

## Letter of protest

New food label is not a good idea | **p.6** |

## Critical of stress approach

Is *Surf Your Stress* just dealing with symptoms? | **p.22** |

## Student seeks donor

'As though I wake up every morning with a hangover' | **p.24** |

# RESOURCE [EN]

For everyone at Wageningen University & Research

no 5 – 7 November 2019 – 14th Volume



## Circular pioneers

Farmers and WUR join forces to find solutions | **p.12**

**INTERNATIONAL  
EDITION**



# 11-15 NOVEMBER CAMPUS WAGENINGEN

## For students and employees of WUR

Learn to balance and ride the waves of stress! Everyone experiences stress once in a while and that's alright, because it's part of life. Too much stress however can get you out of balance. Learn more about dealing with stress during the surf your stress week.

Join us and visit one of the many activities: lectures, workshops, games, sport events, relaxing activities and more.

For the full programme and locations, please check:  
[www.wur.eu/surfyourstressweek](http://www.wur.eu/surfyourstressweek)

## MONDAY

# 11

|  |   |         |               |
|--|---|---------|---------------|
| <b>Rodeo surf simulator</b>                      | Learn to balance & ride the waves   | Walk-in | 09:00 - 17:00 |
| <b>Yoga</b>                                      | Become aware of your body and your mind                                   | Sign-up | 08:00 - 09:00 |
| <b>Masterclass: How to deal with your stress</b> | Want to take a next step in coping with stress? Don't hesitate. Be there! | Sign-up | 19:00 - 20:30 |
| <b>Spinning lecture: Daily Happiness</b>         | Useful tips to bring happiness into your life                             | Sign-up | 20:00 - 21:00 |

## WEDNESDAY

# 13

|   |  |         |               |
|---|--|---------|---------------|
| <b>EFT - Ancient Chinese medicine meets Modern Psychology</b> | Learn to use the meridians in your body to stop the fight-, flight- or freeze response & alleviate stress instantly! | Walk-in | 12:00 - 13:30 |
| <b>Mental Coaching</b>  | Stress is based on thoughts, how to change them?   | Walk-in | 12:30 - 13:30 |
| <b>Workshop: Thriving... in spite of it all</b>               | In this workshop, we'll explore what it means to be successful, and human, in a burn-out world                       | Sign-up | 17:30 - 19:00 |
| <b>Lecture: Life without mobile devices</b>                   | I went offline for 1 year and survived!  | Sign-up | 19:30 - 21:15 |

## FRIDAY

# 15

|                                   |   |         |               |
|-----------------------------------|---|---------|---------------|
| <b>Walk-in: Holistic coaching</b> | Learn to listen to yourself                                 | Walk-in | 11.00 - 12.30 |
| <b>Walk with the elderly</b>      | Have a walk and talk with residents of Oranje Nassau's oord | Sign-up | 15.00         |
| <b>Karaoke night</b>              | Free karaoke night organized by ISOW. Open to all!          | Walk-in | 22:00 - 02:00 |

## TUESDAY

# 12

|  |  |         |               |
|--|--|---------|---------------|
| <b>Tai chi</b>                         | Start the day relaxed and stress free                          | Walk-in | 09:00 - 10.00 |
| <b>Workshop: Time Management</b>       | Do you want to know how to use your time effectively? Join us! | Sign-up | 12:15 - 13:45 |
| <b>Masterclass: The art of failure</b> | Accept errors and use them to learn from them                  | Sign-up | 19:30 - 21:30 |

## THURSDAY

# 14

|  |  |         |               |
|--|--|---------|---------------|
| <b>Virtual Reality: Take a DEEP breath</b> | Play a mesmerizing and relaxing virtual reality game that you can control with your own breath | Walk-in | 12:00 - 17:00 |
| <b>Coach your body and mind</b>            | Lecture on the interaction between stress, body and mind incl. individual testing and feedback | Walk-in | 13:00 - 17:30 |
| <b>Docu-night: One Nation Under Stress</b> | Movie & popcorn! The link between stress and the continuing fall in US life expectancy         | Walk-in | 19:15 - 21:00 |

The Surf your Stress week has been made possible by a collaboration of:



Sports Centre  
de Bongerd

vital@work

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## DIGGING THEIR HEELS IN

The country is in the grip of the nitrogen crisis. Agriculture needs to change course to reduce emissions and save nature, landscapes and biodiversity. The good news is that 'cleaner' farming really is possible. We heard that at the nitrogen debate Resource organized (see p.6), and reporter Albert Sikkema saw it with his own eyes when he visited sustainable farming initiatives in the Northern Netherlands (see p.12-15). But these jewels of the countryside are exceptions. Most of the farmers who've been demonstrating in The Hague haven't got that far yet. And that is apparent when you look at the Agriculture Collective, a coterie of farmers' representatives that negotiates with government on the farmers' behalf on the 'nitrogen dossier'. The collective is an initiative by the Farmers Defence Force. (The name says it all.) As chair, they picked former WUR President Aalt Dijkhuizen – Dutch intensive agriculture personified and someone who is more part of the problem than of the solution. So the Agriculture Collective's starting point seems clear: forget a change of course, dig your heels in. I would love to be proved wrong about that.

*Roelof Kleis, Science and Organization editor*



>> [Sound insulation with fibre from pig manure | p.10](#)



## WUR JOINS NETWORK FOR INNOVATION IN SCIENCE EDUCATION

**WUR has joined CDIO (conceive, design, implement, operate), a worldwide network for educational innovation at science universities.**

‘The world is changing at an ever faster pace, and that calls for continuous adaptation of our education,’ says Emiel van Puffelen of the Education & Student Affairs department. He represents WUR in 4TU, a collaboration between the four science and technology universities in the Netherlands, and he arranged for WUR to join CDIO. ‘By joining this network, we can learn from educational innovations at our fellow universities. That way you make progress faster.’

CDIO was set up in 2008 by Massachusetts Institute of Technology and three Swedish universities. There are now 175 science and technology universities around the world taking part in the network.

WUR teachers have access to information about CDIO’s innovations through the 4TU website. ‘There they can find out more about which educational approaches combine well, what works and what doesn’t in the area of living labs, and how you shape multi-disciplinary, international and project-oriented education,’ says Van Puffelen. **LZ**

## FRESCO CHAIR OF 4TU

**Louise O. Fresco will be at the helm of the 4TU Federation for the next two years. She wants to concentrate on building up the scientific collaboration.**

In the 4TU Federation, the four Dutch science and technology universities pull together to build and share technological knowledge. At the end of October, the federation presented five new research programmes to the government in The Hague, which were allocated 22 million euros. In these programmes, the four science universities run research on personalized medicine, disease prevention and treatment, ‘smart’ industry, a resilient society and the global food issue. By appointing 44 tenure-trackers, the federa-

### Federation allocates millions to appointing 44 tenure-trackers.

tion invests in research for the long term. The aim is that the researchers set up their own research projects under these five themes, obtain funding and take on PhD students. The overarching theme is ‘high tech for a sustainable future’. Four years ago, Fresco entered into discussions on WUR’s behalf with the then 3TU, with the idea of turning it into 4TU. ‘You can

see a massive demand in society for technologists who are also sensitive to social and ecological issues. It was logical to join forces.’ Another motive for collaborating, in Fresco’s view, is that ‘our

kind of education is more expensive than the average education. ‘We thought it was in the interests of the Dutch economy to increase the visibility of the four universities. You can now see that the government in The Hague has understood the potential of 4TU.’

At the meeting in The Hague, Fresco took over the role of chair from Victor van der Chijs (Twente University). The future of 4TU now focuses on improving scientific collaboration, including in the area of education. It must also improve the mobility of PhD students and postdocs. ‘We are not changing direction, but we are gaining something additional. Access to knowledge, people and talent.’ **WA**



POTO: GUY ACKERMANS

## ‘HELP THE AMAZON’

Indigenous leaders from Brazil were in Impulse on 31 October to talk to about 150 WUR students and staff about deforestation, land-grabbing and human rights. The group is touring Europe and came to Wageningen at the invitation of the Forest and Nature Conservation Policy Group and others. The Brazilians expressed their concern about the impact of agro-business on their lives and the biodiversity of the Amazon. It would help if students and scientists in Europe were to put pressure on their governments to ban products that cause deforestation, said the indigenous leaders. **JS**

## BOARD WANTS A NEW TYPE OF PROFESSOR

**The WUR Executive Board wants to start appointing a new type of professor. The new title will be for professors from other universities who work in Wageningen one day a week for five years.**

The plan is intended to intensify collaboration with other universities. The board hopes to recruit professors who add expertise in the Wageningen domain that doesn't overlap with existing expertise in the Wageningen chair groups. Rector Arthur Mol wants to

appoint two such professors per year for the next five years. They will be appointed for an FTE of 0.2 with the right to award PhDs.

The proposal allows for Wageningen chair holders to nominate professors from other universities. The rector and the director of the science group involved will then as-

sess the nomination before an appointments committee assesses the candidate. The idea of these appointments is to realize the strategic plan objective of 'finding answers together'. The board has put the plan to the WUR Council, which is likely to ratify it, says board member Joost van Opheusden. **AS**

**Professors from other universities will work for Wageningen one day a week for five years**

### IN BRIEF

#### >> PLUS ULTRA II One Planet is main tenant

One Planet, the joint research centre of the Flemish research institute Imec, Radboud University, Radboudumc and WUR, is going to rent the top floor of Plus Ultra II. 150 researchers at the new centre will work there together with Gelderland-based and international companies in the fields of micro-electronics, nanotechnology and artificial intelligence. 'This will be closed collaboration: the research is confidential,' explained director of One Planet Chris van Hoof when Plus Ultra II reached its highest point on 22 October. For public collaboration with the two universities and other knowledge-oriented companies, One Planet will set up a relatively accessible Experience Centre on the first floor of the building. **AS**



▲ The new transformer station under construction.

