

Resource

DECEMBER 2022 VOLUME 17

The journalism platform for all at Wageningen University & Research

Profs score poorly
on gender
equality

Energy bills
Worries about
students

Dassenbos wood
has been enlarged

Formula milk producers
have pause for thought

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are malnourished

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FOREWORD

We will keep going

The times we live in seem designed to drive us to despair. Climate change, loss of biodiversity, war... you name it. If you are indeed feeling driven to despair, you could probably do with something to cheer you up. I was fortunate to get plenty of that while working on this issue.

For example, I interviewed two of the four gritty individuals we highlight on pages 20-23: inspiring people who keep going despite setbacks or tragedy (which, as it happens, is also a recurring theme in this issue). I was also lucky enough to attend a symposium organized by WUR students on climate policy with Frans Timmermans (page 24). To the students' surprise, Timmermans had said 'yes' to their invitation to come and talk to them. The evening was an invigorating event from start to finish: from the sharp student pitches taking apart the EU's economic policy, agricultural policy and energy policy to the eagerness of the students to ask questions and learn something from Mr Green Deal.

It would have been a good event for people with climate anxiety (page 12) to attend. If you missed it, you should at least read Tim van Hattum's book *Only Planet* (page 26), as it shows that a liveable future is still achievable.

Luuk Zegers
Resource Editor





TAKE THE STAGE

There is going to be a sequel to the open mic night 'Spoken' that took place in the bblthk (the town library) on 30 November. The driving force behind it, WUR student and Wageningen city poet Ellen van der Kolk, will organize a monthly edition in 2023. Internationals are warmly invited to come and perform. Poetry, rap, stand-up, music, spoken word – anything goes, really. Save the dates: 11 January, 15 February, 23 March, 20 April, 10 May and 14 June. You can sign up via bblthk.nl/spoken. Members of the audience are welcome too, of course. Entrance is free. ME

Photo Guy Ackermans

M/F ratio in science: gender equality is a long way off

The number of women in senior positions in academia is not increasing fast enough, says the new Women Professors Monitor. Progress is slow at WUR too.

In 2021, the number of female professors in the Netherlands increased by 1 per cent, the smallest rise in the past five years. At this rate, it will take until 2041 to get a 50:50 distribution in male and female professors, calculates the Dutch Network of Women Professors (LNVH). The monitor notes gender inequalities in other respects too. Female academics are more likely to have a temporary position than their male colleagues and they are routinely on lower job scales.

The increase in women professors is just as slow at WUR as elsewhere. At the end of 2021, the proportion of female professors in Wageningen was just 1 percentage point higher than the year before:

21.9 per cent versus 20.9 per cent. With progress at this rate, it will take WUR 28 years to get as many female professors as male ones. It is also worth noting that at this rate, WUR's own target of 30 per cent female professors by 2025 is not attainable either.

LNVH notes that a large number of male professors will be retiring over the next few years, leaving room to appoint women to these positions. The relatively large increase last year in the share of female associate professors has also enlarged the pool of candidates to replace these men. Statistically at any rate, there are enough female associate professors available to replace more than 90 per cent of the professors due to retire. ME

See resource-online.nl for an analysis of the Wageningen numbers.



M/F/X

For the first time the Monitor has a category 'other' in addition to the categories of 'men' and 'women'. LNVH acknowledges that this is far from satisfactory, 'but at least it offers a start in abandoning the usual binary data registration and presentation'.

Energy bills: 'Drain on student finances'

Students' monthly expenses are rising steeply, leading to a risk of financial problems. Many are worried.

From 1 January 2023, Idealis tenants will be paying a lot more in service charges. The largest student accommodation provider in Wageningen speaks of 'quite a drain' on students' financial situation. On average energy costs are set to rise by 127 per cent, or 71 euros extra per month for an individual student. That number can be higher or lower depending on the type of room, the building, energy consumption and other factors.

