right debate, but more like a protectionist/globalist debate. Many pro-Brexit voters argue that, as an EU member, the UK is part of a single market where high competition leads to undercutting. They believe that leaving the EU will result in better local organization that can improve the economy. After all, economic wellbeing has declined greatly since the economic crash of 20 years ago. A lot of

people now have to use foodbanks and it is expected that poverty levels will reach record highs in the coming five




Henry Payne (25), a PhD candidate in the Farm Technology Group, reflects on the current political situation in his home country.



PHOTO: LONNIDUBH / SHUTTERSTOCK.COM

years. I have family who work in the state school system and there are children who come to school unfed.

I seriously doubt, however, whether Brexit will improve all these social problems under the current Conservative government. So far, they have shown no signs of changing their policies on the most systemic existing problems. This could increase the inequality between people even further. Some of the Labour Party's ideas are refreshing and could address social problems. However, it will probably take years before they are elected again after the severe losses of the December 2019 elections. It is really a shame how inefficient Westminster is. Everyone outside London feels neglected.

Whether Brexit will cause Scotland to separate from the UK, I don't know. They should do what is best for them. Ireland is a more contentious issue. The real priority when leaving the EU should be to make sure that Ireland is stable. Whatever that means.'  HB

# YOU ON CAMPUS

**Chen Liu is a food safety toxicologist currently pursuing his PhD at WUR, investigating a subject he's highly passionate about: green tea. To be more specific: the anti-stress and disease-resistant effect of green tea extract.**

'This research is more than a PhD project or a job to me, but rather a way to pursue my hobby professionally and a chance to fulfil my curiosity about the mystery of a life-long habit of my parents,' says Chen. He was born in Maanshan, a small town in the east of China. 'People there are well-known as enthusiastic green tea lovers. My parents used to drink green tea every day and they always tell me drinking tea has many health benefits, even though they have never read a scientific paper. Since then, drinking tea has become one of my daily habits too. However, the magic behind it has re-

mained a mystery to me.'

After his Master's degree, Chen got a chance to start a PhD research project on the subject he's so passionate about. 'Nowadays, it is widely believed that some ingredients of green tea can have an anti-stress effect, and this idea has mainly been confirmed in the lab. However, little research has been done

## 'The magic behind green tea has remained a mystery to me'

with human samples to support the conclusion. I designed my research to make use of human faecal samples, and I hope this will help to fill the gap,' says Chen passionately. 'I hope that the results of my research can be



used in modern product developments such as making medicines and skin care products, etc. I believe this can benefit more green tea lovers like my parents. I am planning on taking a break to visit them for the lunar new year in China. They are very curious about my research. I am going to finish the experiments that I'm working on right now before I go back. I want to be able to share my latest results with them.' **© KC**

## Turmoil in Droevendaal

**A blurry matter that has brought some turmoil to the usually peaceful Droevendaal community. That is how blogger Donatella Gasparro describes Idealis' idea of the Living Lab Droevendaal, 'a pilot in co-creation to build sustainable student housing at Droevendaal in Wageningen'. Here's her fully personal take on it.**

In 2018 Idealis expressed a desire to design a pilot for the most sustainable student housing. They want to do it (it seems to be decided though they've just recently been pretending it's open for negotiation) on the Droevendaal land, and with the collaboration of the Droevendaal community. Very cool that Idealis wants to be a pioneer in sustainable building – that's great, nothing against it. But why this needs to happen in a

shared green community space in Droevendaal, and the way they are 'involving' the community still seems a bit questionable to me. Sure, Idealis owns the land where Droevendaal is: they can technically do whatever they want, and build an energy-efficient new room on the site of every chicken coop. At the same time, Droevendaal is a special, unique place, that should be preserved and shown off by Idealis not only as a great example of community living but also as a wonderful case of nature-human interaction.

### COMMON SPACE

Another factor to consider is that tenants, represented by a couple of participants in the Living Lab meetings, have never shown support for the project, as it was planned from the start to be locat-

ed on the field, an important common space for the community. Nonetheless, Idealis claims that 'this idea and pilot is actively supported by Wageningen University and the local community of Droevendaal', as stated in their latest ACT project description.

## 'Droevendaal is a special, unique place that should be preserved'

The thing is pretty straightforward: why should the community cooperate with the creation of something they simply don't want in Droevendaal? And why should they cooperate if Idealis eventually agrees on planning (and building) this thing somewhere else?

## BLOG



Donatella Gasparro is a Master's student in Organic Agriculture. She hails from Italy and currently lives in Droevendaal.