#### >> SILVER FOR XYLENCER Tackling bacteria

WUR's iGEM team came second in the annual global synthetic biology competition. The team, Xylencer, developed a therapy aimed at 'silencing' the dreaded bacterial plant disease xylella, which affects olive trees in Italy and grapevines in California. The Wageningen team came up with a method of combatting the bacteria with genetically modified bacteriophages. These are viruses that use bacteria to reproduce. This is the third time that Wageningen has come second. Xylencer did come first in the Food & Nutrition category, though, and also won the poster prize. **RK**

#### >> CAMPUS ENERGY NETWORK New transformer station

The capacity of the energy network on campus is being expanded with the construction of a new transformer station on the edge of the campus, behind Aeres University of Applied Sciences. It normally takes eight to nine months to build this kind of station but on the campus the network operator Liander is experimenting with prefab construction. This entails putting the station together on the spot from readymade components. 'That saves us about four months,' says project manager Johan van der Plas of Liander. **ME**

## © COLUMN|VINCENT

### Badly informed

I spent quite a lot of time in the water meadows of the Lower Rhine last summer doing research for my thesis. It was in the middle of the holiday period and there were always people who stopped for a chat. About what I was doing and other things. One day I talked to a couple who complained about 'all those fields sprayed to death with glyphosate', and later the same day I had lunch with a man who was annoyed by the 'mega-barn' that spoiled our view. Both irritations were based on unfortunate misunderstandings: what the couple had seen were golden, newly harvested wheat fields, and in our view stood a potato shed.

Funnily enough, this all took place on the edge of a Natura 2000 area, the type of protected nature which has now come under fire because of the nitrogen crisis. The suggestion is now repeatedly made to reduce the number of Natura 2000 areas. Columnist Rosanne Hertberger wrote in the newspaper *NRC* at the end of September that it was high time nature made some sacrifices, as 'The farmers have been our whipping boys for too long.' Her comment would be hard to defend. The fact is that agriculture has been given free reign for a long time, helped by the creation of polders, land redistribution, and various subsidies and licenses. We have all benefitted from that, but it has done a lot of damage too.

All in all, it is actually nature that has been agriculture's whipping boy. Which an awful lot of people are rightly worried about. Including me. And – to paraphrase the protesting farmers last week – we don't always feel our concerns are taken seriously. But sometimes we can do something to help ourselves. We'd make a more credible impression if we made sure we were a bit better informed about agriculture, for instance. **R**

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





# 'FARMERS CAN SOLVE THE AMMONIA PROBLEM'

**Dutch dairy farmers can reduce their nitrogen emissions by 25 to 40 per cent without it costing them a cent – by applying their husbandry skills. Gerard Migchels of Wageningen Livestock Research presented his views on this on Monday 21 October during Resource's nitrogen debate.**

The dairy farms that took part in the experimental farm *Proeftuin Veenweiden* managed to reduce their ammonia emissions by 25 per cent in a four-year period, said Migchels. The most important measures they took? The cows were out in the fields more often and the farmers diluted the manure with water before spreading it on the fields. The farmers who gave their livestock low-protein feed and kept fewer calves achieved further nitrogen reductions. And to top it off, the measures resulted in a small financial saving for the farmers. Migchels' conclusion: 'The farmers' husbandry skills can go a long way towards solving the ammonia problem.'

Previous applied research that Migchels did on dairy farmers in and around Natura 2000 areas in the province of Overijssel produced similar findings. However, this fieldwork had never been translated into advice and guidelines for all Dutch dairy farmers, Migchels noted. He added that to achieve further long-term reductions in nitrogen emissions, the Netherlands needs to ban slurry and organize separate collection of manure and urine. However, that would be a costly procedure, as farmers would need to adapt their cowsheds. In the *Resource* debate, Wim de Vries, person-



PHOTOS: ALDO ALLESSE

▲ A visitor discusses matters with the speakers at the *Resource* debate at Impulse.

al professor of Environmental Systems Analysis, was also in favour of improving mineral management in the agricultural sector. 'But if we really want to close the mineral cycles in this country, we have to reduce our national herd.' Migchels agrees and has taken this into account: 'Only extensive, nature-friendly livestock farmers will be permitted to keep cattle in the Natura 2000 areas; and in the province of Overijssel this policy has already been introduced.' **AS**

See also p. 12-15: *Closing the cycles together*

## 'BUILDING CONTRACTORS SENT HOME FOR NOTHING'

Wageningen 'nitrogen professor' Wim de Vries understands why the building sector held demonstrations on 29 October against the government's nitrogen regulations. During the *Resource* debate he presented a pie chart which he said shows that there is 'no point' in stopping building construction. The building sector is responsible for a mere 0.6 per cent of emissions, one of the smallest portions of the pie. 'These people were sent home for nothing when it comes to nitrogen emissions.'

**ME**



## LETTER OF PROTEST ON NEW FOOD LABEL

**Secretary of State for Public Health Paul Blokhuis will decide this month whether the Netherlands will put the Nutri-Score label for healthy foods on products. Nutritionist scientists, including Kees de Graaf of Human Nutrition, think it's a bad idea and wrote a letter in protest against it.**

Nutri-score, a kind of energy label for food that is already in use in France and Belgium, is intended to help consumers make healthier choices. Products lose points for

sugar, saturated fat and salt, and gain points for things like fibre and protein. Dutch supermarket chains and the Consumer Association are enthusiastic.

But scientists are not so convinced. A group of more than 160 nutrition scientists and experts wrote a letter in protest, which they handed over to Blokhuis personally on Tuesday 5 November.

Their chief criticism is that Nutri-Score is not in line with the recommendations enshrined in the 'Schijf van Vijf', a pie chart with the ingredients of a healthy diet that is

used in the Netherlands. 'Take a product like olive oil,' says De Graaf. 'That is in the Schijf van Vijf, but scores a D or an E in Nutri-Score. And white and wholemeal bread both get an A.' He thinks this is because the score is based on French guidelines. 'French eating habits are different to Dutch ones. So the guidelines are different too.' Conflicting recommendations are confusing for consumers, says De Graaf, and could damage confidence in the Nutrition Centre and the government. The writers of the letter want the government to take

time to develop a Dutch version of Nutri-Score. They are going to discuss this with the ministry of Public Health, Welfare and Sport. A decision will be taken mid-November.

**TL**



▲ Nutri-Score is like an energy label for nutrition

# MOMENT OF TRUTH FOR THE AULA

**November is set to be a tense month as decisions are made on the future of the Aula. Will the iconic building become part of a cinema complex or a venue for political debate like De Balie in Amsterdam?**

The final decision lies with the WUR as owner of the Aula and the former university library building behind it. On Monday 18 November at 19.30, WUR will hold an information evening during which both plans will be presented. The meeting will take place in the Aula of course – the building at the centre of the debate – and the intention is to sound out the opinions of stakeholders and other interested parties. Important and difficult decisions need to be made. The two developers – BOEi/Van Swaay and the Noordereng Groep – have very different plans for the Aula and its surroundings. BOEi plans to turn the Aula into a cultural centre as

**WUR and Wageningen municipality will cast their vote, and WUR will have the final say**

part of the new building that the Heerenstraat-theater plans to construct next door. Noordereng would like to turn the Aula into a venue for debates on food, peace and security, fitting in with the local context of Food Valley, WUR and Wageningen as the ‘city of liberation’. Gerben Kuypers, spokesperson for Noordereng

Groep, has set his sights high. He would like the Aula to become a centre for debate like De Balie in Amsterdam. In this plan, the former library will be turned into a 42-room hotel providing accommodation for people attending the events. The reading room on the ground floor will become a ‘sitting room’ for year clubs, study associations and PhD students. In the open space between the Aula and the library a glass-house building will be constructed to house a café-restaurant for the venue.

The BOEi/Van Swaay team have totally different ideas. They have developed four large-scale plans for the property. One of the alternatives will be chosen in the coming month and will then become the contender in the contest with Noordereng’s debating centre. The views and responses of local residents and the general public will be listened to in the decision-making process. Housing, moving the Heerenstraat-theater from its current location, and extending Hotel De Wereld are the ingredients in all four plans.

The cinema – consisting of four 50-seat auditoriums – will be located underground in BOEi’s plans, as will the parking space. The amount of housing included in the plans varies from a ten-storey tower block, a block of houses sited where the car park is now, to converting the old library. A building containing 30-35 rooms will be constructed behind the listed Hotel De Wereld.

After both sets of plans have been presented to the audience on 18 November, WUR and Wageningen municipality will cast their vote, with

WUR having the final say. So far the two parties have been unable to reach agreement about the development plans. WUR’s preference was for a debating centre, while the municipality opted for the cultural centre. To break the deadlock, both contenders were asked to develop or revise their plans. In response to this BOEi came up with completely new ideas. **RK**



ILLUSTRATION: DPG ARCHITECTENSTUDIO

ILLUSTRATIONS: BOEI/VAN SWAAY



▲ Noordereng Groep has plans to turn the Aula into a venue for debate on food, peace and security.

▲ BOEi/Van Swaay's idea is to turn the Aula into a cultural centre as part of a new cinema complex.



# NEW LIGHT ON RIDDLE OF BIRD MIGRATION

**The migration of seabirds has long been a bit of a mystery. Researcher Rob van Bemmelen of Wageningen Marine Research has now used geolocators to map the routes of phalaropes and skuas. The results shed new light on old questions, but also raise new questions.**

Van Bemmelen loves skuas, especially the long-tailed skua, which he has been studying ever since he first encountered it, in 2007 in Swedish Lapland. He got his PhD last week for a study on this bird's migration patterns, its relative the Arctic skua and two species of phalarope, the red and the red-necked.

## DATA LOGGERS

Van Bemmelen used geolocators, small data loggers that are attached to the birds' feet or back and that measure light every five minutes. That data reveals longitude and latitude, so the position of the bird can be determined. That is, if you can catch the birds again, since the data is not trans-

mitted. The birds are caught when they are sitting on their nests. Van Bemmelen and teams from 10 countries collected flight data from 224 birds in this way. That is more than in most migrating bird studies, and enough to fill out or adjust the existing picture of the overwintering areas of the four birds. Take the long-tailed skua, for instance: 'It was said to overwinter around Antarctica, but we didn't find any evidence of that.'

## MIGRATION DATA

From the migration data collected, it turns out that the long-tailed skua mainly spends the winter in the area of the Benguela current off the west coast of southern Africa. And the overwintering area of



PHOTO: DENISE HERMANS

▲ A red-necked phalarope is fitted with a geolocator.