WUR too is concerned, says Ingrid Hijman, head of the Student Service

Centre. She is particularly worried about international students. 'They have often worked out down to the last penny what money they

'International students often can't even borrow more'

increase the size of their loan. That's not great, but it isn't even an option for most international students. Where do you find the money then?'

International students

WUR too is concerned, says Ingrid Hijman, head of the Student Service

Centre. She is particularly worried about international students. 'They have often worked out down to the last penny what money they need to study here. Now they face 100 euros a month extra. Dutch students can often increase the size of their loan. That's not great, but it isn't even an option for most international students. Where do you find the money then?'

Students who get into financial difficulty through no fault of their own may be able to get help from the Louise O. Fresco Fund, says Hijman. LZ

Read more at www.resource-online.nl

63

Precisely 381 scientists, including 63 from WUR, signed the opinion piece by economist Naomi Leefmans (University of Amsterdam) in financial newspaper the *Financieele Dagblad*. The article calls on the Dutch government to stop the billions of euros in subsidies for fossil fuels so as to achieve the targets for reducing CO₂ emissions. This week, Leefmans sent the text and list of signatures to the Dutch Parliament. ss

'The Glass Clubhouse'

Members of KSV Franciscus will broadcast a non-stop radio show for 72 hours from the clubhouse to raise money for a riding school for the disabled in Bennekom. The show is called Francerious Request, a reference to the pop radio programme Serious Request and its Glass House. 'We want to do something for the local community,' says committee chair Jurre Braaksma. 'Anyone can come along, request a song and make a donation.' Wageningen mayor Floor Vermeulen will kick off the broadcast on Thursday 15 December. Bands will come and play on Saturday. The broadcast will end at 1 pm on Sunday, when the amount raised will be announced.

Follow the radio broadcast live on streaming platform Twitch. The link can be found on the social media channels of Francerious Request (@franceriousrequest). LZ

LETTER TO THE EDITOR

Doubts about value of citations

Associate professor Joshua Dijkman comments on an article in a previous issue of *Resource* in Letter to the Editor on WUR's citation scores. He thinks we should encourage a more critical attitude to such scores, for example by considering the value of the cited papers.

Resource recently announced that WUR had dropped slightly in the list of highly cited researchers. The article named WUR employees whose work is often cited. It also discussed the reasons why WUR had dropped down the list. You could say it offered a critical assessment of how WUR is doing. What I felt the article lacked was a discussion of the merits of such scores. Isn't it the job of a university to encourage a debate about *what* was measured, *how* it was measured and whether such measurements are even meaningful?

I understand journalists have even less time than scientists so allow me to offer that critical note. Measurements can certainly be revealing, but as an experimental scientist I am very aware that extracting

The fact that a database algorithm is able to generate a number does not make that number useful

the right numbers from a complex system is a subtle art. In experiments, at least I know what my aim is with the measurements, namely to test expectations. But what does a citation score tell us exactly?

The answer is: not a lot. Citation scores are known to have questionable value and the list of issues is long. Historians and mathematicians almost never appear in citation lists, for example, because they

rarely cite one another. Popular topics attract disproportionate attention. It is hard to track interdisciplinary work. Citation scores therefore need to be interpreted with the necessary caution. The fact that a database algorithm is able to generate a number does not make that number useful.

Fortunately the national Recognition and Rewards system has now started diversifying the metrics that institutions can use to assess their employees. But that may not be enough. Let's make it a university-wide habit to encourage critical debate based on meaningful measurements, rather than engaging in the mindless pursuit of meaningless stats.

Comment at resource-online.nl



Biodiversity summit hopes to be another Paris

Associate professor Jelle Behagel (Forest & Nature Conservation Policy Group) and two students are attending the COP-15 UN Biodiversity Conference in Montreal, Canada, to study negotiation strategies. ‘We ask negotiators about their goals and the strategies they plan to use in the negotiations. Then we observe their behaviour.’