### SYMPTOMATIC

To be honest, it's very frustrating to find ourselves thinking about and wasting energy on these symptomatic manifestations of root problems that stay unaddressed: a student population that goes way beyond the carrying capacity of Wageningen, efficiency and cement coming before humans and trees, the endless growth model we find ourselves in, and all that jazz. **©**



**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.**

# 'Diving, diving and more diving'

'My internship at the REEFolution Foundation consisted of diving, diving and more diving. You have to like that, and I loved it. It was exciting and special every time again. You see new things all the time, and every dive is unique. Kenya's underwater paradise is gorgeous. There are so many colours to be seen and the turtles are great. I also saw octopuses guarding their eggs. They do that until the eggs hatch out and then the parents die. So amazing!

## DESTRUCTIVE FISHING METHODS

The REEFolution Foundation is a Kenyan foundation that works on coral reef restoration. Overfishing has caused numbers of herbivorous fish to fall, so that algae could smother coral reefs. And destructive fishing methods and coral bleaching don't help either. So there is a real need for coral restoration. Local and international interns are helping to expand the project. Ultimately, it should become self-sufficient through collaboration with the local population.

## 'PLANTING' NEW REEF

The project comes down to collecting bits of coral and tying them to structures called 'trees'. Once the pieces of coral are big enough, they are 'planted' on different types of artificial reef. This creates a reef that is as diverse as possible, thus attracting other fish and animal species. Underwater we worked on filling the 'trees' with coral or on planting the coral on reefs. On-shore, we did computer work and made the 'trees' and reefs.

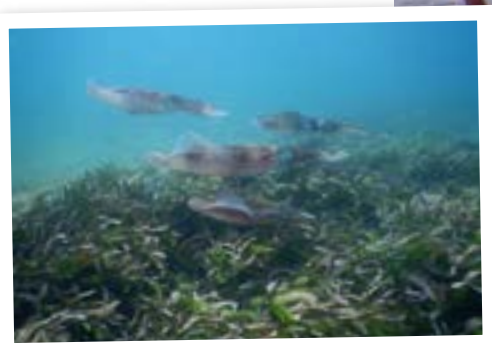
## HARD LIFE

It wasn't just underwater that the internship was interesting. I also learned a lot about Kenyan culture, partly thanks to the other in-

terns. Kenyans are very amicable and can have a good time even when doing tough work, although they are not as punctual as the Dutch. Kenyan life is hard too, as I learned when I spent the night in a hotel that turned out to be in a Nairobi neighbourhood with a high crime rate. I heard shots at five in the morning and at breakfast time there were two bodies outside the door of the hotel. They were thieves who had been shot dead by the police. Passers-by glanced at them and walked on; apparently it was not an unusual sight for them.

## UNFORGETTABLE SAFARI

Kenya has a totally different climate and flora and fauna to Europe. So before starting my internship, I went on a real safari. It was one of the best things I've ever done. We went to several different places: three lakes and the Masai Mara, a big nature reserve in the savannah. One of the lakes was covered in birds of all kinds and full of hippos. As for elephants, giraffes, lions, cheetahs, rhinos and crocodiles: I saw them all!' **MvS**



## THE WORKS

**Who?** Jochem van Herwaarden (24), MSc student of Aquaculture and Resource Management  
**What?** Internship at the REEFolution Foundation  
**Where?** Kenya

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



## Announcements

### Arduino course for beginners in Wageningen Fab Lab

You will learn about microcontrollers (Arduino), electronics and the programming language used to operate robots, self-driving machines, advanced measuring devices and even 3D printers. The course will be on eight Tuesday evenings, starting 22 February. Email: [info@fablabwag.nl](mailto:info@fablabwag.nl).

FABLABWAG.NL

### Ever heard of Swing Dance?

This dance style goes back to the 1920s and 30s in America. We dance the Lindy hop, a dance for couples to jazz music. The first lesson of the course is on 10 February and it's free! Both students (discount!) and non-students are welcome. If you want to be sure of a place on the eight-week course, register via the website [grasshopperswageningen.nl](http://grasshopperswageningen.nl).

### Applications for Mingler Scholarship

The Mingler Scholarship is intended for artists and scientists who want to carry out a research project together. The idea behind the scholarship is to encourage interaction and find synergies between scientific and artistic research. The aim is to make it easier, more exciting and more rewarding for different professionals to share their knowledge and skills. The Mingler network is an initiative of the Society of Arts and the Young Academy, both part of the Royal Netherlands Academy of Arts and Sciences. The scholarship was set up to provide a financial incentive for new art-science collaborations (whether or not within the Mingler network). Application deadline: 1 March 2020.