▼ The long-tailed skua in winter plumage off the coast of Mauritania.



**What is striking about the migration patterns is their inconsistency**

the Arctic skua is surprisingly large, covering large parts of the Atlantic Ocean, the northwest of the Indian Ocean and the Mediterranean Sea.

## VARY A LOT

Another striking feature of the migration pattern is its inconsistency. 'Why, for example, do all the red-necked phalaropes from one population migrate to the same overwintering area, but red phalaropes from one population migrate to areas along the entire length of the Atlantic Ocean?' Migration routes can even vary a lot within a single species. Red-necked phalaropes from Russia fly to the Arabian Sea, but those from Scotland to the eastern Pacific.

## SO MUCH TO FIND OUT

Birds don't visit the same overwintering areas every year, either. Red phalaropes that brood in Northeast Greenland and Spitsbergen overwintering at three different

places on the Atlantic Ocean, but not at the same place every time. It is not clear why they do this, and what determines their choice. There is still so much to find out, sighs Van Bemmelen.

## REST

His migration data shed new light on old questions. They also provide support for Birdlife International's proposal to designate a protected nature area in the north of the Atlantic Ocean. Millions of birds rest in this area during their migration between north and south. 'That proposal is based on migration data on the long-tailed skua from my study, and on 23 other birds.' **© RK**



## HERD BEHAVIOUR CAN LEAD TO HEALTHY CHOICES

**It is a well-known phenomenon that people like to buy what others buy. This herd behaviour offers ways of nudging us towards healthier food choices, shows doctoral research by Robert Goedgebure in the Marketing and Consumer Behaviour chair group.**

Consumers base their choices to a large extent on those of other people. This is known as social proof and it explains why webshops and booking sites explicitly mention which product is the most popular, or that 'this type of room has been booked 3x in the last 24 hours'.

But why do we actually pay attention to other people's purchases, and why are they such an important factor for people? 'We can distinguish two schools of thought in the literature,' says Consumer Behaviour researcher Goedgebure. 'One says the importance lies in the priority we give to quality: if a lot of people have bought an item, it must be good. The other approach explains it more from a social perspective: if you buy the same things other people buy, you can count on the approval of those around you.' Goedgebure tested these assumptions using an MRI scanner and a small army of test subjects who were asked to evaluate popular products. If they were

asked about the assumed quality of the product, different regions of the brain became active than when they were asked to evaluate the social value of a possible purchase. 'So we now know for sure that there are indeed two different 'brain routes' that explain why we buy the same things other people buy,' says the PhD researcher. 'We also concluded that social proof played the biggest role when it came to food because we want evidence of its quality.'

Armed with these insights, Goedgebure set up a virtual supermarket with photos taken for the occasion in the EmTee supermarket in Ede. He researched three products: Chocolate milk, cheese and frankfurters. In all three cases, adding a sign saying 'most popular' to the option with less salt, sugar and/or fat led the test subjects to choose that option more often.

Goedgebure: 'The preference for light products was significant. Not that we are going to change the world at one blow like this, but it is useful to know what possibilities social proof offers for stimulating healthier food choices.' Goedgebure graduated with a PhD on 23 October. His research is part of the Nudgis project co-financed by NWO, in which WUR, Utrecht University, Friesland Campina and Unilever work together. **ME**



PHOTO: ROBERT GOEDGEBURURE

▲ A 'most popular' sign can cause more consumers to choose frankfurters with less salt, sugar or fat.

## VISION

### 'Methane inhibitors in feed are a step in the right direction'

**The feed additive company DSM was in the news recently with its new product, Bovaer, which can reduce the formation of the greenhouse gas methane in cows. That is true, says Wageningen Livestock Research's Jan Dijkstra, but research still needs to establish how effective the additive is.**



#### *Are you familiar with Bovaer?*

'Yes, its effectiveness will soon be tested on Dairy Campus, our research and innovation centre for the dairy industry. The test is required for the product to be included in the Annual Nutrient Cycle Assessment (ANCA), an aid for mineral management in the dairy sector.'

#### *What do you expect from the study?*

'With the standard feed rations used in the Netherlands, methane production is expected to go down by about 20 per cent when Bovaer is used. That is a smaller reduction than the 30 per cent that DSM claims on the basis of international research. That is because there is a lot of fibre in Dutch feed. The more fibre there is, the less effective it is.'

#### *Doesn't adding nitrate to the feed help too?*

'Yes, if you add nitrate, bacteria convert it into ammonia, and less methane is formed as a result. That's a different approach to Bovaer, which is a molecule that binds to an enzyme that forms methane in the cow's rumen. It switches that enzyme off. If you use nitrate, you need a lot more: 10 to 15 grams per kilogram feed for a methane reduction of 10 to 20 per cent.'

#### *Does Bovaer work in combination with nitrate?*

'We don't know yet if you can just add the effect of Bovaer to that of Nitrate. But whatever the case, you can achieve a considerable reduction with these substances. Silage naturally contains nitrate, and Cargill produces it as a pure additive. That company is doing research on nitrate for the ANCA.'

#### *Is this enough to meet the climate targets?*

'The livestock sector has to halve methane emissions in the coming years. With this feed additive, farmers can take a step in the right direction. It does cost money though: the price of milk will have to go up a bit.' **AS**

# URBAN HEAT LINGERS A LONG TIME

**After a hot day, heat hovers above a city like a thick blanket into the following morning. As a result, the city hardly recovers from the heat, show measurements taken by Wageningen meteorologists this summer in the middle of Amsterdam and 22 kilometres outside the city.**

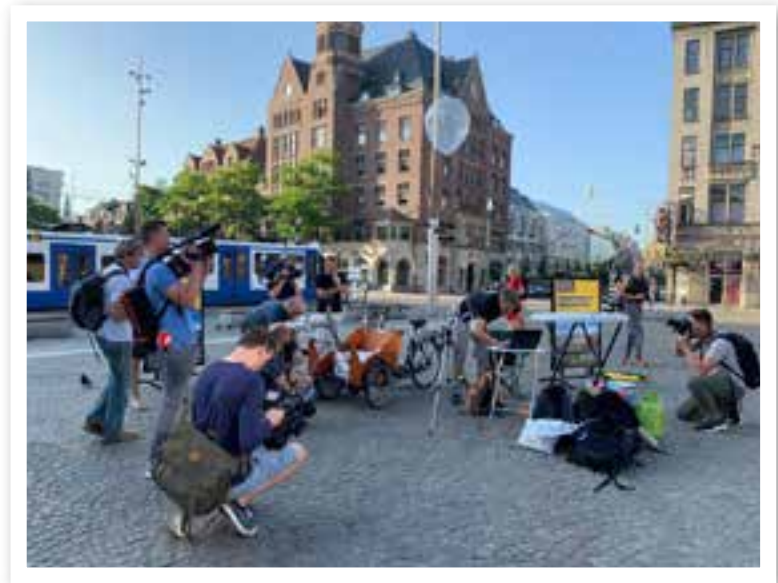
On 23 and 24 July, just before the national heat record was set, the researchers sent up a special, biodegradable weather balloon every two hours. Under the balloon hung a cup containing equipment for

## The heat island effect reached a height of 120 metres

measuring the temperature, humidity and position. The main aim was to establish the extent of the 'heat island effect', explains meteorologist Gert-Jan Steeneveld. That is the phenomenon whereby heat

lingers longer in cities than outside them. The difference can be up to five degrees Celsius. But what this kind of heat island looks like in 3D – from the ground to the upper atmospheric layers – was not yet understood. And that was precisely the information needed to improve weather models, says Steeneveld.

At its thickest, the heat island reached a height of 120 metres. At that height, the temperature was the same as that above the countryside. The influx of hot air from the south in the upper atmospheric layers also helped maintain the heat island. Steeneveld: 'So no mingling takes place. That causes the heat and all the air pollution to linger above the city.' The measurements also show that heat levels in the city vary a lot. The city centre was the 'coolest', with temperatures around 36 degrees. In the outer suburbs they went higher than 38 degrees. The difference has to do with the height of buildings and the width of the streets. The narrower streets



▲ Meteorologist Gert-Jan Steeneveld sends up weather balloons on the Dam in Amsterdam, to great press interest.

PHOTO: AMS INSTITUTE

lined with tall buildings in the centre remain shady for longer. And nearby water (the IJ) provides cooling too. The temperatures measured were better than expected. Steeneveld used the adjusted weather model

and several climate scenarios to calculate what cities such as Amsterdam can expect in the future. Daytime temperatures of 43 degrees will not be exceptional on a hot day in Amsterdam. **Ⓡ RK**

## INSULATING HOUSES WITH FIBRE FROM PIG MANURE

**Six Wageningen Master's students have developed insulation material made out of pig manure. They won second prize with their invention at the Biobased Innovation Student Challenge Europe (BISC-E) in Berlin on 24 October.**

Houses and offices near airports need better insulation, says MSc student of Biobased Sciences Stamatis Chrysanthopoulos from Greece. 'The noise pollution can make you ill. People living near airports have a higher risk of heart failure.' The Wageningen student team BioSilence looked for an organic material that could be used for sound insulation. And they came up with manure. 'In manure processing plants, nitrogen and phosphate are extracted from manure,' says Bas Roovers, another MSc student of Biobased Sciences. 'What is left over is fibre. That is currently incinerated or used to improve

soil, but you can also press it and dry it, which kills the micro-organisms and gets rid of the smell. And then you've got sound-insulation material.' The students experimented with this material in the lab first, and then they wrapped up the fibre in a piece of rockwool. They exhibited that prototype at the BISC-E final in Berlin. 'Our insulation material is a lot more sustainable than the usual rockwool,' says Chrysanthopoulos, 'because the production of rockwool takes a lot of energy and is responsible for high greenhouse gas and nitrogen emissions.' BioSilence eventually wants to replace the rockwool with their production entirely. That will not be easy in the conservative construction world, said the Dutch jury of BISC-E a few months ago at the preliminary round. But the Wageningen team won that round, nevertheless. BioSilence is a very international team. As well as Chrysanthopoulos and Roovers, there are two

Italians, one Mexican and one Colombian on the team. Their supervisors are Costas Nikiforidis, a researcher at Biobased Chemistry, and Martin van den Oever, a researcher at Wageningen Food & Biobased Research. **Ⓡ AS**





## READERS' LETTERS

Do you have your own views on a current issue at WUR? Send your contribution of 350 words max to [resource@wur.nl](mailto:resource@wur.nl), with 'Letter to the editor' in the subject line.