On the summit agenda is a Global Biodiversity Framework, the Canadian equivalent of the Paris Agreement on climate change. There is already a treaty, the Convention on Biological Diversity, which was signed in Rio de Janeiro in 1992. ‘It says countries should stop the decline in biodiversity,’ explains Behagel. But 30 years later it is a dead letter and nothing has been achieved. The main aim of the conference is the ‘30 by 30’ mission: to have 30 per cent of the land and sea surface area protected by 2030. Behagel expects that to be agreed, but the big question concerns the implementation: ‘Who will pay for what, what does protection involve exactly and what role will indigenous groups play?’

Indigenous territories

Indigenous people make up 6 per cent of the global population but the land they inhabit contains 80 per cent of global biodiversity. So nature conservation will have to involve indigenous communities. That is why another key item on the summit agenda is recognizing and safeguarding their rights. Even if the new treaty recognizes the rights of indigenous groups, there is still the question of whether countries will stick to those agreements. Behagel: ‘International treaties never have much power because there is no international police to enforce them. Being legally binding is not enough; it’s also about moral responsibility.’ ss



November

Male students who row with Argo grew a moustache in November (Movember) to raise awareness about men’s health. They also raised money for research on prostate and testicular cancer and for mental health initiatives. Funds were raised through shaving fines (five euros every time you shaved) and the ‘balls-for-balls drinks’ where you had to put money in the jar for every portion of bitterballen you ordered. The month ended with a race between two boats crewed by eight oarsmen and a cox, all sporting a tash (see photo). A total of 400 euros were raised. LZ Photo Guy Ackermans

Early Career Awards for Ingrid de Zwarte and Sanne Kruikemeier

The Royal Netherlands Academy of Arts and Sciences (KNAW) has handed out its Early Career Awards for the fourth time. Two of the 12 awards go to Wageningen, namely to assistant professor of Rural and Environmental History Ingrid de Zwarte and professor of Digital Media and Society Sanne Kruikemeier.

The prize is for researchers in the Netherlands who are starting out on their career and have innovative, original ideas. De Zwarte does research that combines history and the interdisciplinary field of famine studies. Kruikemeier studies how political parties conduct campaigns

on social media and the impact on the formation of political opinions, polarization and voting behaviour (she talked more about this in an interview in *Resource* 5 last November).

The KNAW Early Career Award consists of 15,000 euros that the recipient can spend on their career as a researcher, plus an artwork. The prizes will be handed out officially to the winners on 14 February. ME

New chair holder: 'More emphasis on processing data'

There is an immense amount of scientific data. How can you detect the underlying mechanisms and causal relationships from that data? Students who can do that will make the difference, says Florian Muijres, the new professor in the chair of Experimental Zoology.

'Students can benefit from better skills in data science and modelling,' says Muijres. 'A lot of effort has been invested in collecting data with the aim of better understanding the world. But the mountain of data has become so massive that you sometimes can't see the wood for the

'The volume of data has become so massive that you can't see the wood for the trees'

trees. WUR is working on data science, but I think there is still room for improvement.'

In his group, Muijres works a lot on models to figure out the complex

flight movements of the mosquito. Since his arrival in 2014, he has developed that area of research to make it the largest within the chair group. The research has resulted in improved mosquito traps among other things, thereby helping to combat malaria.

Application

The application of basic research is and will remain important within the chair group, says Muijres. 'We work on fundamental scientific questions about how animals function. But we always choose species that are relevant for society too. That combination is inherent in the Wageningen approach.'

In addition to mosquitoes, they study viviparous fish (a model for the human placenta), cuttlefish (applications in soft robotics) and the regenerative capabilities of the flatworm (to better understand stem cells). ^{RK}

New membrane for portable artificial kidney

Assistant professor Akbar Asadi (Biobased Chemistry and Technology) has developed a new membrane that can absorb urea. That reduces the use of water in dialysis treatments and paves the way for a portable dialysis device.