[AKADEMIEVANKUNSTEN.NL/NL/NIEUWS/MINGLER-SCHOLARSHIP](http://AKADEMIEVANKUNSTEN.NL/NL/NIEUWS/MINGLER-SCHOLARSHIP)

### Student Safaris in Southern Africa

Are you interested in an adventure this summer? Student trips are planned once again to southern Africa in the summer months (Capita Selecta, 3 ECTS). You will join other enthusiastic students on a trip to explore nature and wildlife in Botswana, Zimbabwe and South Africa. Come to the information talk on Tuesday 11 February, 12:30–13:30, Forum, room C103, Wageningen.

[WWW.TWANA.NL/EN/SABOZITOUR/STUDENTSAFARIS@GMAIL.COM](http://WWW.TWANA.NL/EN/SABOZITOUR/STUDENTSAFARIS@GMAIL.COM)

anime about a boy who runs off to Tokyo. *Aquarela*: international documentary about how water brings life and death, joy and despair. *Out Stealing Horses*: Norwegian drama about how you can never escape your past. Venue: Wilhelminaweg 3A, Wageningen. €6.50/€8.50.

MOVIEV.NL

### Thursday 30 January, 19:30-21:30 DOCUMENTARY: INHABIT. A PERMACULTURE PERSPECTIVE




Stichting Boerengroep Wageningen is screening this documentary about the many environmental issues facing us today. The documentary examines solutions that are being applied using the ecological design process called permaculture. Permaculture is a design lens that uses the principles found in ecosystems to help shift our impact from destructive to regenerative. Focused mostly on the north-east and mid-west regions of the United

## Agenda

### Saturday 1 to 13 February

#### SHOWING AT MOVIE W

*For Sama*: Syrian documentary about the war through the eyes of a mother. *The Farewell*: American/Chinese comedy. Everyone knows granny is sick except granny. *Weathering with you*: Japanese

## MCB-51403: Commodity Futures & Options Markets

**Always wondered about what is happening at the trading floor of exchanges like the ones in Amsterdam, Paris, Frankfurt, London and Chicago? Wondered about how (agribusiness) companies manage their risks and improve their financial performance using commodity futures and options markets? Wondered about how it would be if you were trading commodity futures in Amsterdam, Frankfurt and Paris?**

The *Marketing & Consumer Behavior Group* organises a unique course that will introduce students to commodity futures and options markets. Students will develop an understanding of the markets and how they work, gain knowledge about the theory behind futures and options markets, identify their economic functions, and develop an analytical capability to evaluate their economic usefulness. This course is taught by Prof. dr ir. Joost M.E. Pennings (*Marketing & Consumer Behavior Group*, Wageningen University & Research). There are only 40 seats available. If you are interested in taking this course (3 Credits) please register with Ellen Vossen at MCB (Room 5029, De Leeuwenborch, e-mail: [Ellen.Vossen@wur.nl](mailto:Ellen.Vossen@wur.nl), tel. 0317-483385). You can pick up the materials in Room 5029. Lecturers are in period 5. Prerequisites: None.

## Science Cafe

# Wageningen

[www.sciencecafe.wageningen.nl](http://www.sciencecafe.wageningen.nl)

Music by: Wolke



## Economy without growth

**Thursday, 20th Feb**  
**Café Loburg**  
 19:45: Live music  
 20:15: Science  
**FREE ENTRANCE**

**Speakers:**  
 Dr. Rutger Hoekstra (Leiden University)  
 Dr. Caroline van Leenders (RVO)

Partners:  




RESOURCE



States, *Inhabit* provides an intimate look at permaculture peoples and practices in rural, suburban and urban landscapes. Venue: Gaia I. You are invited to drinks and discussions afterwards in the Spot.

**Thursday 30 January, 20:00**  
**STUDIUM GENERALE LECTURE SERIES: DEMOCRACY AND PUBLIC DEBATE**

There is growing concern that public debate in liberal democratic societies is threatened by disinformation, echo chambers and targeted political advertising, which tend to polarize the public sphere where opinions are formed. But why is a vital public sphere that important for how we do democracy? How resilient are the spaces of exchange which shape opinions and ideas? Inspired by the deliberative concept of democracy (Habermas), Dr Geert Munnichs goes into the delicate interaction between a vibrant public debate and political decision-making that is pivotal for democratic legitimacy. This vibrant public debate, in turn, presupposes a critical public audience and a reflexive attitude of citizens towards their political preferences and claims. Join us to put precisely these prerequisites

for democratic decision-making under the spotlight and explore what is at stake. Venue: Impulse. [WUR.NL/STUDIUMGENERALE](http://WUR.NL/STUDIUMGENERALE).