# 'DEEP CHANGES REQUIRED FOR CIRCULAR AGRICULTURE'

Recently the Circular Farming Platform Wageningen organized an interesting forum on circular agriculture. One of the thought-provoking themes discussed concerned the implications of a paradigm shift towards circularity for science and education. The main question formulated was: 'A paradigm shift implies deep changes. What does it imply in education?' The Netherlands wants to be a frontrunner in circular agri-

culture. What 'deep' changes are required to make this happen?

Professor Imke de Boer, Animal Production Systems at WUR and definitely one of the frontrunners in the transition to circular agriculture, said that 'we' will have to produce and consume with less impact on the environment. Basically this implies that farmers as well as consumers (and all other intermediate actors in agricultural value chains) need to change their behaviour.

To my mind, behavioural change is grounded in a change of underlying (often implicit) values. The first step in the transition to circular agriculture is to make these implicit values explicit. The second step is to identify the values that are most supportive of an ecologically and socially sound circular agriculture. The third step is to identify method-

ologies that effectively facilitate the development of such basic attitudes or underlying values. How do farmers, consumers, other actors in the value chain, researchers and students at WUR acquire such values? In processes of personal development, this sequence applies: data information knowledge basic attitude/value behaviour. The arrows represent internalization and transformation processes, which unfortunately are largely black-box processes. Natural (and many social) scientists tend to focus on data, information and knowledge. But knowledge as such is not sufficient to change behaviour.

In my view 'deep' change refers to changes in underlying values and basic attitudes towards nature – and subsequently in behaviour. In my PhD thesis I concluded that the

development of ecologically and socially sustainable farming systems demands both science (including the natural and the social sciences) and methodologies for personal development (Bildung), both reason and socio-cultural education, both outward- and inward-oriented approaches. In order to reach outer and inner sustainability WUR needs to pay much more attention to ecological philosophy (basic attitudes towards nature), philosophy of science (scientific paradigms), farming systems research (farms as socio-ecological systems) and social psychology (behavioural change). And yes, this might imply less money and staff for technical groups.

*Toon van Eijk, alumnus and retired researcher, Tropical Agriculture*

ILLUSTRATION: RHONALD BLOMMESTIJN



## PROPOSITION

# 'Men should start working part-time'

**Sweden is ahead in the gender equality stakes. But even there, men still earn more than women. According to the Swedish PhD student Yla Ran, it would help if men worked less in order to take on more care tasks at home. Her proposition: 'If "men" start acting like "women" we can close the gender pay gap.'**

'Although men and women often earn the same at the start of their career, a difference in salary gradually arises. One of the reasons for this is that women often demand more flexibility in their working hours. They often want to, or feel they need to work less in


order to take care of their children or other family members.

## 'In Sweden men and women get equal parental leave'

Suppose you have two children and therefore worked part time for three years. Then you have had fewer opportunities than someone who has worked full time all the time. If men also demanded more flexibility from their employer, men and women would have the same opportunities for advance-

ment and salary development in their work. Research shows that this is the most effective way to reduce the gender pay gap.

I come from Sweden, where men and women receive the same number of days of parental leave by default. You must then request permission to redistribute it. I think that is a good incentive, and it would be good in the Netherlands as well, to ensure that men and women take the same responsibility for the children.

But there is still work to be done here. In Sweden, pay is not yet equal, and that includes universities and the research world. I want to make people think about why this is.' 



PhD candidates are required to submit a few propositions with their thesis. In this feature, they explain the thinking behind their most thought-provoking proposition. This time it's the turn of Yla Ran, who was awarded her doctorate on 30 August for her thesis on water use by livestock farmers in Latin America.

Calling at three regional innovation workplaces

# Closing the cycles together

The Dutch ministry of Agriculture, Nature and Food Quality does not have a blueprint for the circular agriculture it aims at. The approach is to be developed in regional 'innovation workplaces' where farmers, nature-lovers and scientists work together. It is starting to take shape in the Northern Netherlands. Reporter Albert Sikkema went to have a look.

*text* Albert Sikkema *photos* Reyer Boxem

▲ Maurits and Jessica Tepper are the owners of Eytemaheert farm, where WUR is doing research on nature-inclusive circular agriculture.



## ‘The Blaarkop cows are entirely grass-fed and the farm buys no feed or fertilizer from elsewhere.’

**M**aurits Tepper, joint owner with his wife Jessica of Eytemaheert farm, is quickly building a ‘skybox’ in honour of the big shots from WUR and the Agriculture ministry who will be visiting the farm tomorrow to discuss a research programme at this brand new WUR experimental farm. They’ll be able to survey his Groningen Blaarkop cows from this raised platform in the shed.

We are in Leutingewolde, at the northernmost tip of the province of Drenthe. Eytemaheert borders a lake, the Leekstermeer, and a Natura 2000 reserve, the Onlanden. It’s a vulnerable area in terms of the nitrogen problem, but Tepper is keeping his cool. His farm is to be a showcase example of a livestock farm with a closed manure and nitrogen cycle.

### PROCESSING GRASS CLIPPINGS

Eytemaheert has 500 Groningen Blaarkop cows that produce meat which the Teppers sell directly to consumers through a webshop. The cows are entirely grass-fed and the farm buys no feed or manure from elsewhere. But it does process grass clippings from the nearby nature reserve into the fertilizer bokashi. ‘The nitrogen-rich clippings from the nature reserve compensate for the nutrient loss from the farmland due to grazing cows,’ says Tepper. He would like further research done on bokashi, a mixture of grass clippings, chalk, clay and micro-organisms that break down the cell structure of the hay. ‘Together with Staatsbosbeheer (the state forest service, ed.) and Natuurmonumenten (a nature conservation organization, ed), we want to look at how other farmers could make use of this bokashi too. That is not possible at present because if you transport it more than five kilometres, it comes under waste matter legislation and farmers must keep a record of it.’

This research will probably be done because last summer, Eytemaheert became one of WUR’s experimental farms for nature-inclu-

sive circular agriculture. Martin Scholten, director of the Animal Sciences Group, wants to explore new opportunities for putting circular agriculture into practice, he explains on Eytemaheert’s website. The Teppers will still own the farm, but they are keen to have the nitrogen cycle quantified by Wageningen researchers. And they intend to start milking their Blaarkop cows, so that they become ‘dual-purpose’ cows producing both milk and meat.

### NATURA 2000

Tepper thinks the Blaarkop cows can produce about 5000 litres of milk per year – half of standard production levels. He wants to make cheese with some of it. Wageningen could also study this business model with dual-purpose cows. ‘This is a good business model to use near Natura 2000 areas,’ thinks Tepper. His guess is that his farm does not produce much ammonia, because he doesn’t import any nitrogen in the form of feed concentrate and artificial fertilizer. In fact, with the bokashi he actually transports nitrogen out of the nature reserve. What is more, the cows spend most of their time out in the fields, so their droppings and urine do not get mixed and no ammonia is formed that way. He is also thinking about how he can increase biodiversity on the land using mixed grass and clover, and creating hedgerows that produce hazelnuts, thus providing food and nature at the same time.

The representatives of the ministry and WUR are coming tomorrow to consult Tepper about the research programme at the farm that is aimed at finding out what effect his farming system has on biodiversity and soil life, and what effect the bokashi has on his nitrogen cycle. Tepper: ‘We must start measuring and finding out if it’s any good.’

### MALTING OATS

We take a walk into the field behind the farmhouse. Maurits and Jessica Tepper are entrepreneurs who like to try out new things. Last sum-

## SO WHAT IS CIRCULAR AGRICULTURE?

The cabinet wants the farmers in the Netherlands to make a transition to circular agriculture by 2030. It wants an agriculture sector that:

- contributes to closing the cycle, cutting emissions and reducing biomass waste in the food system;
- strengthens the socio-economic position of farmers in the chain;
- contributes to addressing climate change in line with the Paris Climate Agreement;
- makes the countryside more attractive and dynamic;
- benefits ecosystems, biodiversity and nature;
- improves animal welfare;
- strengthens relations between farmers and other citizens;
- improves the position of the Netherlands as a developer of integral options for climate-smart, sustainable food systems.

The government is not aiming for a single food system that does all these things, but for a patchwork of regional initiatives that all contribute to the objectives. These are usually regional collaborations between farmers, nature and landscape managers, and nature-lovers. They are funded from the ‘Regional Deals’, an intergovernmental programme for a ‘Vital Countryside’, or through the European Agricultural Policy. WUR is taking part in several initiatives in the Northern Netherlands, the Achterhoek in the east, and the Groene Hart in the west.

mer they sowed a hectare of oats of an ancient variety that is less prone to diseases and pests. They are going to have the oats malted so they can make an oat beer for the local market. And next season, they want to grow one hectare of potatoes to sell directly to consumers through their webshop. They also want to hire a butcher to slaughter the blaarkop cows on the farm. ‘We sell directly to the consumer at a fair price, and that’s how we make a profit.’

More on this topic on p.14-15.



▲ Director Hans Bergsma of Westerkwartier Regional Cooperative is working with farmers, businesses, care institutions and schools on a new regional food chain.

**H**ans Bergsma, director of the Westerkwartier regional cooperative, is sitting in an office in Noordhoorn with four law students from the Hanze University of Applied Sciences in Groningen. They are poring over a folder that describes the key features of The Food Factory. The food suppliers are listed on the left-hand flap: livestock farmers, arable farmers and horticulturalists from the region. Their clients are listed on the right-hand flap: hospitals, care institutions, schools and restaurants in Groningen. In the centre is the Food Factory, which is going to slaughter animals, process food and make meals. A regional food chain in the making.

The task of the law students is to figure out how participants in The Food Factory can acquire intellectual property rights. The investors in the factory, including the regional coop-

erative, a project developer and processors of food and waste streams, contribute their knowledge of processes and their patents. The law students have to work out what price to put on these things.