Kidney patients have to visit the hospital three to four times a week for dialysis. The dialysis equipment weighs about 100 kilos and uses large amounts of water to filter the toxic substances out of the blood. Hospitals need large water treatment systems to purify that water for reuse. That is the main reason why it has not been possible to date to develop a portable dialysis device.

Water

Dialysis uses two membranes. The first membrane removes toxic substances such as urea from the blood and dissolves them in water on the other side of the membrane. The second membrane separates the toxic substances from the water, allowing a small amount of water to be recirculated in the system.

Asadi's project focuses on the second membrane. Utrecht University Medical Centre has developed beads that can absorb urea based on polystyrene polymers. 'Using this absorbent material, we want to develop a membrane with a large surface area,' explains Asadi. 'Then not much water is needed and the blood can be purified more quickly.'

Simple method

The biochemist can make the membranes in the lab quite easily using what is termed the phase inversion process. 'We dissolve the polymer in an organic solvent,' says Asadi. 'Then we pour the solution onto a plate to create a thin film. Finally, we place the plate in water, which causes the membrane to solidify.' This initial project, which is funded by a grant from the EWUU alliance (Eindhoven University of Technology, WUR, Utrecht University and Utrecht Medical Centre), aims to demonstrate the proof of principle. After that, they will apply for a larger grant. ss



A portable dialysis device would improve the quality of life of kidney patients considerably.

[You win some, you lose some]

A failed experiment, an error in your model, a rejected article: in academia such things tend to be labelled failures. As for talking about failure? Not done! But that's just what WUR co-workers do in this regular feature, 'You win some, you lose some'. Because failure can be useful. In this instalment, we hear from Eveline Verhulst, assistant professor of Entomology. Text and illustration Stijn Schreven

I've been trying and failing to modify the DNA of a parasitic wasp, *Nasonia*, ever since 2008. I want to understand the sex determination in those wasps. A whole bunch of genes together determine whether a wasp turns out male or female. I'm very interested in how that came about and why it varies so much. To understand it, you need to be able to switch off genes. To do that, you have to inject embryos (eggs) at an early stage with Cas9 RNA from the CRISPR-Cas system. And that turns out to be very difficult in this wasp. During my PhD research in Groningen, a colleague and I flew to New York, where a lab had succeeded in modifying genes by injecting eggs with a special piece of DNA. Back in Groningen, I repeated the procedure, but only a few eggs survived. It was even less successful later with the Cas9 RNA: out of thousands of injections, three eggs had survived and in none of them had the gene been switched off. That was no good to me. I completed my PhD without having used a single injected egg in my experiments.

This is a failure that's been going on for 10 years. The research keeps getting stuck for technical reasons very annoying. If injecting those eggs had gone smoothly, all these other technical hitches could have been avoided. With fruit flies and cabbage white butterflies, it is straightforward, but in this case it isn't. Most frustrating.

'One day I hope I can say: yes, it was 10 years of setbacks, but now we're there.'

Sometimes I wonder why I'm not working with fruit flies. But then again, if everyone does research on an organism with which you know everything will go to plan, we won't learn anything. Sometimes you have to deal with masses of technical setbacks before you can gain new insights. It's just got to work in this organism. It's a case of going for the long haul. One day I hope I can say: yes, it was 10 years of setbacks, but now we are there.'



Urea in breast milk important for baby

Danone is considering adding urea to powdered milk for babies based on research by Patrick Schimmel. The microbiologist obtained a PhD on 6 December for his study of the nitrogen metabolism of gut bacteria in babies.

That breast milk contains urea was a known fact, but it was thought to simply be a breakdown product of the mother's metabolism. Patrick Schimmel (Microbiology) has shown that the urea serves a purpose for the baby. 'Bacteria need nitrogen to grow,' he explains. 'They get that nitrogen from the urea in breast milk.'