**Sunday 2 February, 15:00**  
**SUNDAY UNIVERSITY. WIEGER WAMELINK: 'CAN WE GROW FOOD ON MARS OR THE MOON?'**

This is the last of a series of three Sundays where WUR scientists give a talk in the public library (bblthk). Wieger Wamelink says that if future space travellers want to live on the moon or Mars for any length of time, they will need to grow food there. But is it possible to grow plants there given the soil conditions? To investigate that, various experiments have been set up with replica Mars and moon soils. Seeds of different vegetables have been planted and their germination and growth monitored. There will be an opportunity for discussions after the talk. More info: [bblthk.nl](http://bblthk.nl).

**Thursday 6 February, 12:30-13:00**  
**GENDER & DIVERSITY LUNCH MEETING**

At WUR we believe that an inclusive culture contributes to better research and education. We are therefore building an inclusive organization where everyone feels safe and welcome. On this first

Diversity Day, a varied programme will be offered on campus throughout the day. The topics of inclusion, our culture and customs, as well as our differences and similarities, receive attention on this day. Sexual harassment and abuse of power are also discussed. Venue: Impulse, Speakers' Corner.

**Tuesday 11 February, 20:00**  
**STUDIUM GENERALE LECTURE SERIES: MANAGING DISAGREEMENT**

Present-day digital tech developments offered by online platforms and social media have revolutionized who is contributing what to public debate in democracies. And yet, despite the amplification of, access to, and reach of these techniques, polarization and extreme standpoints are easily magnified. What is going on? Prof. Robert Talisse explores the mechanics behind echo chambers and what would seem to be feeding the exacerbation of polarizations and extreme standpoints. From algorithms to bots, trolls and cocoons, he will look at the infiltration of 'box thinking' into our social lives, both online and offline. Venue: Impulse.

[WUR.NL/STUDIUMGENERALE](http://WUR.NL/STUDIUMGENERALE)

## Colophon

*Resource* is the independent medium for students and staff at Wageningen University & Research. *Resource* reports and interprets the news and gives the background. New articles are posted daily on [resource-online.nl](http://resource-online.nl). The magazine is published every fortnight on Thursday.

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0317 484020

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## In memoriam

### Bart Ooms



Bart Ooms passed away after a long illness on 16 January, at the age of 55. In the course of his career he had given all sorts of training courses and inspired and touched many teachers. Bart was always involved with the participants in his training courses, thinking about how he could best support them in his role as trainer. To this end, he used his creativity and his sincere interest in people. People, rather than the content or learning goals, were at the heart of all his teaching. Many teachers will remember Bart for the Theatrical Skills training which he developed and delivered himself. It was an unconventional, out-of-the-box course which make participants aware of the possibility of using theatrical elements in their lectures. Teachers were pulled out of their comfort zones and induced to see their

work, their classes and themselves in new ways. Even when Bart was ill, that didn't stop him carrying on with his training work as long as possible. His body let him down, but his mind remained sharp. In 2014, Bart was forced to say goodbye to his work and we had to manage without him as a colleague. He was still fascinated by theatre and looked for new goals. He had the idea of making a film about himself and his illness, and a project was launched. Bart raised the necessary funding through crowdfunding, a campaign which drew a lot of response, including from WUR teachers who still remembered him. The film *SANDO, illness from the inside out* was premiered last year.

We cherish warm memories of Bart.

*On behalf of the Education Support Centre,  
Chris Blom and Annemarie Zijlman*

# >>TYPICAL DUTCH



ILLUSTRATION: HENK VAN RUITENBEEK

## Finnish nightmares

When it comes to teaching methods, the Dutchies seem to be very keen on group work. Something that is considered to be the ultimate Finnish nightmare appears to be something very mundane here.

In the North, group work is usually implemented only when it's *absolutely necessary* for the task itself. And even then it sends cringes down the Scandinavian spine. Here, it feels like group work is the primary method of learning, and also done 'purely for the sake of it'. Sometimes the end product even seems to be less important than the interactive process of working on it. Here, group members seem to feel responsible for the entire group task, whereas group assignments back home are basically just individual parts brought together. Most importantly, in the North, commenting on someone else's part of the work would be considered as stepping on their toes. Here people seem to be accustomed to giving feedback to each other, and even quite critical comments are tolerated well.

For the Dutch, opposing opinions and occasional debates seem to be as humdrum as their lunch sandwiches. It's still a big ask for a reserved Finn to cope with the endless group work, the wrangling over visions, and the flood of feedback. Let alone the lunch sandwiches...

📍 Annie Sallyla, MSc student of Nutrition and Health from Finland

**'It feels like group work is the primary method of learning'**

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.