#### HIGHER PRICE

The Westerkwartier Regional Cooperative was started at the end of 2013 by an agricultural nature association of about 500 farmers, Staatsbosbeheer and a vocational training college Terra Groningen. Since then the Rabobank and an energy cooperative have joined too, says the director of the cooperative Bergsma. The aim is to find new business models for farmers in the Westerkwartier.

Bergsma thinks The Food Factory can offer farmers in the regional chain 10 to 20 per cent higher prices, starting with 50 to 70 farmers who are going to supply food to hospitals and care providers in Groningen. Planning permis-

sion for The Food Factory, to be built near Leek, has already been applied for.

The Westerkwartier is farmed by conventional farmers who are looking for alternatives to the export-based business model, says Bergsma. 'At the same time, we want to restore the relationship between farmers and the villages. So a transparent regional chain through which consumers in Groningen know where their food is coming from fits the bill.'

#### WAGENINGEN SPECIALISTS

Once the regional food chain is established, Bergsma wants to further develop circular agriculture with WUR's help. 'Within the regional cooperative, livestock farmers, arable farmers and horticulturalists are now talking to each other about things like how they can use each other's waste streams. This means they encounter the issues around CO<sub>2</sub> and nitrogen. I hope Wageningen specialists can tell us how they can best avoid harm to the climate and nature.'

Bergsma wants to collaborate on this with the Fjildlab in nearby Buitenpost, where a local association, Noardlike Fryske Walden, is working on circular agriculture with Wageningen.

**'The farmers are looking into how they can use each other's waste streams'**



**A**lbert van der Ploeg, a Wageningen alumnus, has a small business with beef cattle and sheep in North-eastern Friesland, but today he is at a meeting in the Fjildlab, the innovation workplace for circular agriculture in North-eastern Friesland which he heads. He is also chair of the Noardlike Fryske Walden association, in which about 800 farmers and individuals collaborate on agricultural nature management and landscape restoration in this bocage landscape.

The farmers want to manage a small-scale landscape with hedgerows, field birds and biodiversity, says Van der Ploeg. The innovation workplace has eight expertise circles in which farmers can exchange knowledge on topics such as the use of manure and sustainable soil management.

Wageningen is closely involved in this Fjildlab. Researcher Durk Durksz is the project leader and Ingrid van Huizen, who was director of the Fryske Walden association for years, is now Wageningen's circular agriculture programme manager for the Northern Netherlands. In this capacity, she finds researchers in Wageningen who can answer questions coming from the region. And not just in Friesland, she adds. 'We want to find answers together with Eytemaheert and the Westerkwartier Regional Cooperative too.'

#### HUMAN FAECES

'Our starting point for circular agriculture is the vision of WUR professor Imke de Boer,' Van Huizen continues. 'She wants us to use plant-based food solely for human consumption, and to feed livestock on grassland and waste streams. The farmers in this region have been working on circular agriculture for years. In the Fjildlab expertise circles, we are looking at the research needs of these farmers. We want to bring in the relevant scientific knowledge. One example is a project we have submitted on the use of human faeces in agricultural cycles.'

Van der Ploeg is aiming at an agricultural transition. 'The farming system no longer matches the demands of our society,' he says, thinking of the nitrogen and manure issue and the fall in the numbers of insects and field birds. 'We are looking for changes at the system level.'

Just like Eytemaheert, the Fjildlab wants to document the manure and nitrogen cycles of dairy farms and experiment with fertilizers such as bokashi and sewerage sludge. Van der Ploeg also wants to organize a closed manure cycle between livestock and arable farms, and to make use of waste streams from potato and beet farms in the region. For the nature management side, he relies on the scope for experimentation in the European Agricultural Policy.

#### NATURE-FRIENDLY

Farmers can get grants for creating nature-friendly field edges and hedgerows. Van der Ploeg expects that Wageningen will contribute knowledge of biodiversity and landscape to this process. Ecological landscape management requires a business model, adds Van der Ploeg. 'If you want cheap food, you get the monotonous landscape that goes with it, poor in biodiversity. If you want field birds, insects and a rich soil life, you've got to do something

**'We want to research how farmers can make use of human faeces'**


to get it, as a farmer. So the government must subsidize farmers for that. There's nothing odd about that, because Staatsbosbeheer and Natuurmonumenten get government subsidies for nature management too – they are in the same boat as the farmers.'



▲ Albert van der Ploeg is a farmer who heads the Fjildlab, an innovation workplace for circular agriculture in North-eastern Friesland.



## WAGENINGERS GET EVERYWHERE

The last thing you expect when you go trekking in the Himalaya for three weeks is to meet a group of Wageningen researchers. But that's what happened to me at 5000 metres near the Kang-La pass in Nepal. Researcher Yorick Liefjting (centre) and PhD student Ashok Subedi (right) of the Resource Ecology chair group were out with their Nepalese colleague Om Bahadur Gurung (left) to collect data from eight weather stations they put in place at the beginning of the year. They use the data to gain information about the energy balance of the snow leopard and its prey, the blue sheep. The researchers aim to find out how the animals manage to survive in this cold and inhospitable region.  Text and photo Tessa Louwerens









‘You could ask: what did we do that made this possible?’

# Worried about the Kurds



Development sociologist Joost Jongerden is following the Turkish invasion of northern Syria with great concern. He did his PhD on the Turkish Kurds and studies the Syrian Kurds’ unique system of self-rule.

text Roelof Kleis photo Delil Souleiman/AFP

▲ Residents of the northern Syrian city Ras-al-Ain flee the Turkish military invasion. In the background are the fires started by Kurds to reduce visibility for the Turkish fighter pilots.

‘That cannot be true,’ was Joost Jongerden’s first thought when he heard that the American president Trump was going to withdraw his troops from Syria. ‘Then I thought: he’ll be stopped by the Pentagon or by Congress. But he wasn’t.’ Turkey reacted instantly by invading northern Syria to chase the Kurds out of the border zone. Jongerden, associate professor in the Rural Sociology chair group, looked on in dismay. Ever since

the early 1990s, he has been intensively involved with the Kurds and with developments in the region. He got his PhD in 2007 for a study on the enforced migration of Kurds in eastern Turkey. His partner is Kurdish and he regularly visits the Kurdish areas of Turkey.

### *What is the core of the Kurdish problem?*

‘It goes back to the time when the Ottoman Empire fell apart and a nation state emerged from the remnants of it. The Ottoman Empire

was made up of a highly diverse set of populations. Its policies were not based on cultural or ethnic identity. With the formation of nation states, we see a governance system emerge that is based on identity politics. That is very obvious in Turkey, where the republic established in 1923 clearly linked citizenship to Turkish identity. And that sowed the seed of the Kurdish question. The Turkish government saw the expression of Kurdish identity as an existential threat. It imposed an almost



PHOTO: GUY ACKERMANS



## 'Kurdish self-rule in Syria is a good example of do-it-yourself development'

Joost Jongerden, associate professor of Rural Sociology

continuous state of emergency on the Kurdish area of eastern Turkey, and there was a strict policy of assimilation: Kurds were forced to move to cities elsewhere in the country. That is the background to the violence.'

### *The Kurds have no autonomy in Turkey, like they do in Syria and Iraq. Why is that?*

'That autonomy came about in the context of war. After the Gulf War in 1991, the UN declared a no-fly zone in northern Iraq. Autonomy grew up in the wake of that, and was formalized in the constitution in 2005. The central government in Iraq has reluctantly come to accept the situation. But will it always do so? The Autonomous Administration of North and East Syria, Rojava, emerged in the context of the war in Syria. In 2012, autonomy was established in several regions and cities, where various forms of local self-rule were set up.'

### *What does that self-rule consist of?*

'Councils were formed locally and regionally, which try to run daily life. Those councils ensure that people get access to basic needs

like food, energy and education. They try to address forms of inequality, such as gender or ethnic inequality, in a new form of governance. I call that do-it-yourself development. It is a very interesting phenomenon to me, as a development sociologist. How do you make sure government stays close to the people? How do you organize the economy? Rojava is a nice example of how people are trying to do that together. My main interest is in the way agriculture is organized. In Rojava, in the face of continuous war and danger, the Kurds have managed to set up a system of agriculture that succeeds in feeding their own population and producing surpluses for export.'

### *How did they manage that?*

'The land is very fertile. Under Syrian rule, there was an emphasis on monocultures. You had areas with mainly cotton, wheat or olives. After the implosion of the central regime, the farmers started diversifying production. And that was the logical thing to do, because the area was isolated by the wars going on around it. So you had to produce food yourself. Diverse production, local markets and a fair price were the leading principles in agricul-

ture. And the diversity of the population was therefore valued and maintained. Rojava is the only part of this region organized on a non-sectarian basis.'


### *What can Europe do to help the Kurds in northern Syria?*

'A lot could be done if there is the political will. You could use economic sanction to put pressure on Turkey to withdraw. The economy is Erdogan's Achilles' heel. But you could also reflect a bit more deeply on that question. What did we do that made this possible? In 2018, Turkey invaded Afrin, part of Rojava in the far western part of northern Syria. The invasion was followed by ethnic cleansing. The international community was in no hurry to condemn that. What we are now seeing is an upscaling of what happened then. So we had been warned.'

### *How will this end?*

'It looks as though Putin is the dealmaker now. We don't know how he will play his geopolitical hand. The position of the US in the region has been weakened and the Americans' reputation has been badly damaged. Turkey is defiant but doesn't have much international support, and Assad seems to be strengthening his position. Without any prospect of a political solution, there doesn't seem to be much chance of the violence ending soon.'

### *Could there be a turn for the better?*

'There has been a lot of human suffering. That is irreversible. Turkey has occupied a small area of Rojava. The question is whether they can maintain their occupation. It is not irreversible, and democratic self-government is still functioning elsewhere. Sanctions could help to force Turkey to withdraw. If there is the political will.' 





# What's the state of play with bee mortality?



Two of these honey bees have a varroa mite on their backs. Control of this parasite has improved dramatically in recent years.