Bifidobacteria are beneficial gut bacteria that help the baby digest the breast milk and perhaps also train its immune system. In an *in vitro* experiment, Schimmel showed that these bacteria

are able to convert urea very efficiently. That means the bacteria perform a renal function at a time when the baby's kidneys still have to get going properly, explains the microbiologist. 'Too much urea can be harmful for the baby, and the bacteria help prevent that.'

New formula

Schimmel's research has given formula milk manufacturers pause for thought. Breast milk contains less protein compared with cow's milk, but has a lot of other nitrogen sources, including urea and free amino acids. But cow's milk forms the basis for most formula milk for babies. Schimmel: 'Danone Nutricia Research, the partner in my project, has a patent for adding urea to formula milk, or for checking the amount of urea — because too much urea is risky as well.' ss

70,000 hectares of new nature needed

Drastic measures are needed to preserve species and key habitats. Among other things, new nature areas need to be created. WUR researchers and bird organization Sovon came up with an estimate per province for the Ministry of Agriculture, Nature and Food Quality.

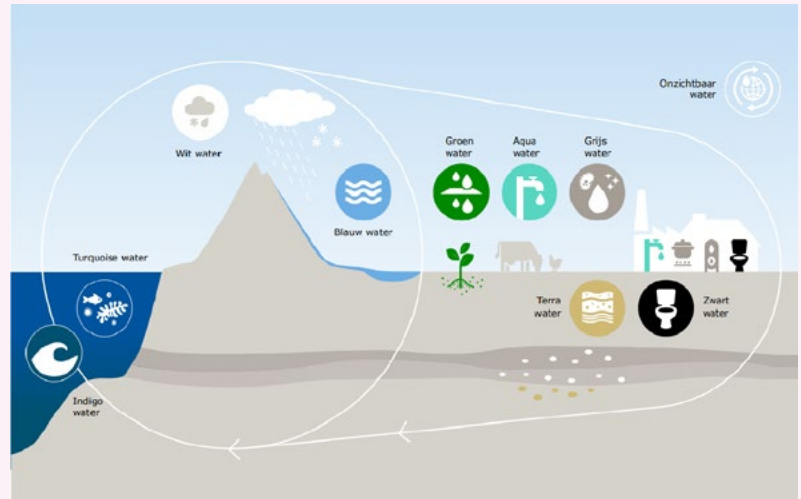
Nearly 70,000 hectares of new nature is needed in total. A small proportion (10,000 hectares) should be forest. In addition, 700,000 hectares of farmland, a third of the total area, needs to be managed differently. According to Nina Smits (Vegetation, Forest and Landscape Ecology), that mainly means protecting populations of peewits, godwits

It is mainly about protecting field birds

and other field birds. The calculations involved looking at how many birds are needed to maintain a stable population and how much space

they require. The new nature should preferably connect to existing nature areas. Smits: 'It is only logical to have new areas in the places that are most promising. In addition, existing nature areas can be transformed into desirable habitats for certain species.'

The calculations play a role in the elaboration of the plans the provinces need to make to achieve the targets for nature, water and the climate. Those targets were agreed in the National Rural Areas Programme. One aspect is tackling the nitrogen issue. RK



The water cycle from the report with its ten types (and nine 'colours') of water. Illustration WUR

The dilemmas of water use

The transition to a circular food system involves water too. Water should therefore get a more prominent place in the food system of the future. And the Netherlands has some key decisions to make. That is the message you get from the 'Wise with Water' report that Wageningen Bioveterinary Research presented last week to the Ministry of Agriculture, which commissioned the study. 'What do the changes in the water system mean for the water cycle, but also for health, biodiversity and the well-being of humans and animals in the Netherlands? We show all that in this report,' explains project

coordinator Adriaan Anthonis. The report describes the water cycle at the macro level, distinguishing between water's different manifestations ('colours'), ranging from 'white' water droplets in the atmosphere to 'black' sewage water that contains the excrement of humans and animals. The researchers also selected real-life stories about water for the report to show the opportunities offered by responsible water consumption and the threats from irresponsible usage. ME



Dialogue on animal images

In our increasingly visual-oriented world, we see a lot of animals in the media. Do all those images increase our understanding and empathy, or do they give a distorted impression?