It looks as though the period of alarmingly high winter mortality in honeybees is over. And a long-term study by Wageningen and Leiden suggests there is no clear cause of other bee deaths. Seven questions about bees, varroa mites and neonicotinoids.

text Roelof Kleis photo Bram Cornelissen

## 1 WHY WERE SO MANY BEES DYING?

It has always been the case that some bee colonies don't survive the winter. According to bee researcher Bram Cornelissen, average winter mortality was about three per cent until 1983. That was the year that the infamous varroa mite made its appearance. This insect parasitizes bees and can cause a whole colony to collapse. From the start of this century winter mortality assumed alarming proportions, not only in the Netherlands but worldwide. In the winter of 2009-2010 around 29 per cent of the colonies did not survive into spring. The use of insecticides – and in particular those called neonicotinoids – in agriculture was identified as a possible cause. The Dutch government woke up to the problem in 2011 after the current affairs programme Zembra aired a controversial programme on what it dubbed the 'murder of the bees'. The ministry of Agriculture, Nature and Food Quality commissioned Naturalis to conduct a four-year study (2014-2018) on the causes of the bee deaths. A number of WUR researchers contributed to this, and the report was submitted to the Dutch parliament last summer.

## 2 WHAT HAS THE STUDY CONTRIBUTED TO OUR KNOWLEDGE?

The most important finding is that winter mortality is not as bad as we thought. The high levels of colony collapse of the first decade in this century have stopped. The last time mortality was higher than 20 per cent was in the winter of 2001-2002. Since then the figure has just about halved. Last winter only nine per cent of the colonies did not survive and most beekeepers did not lose any hives during the winter. Another important point is that there is no smoking gun: no single cause of mortality has been found. Various factors play a role: parasites such as the varroa mite, chemical pesticides, fragmented landscapes. What does increase bee colonies' chances of surviving the winter, is good control of the varroa mite.

## 3 AND WHAT ABOUT NEONICOTINOIDS?

Residues of chemical pesticides were found in about 30 per cent of the bee colonies in the study, and in 12 per cent these were neonic-

otinoids, but there is no correlation with winter mortality. And anyway, in 2013 the use of the three most important 'neonics' – imidacloprid, clothianidin and thiamethoxam – was banned on crops that bees feed on, and a total ban was introduced in 2018. While the study reveals no noticeable effects of neonics, this does not mean that they have no effect, says Bram Cornelissen, one of the Wageningen bee researchers who worked on the study. 'There are enough studies in both lab and field that do show that neonicotinoids affect bees. But no studies demonstrate a correlation with winter mortality. His colleague Tjeerd Blacquière, also a bee expert, was not involved in the study and is more

**'The role of neonicotinoids is always exaggerated - it's a question of careful beekeeping'**

outspoken. 'The role of neonicotinoids is always exaggerated. In all the years that the debate has been going on, many beekeepers' colonies have not died. I've never had a colony collapse during the winter. It's a question of careful beekeeping.'

## 4 SO HOW COME WINTER MORTALITY HAS HALVED SINCE 2012?

There's no clear answer. Experts in Wageningen attribute it to beekeepers' improved understanding, which has resulted in more effective control of the varroa mite. 'Varroa is the most important factor affecting bees' health,' says Cornelissen. 'Beekeepers used to kill varroa by placing a strip with a chemical on it in the beehive. Since 2005 they've been using other substances such as oxalic acid and formic acid, which you apply in the form of drops or a spray: more labour intensive but a less noxious form of pesticide. In 2010 we published a booklet on

effective varroa mite control. We think that changing from straightforward chemical control to a more natural method has had a significant effect on the reduction in winter mortality. But remember, we are talking about honeybees, says Blacquière. 'Wild bees are a different story; it's much more difficult to pinpoint the causes of mortality than it is with honeybees.'


## 5 SO IS THE END OF WINTER MORTALITY IN SIGHT?

No. Mortality levels remain higher than they were before the advent of the varroa mite. It would therefore be good for honeybees to acquire resistance against the parasite. At WUR they've been working on breeding a varroa-resistant bee since 2008. Blacquière: 'We started by separating 75 randomly chosen bee colonies so that the queens only mated with the drones from this group. After one last varroa treatment at the start, we stopped treatments, so that only colonies that were most resilient to the mites survived. Natural selection on the basis of resistance to varroa. Now we're 11 generations further and our bee population is pretty resistant.'

## 6 IS WAGENINGEN BREEDING A SUPERBEE?

No, WUR is certainly not developing a superbee to put on the market, says Blacquière. His aim is to demonstrate that all beekeepers, or beekeeper collectives, can breed their own resistant bees through natural selection. 'The varroa mite is with us to stay. Our approach is to show that the honeybee has enough genetic potential to be able to deal with the parasite itself. We are developing a protocol that gives instructions on how to do this.'

## 7 WILL THIS HELP TO FURTHER REDUCE WINTER MORTALITY?

Time will tell. 'A return to pre-varroa mite levels is no longer feasible, I suspect,' says Blacquière. 'If there are no mites in the autumn, winter mortality is around 3.7 per cent. The contamination level in our colonies is between 5 and 10 mites per 100 bees. We don't yet know how much winter mortality that causes.' 

# ‘DEAL WITH THE ROOT CAUSES OF STRESS’

During the Surf Your Stress week from 11 to 15 November, WUR students and staff can learn ways of dealing with stress. There will be workshops on time management, the art of failure and mindfulness. A good idea? Or is that just symptom-surfing, and does WUR need to change its policies for stress levels to drop?

text Coretta Jongeling and Luuk Zegers illustration Henk van Ruitenbeek

## Louise Bommelé



BSc student of  
Health and Society

‘WUR is sending out mixed messages. First there’s the Surf your Stress project, where they say working until deep in the night is the fast track to a burnout, and then they proudly announce that the library in Forum is open until midnight during the study week, which normalizes the idea that it’s fine to study until late. **The university should work towards creating a healthy working environment, for example no longer setting deadlines for midnight on Sunday.** If they made them a more normal time on Friday, students wouldn’t have to devote their entire weekend to studying. That way you prevent those at high risk of a burnout – people who always feel they haven’t done enough – from keeping going until midnight.’

## Filipe Ribeiro da Cunha



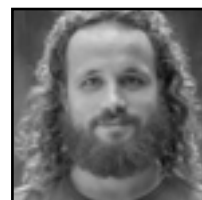
Lecturer in Behavioural  
Ecology

‘My colleagues and I experience a lot of stress. The main cause is the way to-do lists of small stuff get longer and longer. It never stops. My diary is crammed full and it’s almost impossible to get all the work done when little matters keep cropping up that require my at-

tention. **The worst thing is the enormous number of emails. Yesterday I received 65, not counting the spam.** Although many people say you don’t have to answer mails immediately, it doesn’t feel like that. It would be good for our inboxes and our minds if the university introduced a healthier email culture. Say by blocking mail after a certain hour, or by encouraging more face-to-face contact. Although, then we’d probably drive ourselves mad with all those pointless meetings...’

**‘It is important to look out for each other in the workplace’**

## Pieter Rouweler



Head of Insect Rearing at  
the Entomology Lab

‘It would be good if WUR looked into how people can become more resilient to stress or how workloads can be reduced when necessary. **In our department it was a great help when money was made available so we could employ someone for a lot of the teaching work. That gave profs and postdocs more time for their other work.** It’s also important to look out for one another in the workplace, to help each

other and give positive feedback when things go well. If you feel appreciated it’s easier to accept and discuss criticism, and that prevents a lot of stress. Some of my colleagues really enjoy the chair massages that WUR offers. That’s not really my thing, so I pass my massage slots on to others.’

## Annemarie Teunissen



Biology study advisor

‘A lot of students suffer from stress. There are a number of clear causes. Some political decisions have considerably increased the stress on students. On top of that, stress is also a general problem in society. It affects everyone including teachers and other members of staff. The problem is not just confined to WUR. **Succumbing to stress is not a personal failure. We have to learn how to deal with it. That’s why I think Surf Your Stress is a good idea, for staff as well.** It’s also important to learn to stand up for yourself, to be able to say “no” if a deadline is unrealistic. That’s personal development. Fortunately more and more MOS modules (modular skills trainings for Master’s students, Ed.) cover personal development subjects. And we are also offering Personal Motivation Assessment more often as an elective course. What makes you happy? What do you want? That’s a big help for dealing with stress. I think the uni-





## 'The library stays open till midnight so WUR sends mixed messages'

versity can do a lot by offering tools to help people learn how to deal with stress.'

### Patrick Steinmann



**Speaking on behalf of the PhD Council**

'The things WUR does about stress: put on a play, organize a "time-out" café, hold two workshops and three talks, provide a stress ball pool. **The things WUR should be doing about stress: hire enough people for the present workload; pay all researchers – including sandwich PhD students – a decent living wage; adjust the number of incoming students to the amount of**

**supervision available and to the housing market.**


As the PhD Council, we hope that in the future WUR tackles the roots of the stress problem rather than teaching people how to surf the symptoms.'

### Marije van Santen



**BSc student of Landscape Architecture and Planning**

'My course is hard work. They warn us: if you can't take the pressure now, you won't manage later either. And there's external pressure too, the student loan for example. And if you don't pass certain subjects you can't

start other ones, which means you get delayed by a year. The university should look into making things more flexible – that would certainly reduce stress. I've had RSI now for about a year, and that's not just due to my posture but also because of stress. It would be good to devote much more attention in the first year to the balance between work and free time. There's so much to do that is tempting for an 18-year-old: you have to pass your coursework and build up a social life in a new place. **Students should be told about stress, burnout and RSI by other students who have suffered from these problems.** That would have more impact.' 

Sick Master's student seeks donor

# 'Dialysis is such a drag'

When you meet him, Pepijn Heerkens Thijssen seems just like any other Wageningen student. He lives in a student house, likes to go out for a drink, and has been to Australia on an exchange. 'I usually keep quiet about the fact that I have a rare kidney disease.' But now he is seeking publicity – out of necessity.

*text* Luuk Zegers *photo* Guy Ackermans

**'Y**our kidneys filter waste products out of your blood, and then you pee them out. Kidneys that are in perfect condition can filter 100 millilitres of blood a minute, but kidneys generally filter less efficiently. Even if your kidneys are only functioning at 50 per cent you're unlikely to notice. You'll only start to feel things when they're functioning at about 30 per cent and waste products remain in your blood for longer. You'll have much less energy and start to wake up feeling nauseous.'

## ALPORT SYNDROME

Pepijn Heerkens Thijssen (22) is doing a Master's in Management, Economics and Consumer Studies. His in-depth knowledge of the kidneys comes from his visits to the doctor. When he was ten, he and his brother found out that they have Alport syndrome, a rare hereditary disease that causes kidney failure, hearing problems and sight loss in young men. 'I have a hearing aid and contact lenses, but until recently we had no problems with our kidneys.' So Heerkens Thijssen did what many young people do. He came to Wageningen, joined Ceres student *society* and embraced student

life to the full. He breezed through his bachelor's course in Business and Consumer Studies, topping it off with an exchange in Melbourne in his final year. 'It sounds brattish, but it was the only continent I hadn't been to. And I thought that if I did my exchange in Europe everyone would come and visit me, and I really wanted to have an adventure on my own, so I went to the other side of the world.'

## SURFING AND SKATEBOARDING

Heerkens Thijssen felt very much at home 'down under'. 'I did my minor there, went on a couple of wonderful trips, did a lot of surfing, and took up skateboarding. Melbourne is a big city, but it's easy to find your way around and I quickly felt at home there.'

While in Australia, Heerkens Thijssen went to hospital twice to get his blood checked. 'At the second appointment it became clear that my kidneys were deteriorating fast. That was in June. So when I got back to the Netherlands I had a blood test immediately. The results showed my kidney function was really low, so I started to look for a donor. At the moment my kidneys are functioning at 12 per cent.'

## That sounds serious.

'It is. Fortunately we've found someone who is willing to donate a kidney, but it takes four months to check whether the kidney is completely compatible. Given the speed at which my kidneys are declining, I'll probably have to have dialysis while I'm waiting. That means going to hospital every other day and being hooked up to a machine to clean your blood. And that's such a drag. There's also a chance that my donor's kidney won't be compatible, in which case we'll have to look further.'

## What are you doing about that?

'My family and I are looking for a back-up donor. Apart from that I'm trying to enjoy myself as much as possible while I can, because I know I won't be able to do much once I have to start dialysis and have the trans-







▲ Pepijn Heerkens Thijssen in his student house. 'I'm trying to enjoy myself as much as possible while I can, because I know that soon I won't be able to do much for a while.'

plant. Going to techno parties at the Amsterdam Dance Event with housemates. Skateboarding. And my main thing in life: going to the pub, though of course I drink much less than the rest. I am allowed to drink in moderation, as long as I take phosphate binders.'

## 'For the past few months I wake up feeling like I have a hangover'

### *What does it feel like to have kidney failure?*

'For the past few months I wake up feeling like I have a hangover. I also get tired more quickly and I'm on medication. I've had to give up sports in the last two months and I'm finding it harder to concentrate when I'm at the uni.'

Besides the physical discomforts, having kidney failure also means that I'm no longer able to do things I'd like to. I'd really like to organize the AID for Ceres, but I'd have to be able to work full time on that around the time when I'll probably be having the kidney transplant. These are all irritations.'

### *How do those around you deal with the situation?*

'I usually keep quiet about the fact that I have a rare kidney disease. People probably mean well, but I really don't need sympathy from everyone. It occupies enough of my time anyway, so I'd rather not be reminded of it in my free time too. The reason I decided to give an interview now is because I'm looking for a back-up donor and I hope that the publicity will help.'

### *Where will you be in five years' time?*

'Good question. I'd like to work for a big company later on, in the field of logistics. My thesis was about improving the efficiency of parcel delivery. If people provide two delivery addresses instead of one, for example their place of work from nine to five, and their home address for six to nine in the evening, parcel delivery could be made 25 per cent more efficient. I like it if you can see when something's working well or not. There's always room for improvement. But all in good time: first I need to get myself better.' 🗣️



## IN OTHER NEWS

### BLUE

Blue light from screens shortens life expectancy. In fruit flies, at least. This was the finding of a study by Oregon State University. The lifespans of fruit flies that only see blue light during the day are half the length of those of fruit flies that live in complete darkness. This has two implications: 1: screens might be risky for humans too. 2: You can combat fruit flies with your mobile phone.

### DRY

American and Scotch whiskies dry out differently, physicists at the University of Louisville discovered. The Scottish variant leaves concentric circles behind, while the American spirit leaves a network of lines. The researchers think this comes from undissolved particles from the vats in which the drink ripens. Each brand leaves its own 'fingerprint' behind. Makes identification easy.

### JAWS

Biologists from Hiroshima University have discovered a new shrimp-like species: *Podocerus jinbe*. It is half a centimetre long and lives in the mouth of the whale shark. Strange habitat? Not really. There's a steady supply of fresh seawater and food. And what safer place than in the jaws of a large predator? The real question is what the whale shark stands to gain from the arrangement.

### JUMP!

Gymnastics during class improves learning capacity, shows a meta study on the link between learning capacity and movement, done by the University of Leiden and partners. It is enough to do some simple exercises such as jumping or running on the spot. Maybe it's because you are less likely to fall asleep during a boring class?



RESEARCH — 7 November 2015

# Students homeless after fire safety check

**How do you find a home for eight people, two cats, a dog and some chickens in five days? This task faced eight WUR students when their house in Renkum was quite unexpectedly declared unfit for habitation due to missing paperwork and inadequate fire safety.**

During a fire safety check at a snackbar, the fire brigade noticed that the house behind it was inhabited too. It has been rented out to students for 30 years but has never been checked in all that time. It turned out many of its ceilings are made of inflammable soft board and there wasn't a single smoke alarm in the building.

At first it looked as though this would be a flash in the pan: the landlord promised to take the appropriate steps. But when the housing inspectorate took a look, the house turned out not to be registered as student accommodation at all. The residents were astonished. 'We are all registered with the municipality and you assume your landlord knows the rules,' says Elise Lange, a Bachelor's student of



▲ Lianne Eertink in her now empty room

International Development Studies.

After the inspection, the residents were given five days to vacate the premises. In that period, a firefighter sat on the sofa every

**'We had such a great house - it felt like a family.'**

night to guard the house. The residents took a week off to look for new accommodation. 'We

phoned all the campsites and hotels in the area, but everything was full,' says Master's student of Animal Sciences Lianne Eertink, who has moved back in with her parents temporarily. Renting a house together seemed impossible too. 'As soon as they heard the word "student", all the property-owners said no.'

The residents have now all found different places to stay temporarily and are still looking for a long-term solution. Eertink: 'We had such a great, friendly house. It really felt like a family.' **© CJ**



## Sport for a cleaner sea

Fishing nets account for 46 per cent of the plastic soup in the ocean, with disastrous consequences for the sea life that gets stuck in them. So WUR alumnus Tim de Rooij and student Tomas van der Heijden came up with 'Beachatón', a kind of 'badminton on the beach'. All the material for Beachatón – the bats and nets – are made out of disused fishing nets. De Rooij hopes the sport will spread quickly. 'Because the more people play Beachatón, the cleaner the ocean will get.'

**© LZ, photo Sven Menschel**



# 'Sail to the COP' becomes 'Rail to the COP'

**The young people of Sail to the COP, some of them Wageningen students, who set sail for the climate summit in Chile as a protest against air travel, are not going to make it now that the summit has been moved to Madrid. But they have not let that take the wind out of their sails. They are now calling on European COP participants to travel overland to the summit.**

The news that the summit in Chile is not going ahead due to unrest in the country came 'as a blow' to the 36 young Europeans on board the three-master Regina Maris. It is bizarre to be working so intensively on a plan that suddenly falls apart, say the sailors. At that point, the ship was already halfway across the

Atlantic on its way to South America. An about-turn is not an option, as some of the young people have appointments to keep in South America.

But the relocation of the climate summit hasn't caused the Sail to the COP crew to throw their mission overboard. Instead, in an open letter, the sailors have changed tack. They are calling on all European COP participants to avoid flying and travel to Madrid overland. 'It is our mission to make the travel industry more sustainable and fairer,' they say in the open letter. 'Take your responsibilities seriously: take the train, the bus, or go by bike. #Railto-theCOP!'

They are looking into the possibility of getting some of the crew to



PHOTO: SAIL TO THE COP

the climate summit some other way, perhaps by transferring to a different, faster boat. Flying, of course, is not an option. **LZ**

▲ A crew of young Europeans were on their way to the climate summit in Chile in the Regina Maris.

## MEANWHILE IN... CHILE

### 'Even peaceful protests are suppressed'

**A rise in public transport prices sparked mass protests and riots in Chile at the beginning of October. Hundreds and thousands of people have expressed their discontent about inequality and the cost of living in the country. At least 20 people died in the violence and hundreds were injured. The UN climate summit that was to be held in Santiago has been moved to Spain.**

'Reports by Chilean television channels and newspapers currently focus on the protests and associated violence. I miss coverage on the problems the country is facing and discussions about necessary changes. I am careful what media I use to follow the developments in Chile. I receive a flood of information every day, much of which is fake news. I filter the information, but I don't always know what to trust. The repression by the government is too severe at the moment. Even peaceful protests are immediately suppressed by the police. One example is a non-violent group of pre-school teachers who were attacked on the streets with a water cannon.



Jorge Vega Briones, an MSc student of Earth and Environment from Chile, reflects on recent events in his home country.

The discussion is polarized and there is no dialogue. I am glad to see that people have started to organize themselves into groups where they talk



FOTO: ABRIENDOMUNDO / SHUTTERSTOCK.COM

about what needs to change in society. They try to make suggestions to the government in other ways than protesting. For example, they produce documents resulting from brainstorming meetings. I also see many surveys on social media these days with questions about how content people are with the government.