About 100 animal professionals and animal lovers recently got together to discuss these questions. The occasion was the annual Animal Talks organized by the Cen-

tre for Sustainable Animal Stewardship (CenSAS), an alliance between Utrecht University's Faculty of Veterinary Medicine and WUR's Animal Sciences Group. The day started with a mini lecture by Maarten Reesink, assistant professor of Animal Studies at Amsterdam University, followed by discussions in small groups. Reesink explained that animals had always been prominent in the media. Ani-

mals played the main role from the oldest rock art to the first YouTube video. 'And of course everyone knows the internet is mainly about cats,' he noted. The Talks did not have a concrete outcome, but that was not the intention. It did make people think and let them develop new contacts. ME

Dassenbos to be enlarged

Trees are regularly felled on campus to make way for building projects, so it is big news when trees are planted. Especially when it's over 2000 trees.

Leo Goudzwaard, a researcher at Forest Ecology & Management, and his team turned a field to the north of Dassenbos wood into new woodland. This was partly in the name of science. 'The field had been used by Carus and then it became available,' explained Goudzwaard. 'A number of people had the idea of planting trees there to enlarge Dassenbos. The Dutch Forest Strategy states that 37,000 hectares of new woodland needs to be planted by 2030. We are doing our bit here.'

The new trees are not intended as compensation for the trees felled to allow construction of the bus lane on

the other side of Dassenbos. WUR and nature group Mooi Wageningen are still arguing about that. Dassenbos 2.0 is not a continuation of the original either. 'Quite the opposite,' says Goudzwaard. 'It is actually good for diversity to select different species.'

Not just pretty

A total of 20 different species were planted, including euonymus, privet, viburnum, birch and wild apple. They are a combination of flowering bushes with berries and trees. The soil had to be loosened before planting could start. Goudzwaard: 'The soil had become very compacted. A crane with a knife had to cut the ground open first. Then holes for planting were created with an electric drill. All in all, it was a lot of work. It took us an entire week.'



Some of the trees on the site will be used for research. The species of rowan, wild service tree, field maple and Turkish hazel will be studied as part of the Climate Smart Forestry programme. One aspect of that programme is to assess how less common species fare in the various kinds of soil in the Netherlands. RK

THE PROPOSITION

For PhD candidates, their thesis propositions are an opportunity to publicly express their professional and personal convictions about science and society. In this feature they explain their most thought-provoking proposition. This time, a proposition from Patrick Schimmel, who received his PhD for research in the Microbiology Laboratory on 6 December.



'There is a racist in everyone; the way to get rid of it is education'

'Many of the wrongs in our society stem from an unconscious fear of the unknown, which leads to unconscious racism. I think the only thing you can do about that is to raise awareness of diversity from an early age. Education is the only way to prevent prejudice and racism. In the Netherlands, education is kept separate from politics and it should be kept that way. Post-secondary curricula more often do have a political slant to them, but it is hard to get people to think in new ways by then.

In the sciences, I notice that people sometimes look at Dutch and Chinese PhD students differently, purely on the basis of where they come from. Their assumptions can have negative connotations. An example is the assumption that a person who works hard and puts in extra hours must need to do so

because they are less capable. But if you don't know what motivates their behaviour, you can't simply assume that. We can learn a lot from other cultures, actually. Becoming aware of and understanding other perspectives helps you collaborate better. My PhD research in a chair group with many nationalities made me more open to other views. I grew up at a time when it was taken for granted that Saint Nicholas would arrive with a Black Pete, but I now understand that that can be offensive to others. Education should be diverse so that students get to know and understand a range of languages and cultures. And the university can teach students to work together in a diverse group as early as possible in their studies.' ss