It feels strange to be so far away from my country in these times, with the feeling that I cannot do much. I am worried and feel stressed because of the situation. My sister once went outside during the curfew to help somebody and I was concerned that something would happen to her. I think it is a pity that the climate summit in Santiago was cancelled because I think Chile needed it. We need discussions about natural resource exploitation since inequality in the country is directly related to this issue.' **JS**

# YOU ON CAMPUS

**Marina Mokbel has recently obtained her Master's degree in Marine Ecology at Wageningen. She is from Bulgaria and was planning on going back home after graduation, but she has changed her mind. She will stay here and will continue to do full-time what she did part-time during her studies: teaching students to dance.**


'Dancing has always been an important part of my life. When I first came here, I barely knew anyone and felt lonely. I just really wanted to join a dance community. I got to know Lafrique Dance Company and started to take lessons there. I met a lot of WUR students there and I really liked the atmosphere, which made me feel involved', says Marina. 'After a while, I was offered a position teaching salsa to students and organizing events in collaboration with student associations. It

was nice that I could combine student life with something I'm passionate about. I really enjoyed it!'

## 'I felt lonely in Wageningen at first, but then I started taking dance classes'

As a recent graduate, Marina has decided to try something new and challenge herself. Instead of moving back to her home country and searching for a job related to her studies, she will stay at 'the place that feels like home' – the dance studio in Wageningen – and continue with dance tutoring and organizing events.

'The dance studio is like a second home to

me. I want to create a home-like atmosphere there for both the locals and international students like me. I want to make everyone feel connected and united through dancing', Marina says happily. 'As for me, through dancing I found my feet after graduation. This is the best reward for all my effort in the past two years. I'm looking forward to meeting and working with more dance lovers!' 



## 'I'd never seen anyone screaming and crying like that before'

### DIARY OF A CARETAKER

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

**Generally speaking, student apartments are happy places. But sometimes sadness is concealed within their walls, recounts Eugene van Meteren.**


'Early one morning I was registering requests for repairs in an office on the ground floor of one of the student residences. Suddenly, out of the corner of my eye, I was aware of a commotion outside. Looking out of the window I saw a young African woman in pyjamas jumping about in the thorny bushes in a highly agitated state.

'I ran outside and saw that her bare feet were bleeding as she stamped in the bushes. I'd never seen anyone screaming and crying like that before. I went into the bushes to try and calm her down and after a few minutes her howls turned to sobs. I asked if we could go inside and she took my arm.

'As we walked towards the lift I asked what had happened. Still sobbing she explained that she couldn't get the images of a terrible event out of her head. As a child she had lost her parents during the genocide in Rwanda. "My parents were killed in front of my eyes. But I survived together with my sisters. I am very happy to be alive, but being an orphan at a young age is horrifying."

'We soon got to her room on the eighth floor, where the floor was covered with broken glass and blood. The moment we entered the room the woman made a dash for the open window. She crawled through it onto the balcony and tried to climb over the railing. I managed to pull her back together with another resident who had heard the commotion. Meanwhile, one of my colleagues had called the police, who fortunately arrived quickly and took over in a professional way. The same day we heard that the woman had been taken to the psychiatric ward of the clinic in nearby Wolfheze.

## 'My parents were killed in front of my eyes, but I survived together with my sisters'

'Three months later, subdued and clearly on medication, the woman came to the Idealis office accompanied by someone from the clinic, to collect her things and say goodbye. The person accompanying her said that it would help her healing process if she returned to her own country and to her sisters. After that last encounter I heard nothing more of her.' 





**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.**

# Farming life in New Zealand

Palmerston North is on New Zealand's North Island. My job was to map the diversity in organic farming in that area. I visited 19 farmers and looked at their values, relationships and work methods, the three things that together make up a strategy.

## FOUR TYPES OF FARMER

'In the end I concluded that there are four different sorts of farmer: soil farmers, spiritual farmers, old-school farmers and new-school farmers. Soil farmers focus on maintaining the balance of nutrients in the soil. Spiritual farmers feel a connection with nature and try to treat the environment with as much respect as possible. They are also keen on spreading their ideas. Old-school farmers are more conventional. They have often inherited the farm and regard it as a source of income. New-school farmers are people who have decided to give up their office job and have made a conscious decision to go into organic farming. They are often idealistic and innovators. It turns out that norms and values have the most influence on the farmers' strategies and relationships.

## NARROW COUNTRY ROADS

'I had a rental car to get from one farmer to another. Driving along narrow country roads, I ended up in the most gorgeous spots in the mountains and among the volcanoes. It was all stunningly beautiful. I stayed with some farmers for a few days to get more of a feel for life on their farm. I discovered that I actually knew very little about the farming life.

'Organic farmers are very passionate about their work and are very willing to talk about what they do and why. I also noticed that they were proud of farming organically. A big cultural difference with the Netherlands is that nearly all the children

in these families go to boarding school because the farms are too far away from local schools. There are separate boarding schools for boys and girls.

**'I find it easier to be on my own now and no longer worry about missing out on things'**

## MORE SELF-CONFIDENCE

'Because I was doing research I ended up in very different places and got to know people better than if I had been a tourist. I learnt a lot personally too. I had the time to think about my life and put things in perspective, and I found it easier to think about what I want. I am better at being on my own now and no longer worry about missing out on things. I'm also more confident that things will work out fine. It wasn't all great of course. I was on my own and I really missed people. But I had little choice other than to accept the situation. And in the end that gave me more self-confidence.'

RFJ

## THE WORKS

**Who?** Maxime Veenhoven (24)  
**What?** Thesis research on organic farmers' strategies  
**Where?** Palmerston North, New Zealand

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



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## In memoriam

## Arjo Rothuis



Arjo Rothuis passed away on Friday 25 October, at the age of 60. Arjo worked as Manager International Cooperation Asia in the Corporate Strategy & Accounts department (CSA). He was diagnosed with cancer in April this year.

Arjo obtained a degree in Aquaculture and Fisheries from Wageningen, and got his PhD at Louvain University in Belgium in 1998. Early in his career, he worked overseas for a long time, in countries including Zambia, Madagascar and Vietnam. Arjo came to work at WUR in 2011,

as a Senior Researcher in Aquaculture Development at IMARES. He moved to Wageningen International in 2015, as Manager International Cooperation Asia. In this capacity, Arjo made an important contribution to expanding our collaboration with partners in Asia.

Arjo was a highly professional and committed member of staff. He was exceptionally conscientious and always put the interests of WUR first in his dealings with professional partners. He was always business-like, fair and people-oriented, making him a role model for colleagues both within and beyond CSA. Foreign colleagues from Japan, South Korea and Iraq who were seconded to work

with Arjo found in him not just a colleague but also a highly committed mentor.

In spite of his debilitating illness, Arjo wanted to go on doing his bit for WUR to the end. He was very keen that his work should be continued after his death and he was closely involved in the recruitment of his successor.

Our thoughts are with Arjo's wife, daughter and mother, and the rest of his family. We shall remember Arjo as the professional and dedicated regional manager he was. But above all, as the sincere and dedicated man he was.

*On behalf of the CSA team,  
Ron Mazier, CSA director*

## In memoriam

## Ricardo Francisco Paes



Last week we received the shocking news that Ricardo Francisco Paes had passed away in his home country, Brazil. Ricardo was a guest

PhD student at WUR, working at the Environmental Policy Group within the framework of the International Cooperation program Capes/Nuffic. Ricardo was doing his PhD at the Federal University of Santa Catarina in Brazil and stayed with us for nearly a year, working on his research on the aerial spraying of pesticides. Ricardo was a very modest but also very friendly colleague. He needed some time to really settle in but then he made some wonderful friendships here in Wageningen. He returned to Brazil in August and the news that he had passed away suddenly came as a complete shock to us all.

Our thoughts are with Ricardo's wife, his family and his colleagues in Brazil, and we wish them all the strength they need at this sad time.

*On behalf of the staff and PhD students at the Environmental Policy Group,  
Peter Oosterveer*

## In memoriam

## Hadija Nagujja (1989-2019)



On 19 October students and staff of the MSc in Leisure, Tourism and Environment (MLE, since renamed the MSc in Tourism, Society and Environment) received the incredibly sad news that Hadija (Haddy) Nagujja, an MLE graduate in 2018, passed away in a fatal traffic accident in Kampala, Uganda.

Haddy was very much loved among the student community, MLE staff and beyond. She was a unique, warm and kind-hearted person. With her genuine, fun personality, she brought lots of laughter to the classroom. She was a hardworking student who passed her courses with high grades. At the same time, she was always there for her fellow students if they needed help. Being the joyful and jovial person she was, Haddy contributed greatly to the warm and personal connections among MLE students and staff.

Inspired by the 'slow movement',

Haddy's thesis was entitled 'An Exploration of Emotions and Subsequent Transformative-Therapeutic Effects in Slow Tourism Experiences'. It showcased an original and successful exploration of slow tourism on the island of Texel, the Netherlands, and it contributed to a better understanding of the concept of slowness and the role of emotions in tourism practices and experiences of personal transformation.

After her graduation, a promising future lay ahead. She got engaged to her boyfriend, worked as a senior manager for a Ugandan tour organization, and had exciting plans for the future. We are deeply sad about losing Haddy way too early and we will remember her kindness with gratitude.

Our sympathy goes out to Haddy's parents, family, fiancée and friends for their terrible loss.

*MLE students and staff, the Cultural Geography Group, the Anne van den Ban Fund, the Ugandan community in Wageningen and the United Community of African Students*

## 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. The magazine is published every fortnight on Thursday.

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# >>TYPICAL DUTCH



ILLUSTRATION: HENK VAN RUITENBEEK

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## ‘You can always bake a cake’

**It was in the end phase of a course’s group work when I asked my fellow group members for permission to miss one meeting due to another urgent appointment. They told me it was OK, but one Dutch group member added: ‘Well.... you can always bake a cake’.**

Some of the other Dutch students nodded in agreement, but I was confused as I didn’t understand what they meant. I was wondering whether it was sarcasm or whether they were trying to say that my appointment was not necessary.

Later on I asked another Dutch friend and she said that this is a habit amongst Dutch students. When they are doing group work and someone is late or absent, that member should bring them a treat as a form of ‘compensation’, whether it is sweets, cookies, or a homemade cake. I felt relieved to hear this explanation. I could face my group again without feeling awkward.

And I surely ‘compensated’ for my temporary absence: we had a group dinner where I cooked a nice *gado-gado*. 🇮🇩 **Ranhi Whesi Umbarani, MSc student of Plant Sciences, from Indonesia**

**‘Dutch students expect you to compensate for missing group work by bringing a sweet treat’**

*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.*

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