Scabies - continued

If you're looking for attention, you should write a column about scabies. I know by now how much response you usually get to a column and I can already conclude that my peak as a columnist is now behind me. The media have run with the fact that scabies is on the rise in the Netherlands. So I got a call from a journalist from the TV news programme *RTL Nieuws* who had come across my column apparently *Resource* is read more widely than just in Wageningen. He had called a lot of people, but no one was prepared to appear on television as a scurvy sufferer. 'You wrote

'That same evening I was on the programme - with our sofa - as Mrs Scabies'

in your column that the taboo should be lifted, so I'm pinning my hopes on you.' There wasn't much I could say to that, of course. A camera crew came calling the very next day, and the item was broadcast the same evening. The whole country is familiar with our sofa now. Two days later, the current affairs programme *Nieuwsuur* called. I was filmed

again and that same evening I was on the programme - with our sofa - as 'Mrs Scabies'. This time a student was featured too, filmed anonymously. There was more media coverage of scabies for the rest of that week, including on the talk show *Op1*. The presenter said they couldn't find anyone willing to go on air, so the only guest was a GP. This did give me pause: am I the only one crazy enough to just appear on television using my own name and talk about what it's like to have scabies?

Fortunately, people in my social circle have reacted very nicely. Friends and strangers alike have come up to me. 'Good move! Nice sofa you've got!' No one flinched 'Oh, there she comes with her scabies'. Someone wrote: 'It must feel good to have raised an important issue. Although you might have taken, say, world peace rather than scabies.' I wrote back: 'I thought I'd start with something small.' He concluded: 'Wise. World peace is more of a Christmas thing, anyway.'



Sjoukje Osinga

Sjoukje Osinga (55) is a university lecturer in Information Technology. She sings alto in the Wageningen chamber choir *Musica Vocale*, has three sons at university and enjoys bird-watching in the *Binnenveldse Hooilanden* with her husband.

DEALING WITH YOUR CLIMATE DEPRESSION

Concern about the climate can be so strong among Wageningers that it affects existential choices such as whether you dare give in to your desire to have children. How can you carry on with your life when you are that worried about the planet? *Resource* looked for guidance from eco-philosophy.



Text Marieke Enter

Climate scientists who say out loud that limiting global warming to 2 degrees is no longer feasible. A climate conference with results that even the conservative Dutch Prime Minister Mark Rutte says are 'not enough'. Worried noises coming from the COP15 biodiversity summit in Montreal. And in the meantime, the realization that the Greenland ice cap continues to melt at record speed and that more Brazilian Amazon rainforest was felled last spring than ever before...

It's enough to make you depressed, and that is not just a figure of speech. Climate depression is not on the official list of psychiatric conditions, but the fact is that the climate and biodiversity crises are seriously lowering the spirits of more and more people, especially the young. Recent peer-reviewed British

research shows that over 80 per cent of young people aged 16 to 25 are worried or very worried about climate change. More than half of them feel sad, anxious, angry, guilty or powerless about it. Such concerns and emotions can be heard in Wageningen too. Some WUR folk channel their sometimes very strong feelings into activism (see page 18), but others are at risk of going under due to their anxiety about the climate. We must take that seriously, says Manon Danker, who led a session on 'How to deal with climate anxiety' during Surf your Stress week last November. The session made an impression on people. She knows it's tough. But no one and nothing, not even the climate, stands to benefit from you having a burnout because of climate stress. 'See your emotions differently: as information, as guides. If you're very emotional, it doesn't have to mean there's anything

wrong with you – it shows you care passionately about the planet. You can link that realization with an action plan. What kind of world do you want and how are you going to put your back into creating it?'

Support

Danker started out as a sociologist and environmentalist – not in the Wageningen tradition, but educated at the two Amsterdam universities. After a long career in those fields, she chose a new direction. 'I've been feeling very sad for many years about what is happening to the Earth, especially the loss of

'NOTHING OR NO ONE, NOT EVEN THE CLIMATE, BENEFITS IF YOU HAVE A BURNOUT DUE TO CLIMATE STRESS'



Winter flooding in the flood plains around Wageningen in 2021. More than half of young people aged 16 to 25 feel sad, anxious, angry, guilty or powerless about climate change. ♦ Photo Sven Menschel

biodiversity. I worked as a scientist in several nature reserves, and I experienced first-hand the enormous tension between wilderness and domestication, in palm oil plantations for instance. I got depressed about it and disillusioned with humans; it baffled me that we do so much damage as a species. I had to take those emotions seriously. And I wanted to find a methodology or approach for dealing with them.'

Danker found support in the work of eco-philosopher and activist Joanna Macy. Her book *The Work That Reconnects* assumes that humans have an unbreakable bond with the Earth, as the planet that gives us life and sustains us. Thanks to that connection, every human being is in theory capable, after thorough self-examination, of arriving at a fundamental sense of what their

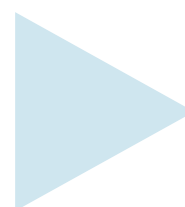
contribution to a better world could be (she calls this 'active hope'). This does not necessarily have to be anything grand and enthralling; co-creating the world you want to live in can also be done in small steps – it is different for everybody.

The same boat

Danker said goodbye to academia and made a name for herself as a process facilitator for *The Work That Reconnects*. It was a step into uncertainty, as she put it: 'Not knowing for sure, but feeling and exploring.' She guided many like-minded people and she regained her faith in humanity. 'If you are sensitive to all that's happening in the world, you can find yourself wanting to cut yourself off from other people,' she says. This is common among people who are deeply concerned about the planet: a sense of

being alone, the loneliness that creeps up on you when your family or friends seem to hardly care while you are losing sleep about it.

That kind of loneliness came up a lot during the meeting at WUR. 'A lot of students struggle with the question of how to relate to the people in their lives when it comes to their concern about the Earth,' says Danker. 'You can feel very alone on this and can even start doubting yourself. But you are not alone. We are all in the same boat and at the moment it is touch and go whether



we're going to sink. It would be great if we could acknowledge that, instead of adopting an ostrich policy or bickering about the causes or the solutions. In Wageningen as elsewhere, there are all sorts of different schools of thought. Have a chat, for a change, with someone who thinks differently from you. Learn to communicate with people with different perspectives. It's especially important not to lose touch with each other now that it's so urgent.'

Falling and rising

During Surf your Stress week, Danker used an exercise to put across the power of interconnectedness. She asked all those present to stand and imagine they were trees in a forest, and to take any two of the other 'trees' as their reference point. As soon as one of 'your trees' was felled, you fell to the ground too. Once Danker had signalled to the first tree to fall, all the workshop participants went down like dominoes: felled by disaster. But her real message



Manon Danker
eco-philosopher

'MANY ECOSYSTEMS ARE HANGING BY A THREAD, BUT PEOPLE CAN INNOVATE'

'IF YOU'RE VERY EMOTIONAL, IT DOESN'T MEAN THERE'S ANYTHING WRONG WITH YOU'

was still to come: as soon as one of your trees rises again, you rise again too. That process seemed to go even faster. Danker's point was clear: positive choices can have just as much of a snowball effect as negative ones.

Danker says she can relate to her own species better these days: her view of humanity has improved. 'I have gained more hope that people are willing to look beyond their own interests, and that we are capable of looking at things without an anthropocentric frame.' Not that her worries about the planet are all gone. 'Important things are certainly still going to be lost; many ecosystems are hanging by a thread. But people can innovate and start making different choices.'

People in the west, as she sees it, are still inclined to take refuge in consumerism to avoid facing the harsh reality. 'But the tables will turn there too, eventually. Really, it's due to privilege that we still get away with an ostrich policy. Elsewhere in the world, people are already in the throes of the consequences of climate change, and they have run out of options. We still have a certain amount of freedom of choice,' she argues. But that doesn't mean we're going to escape unharmed, adds Danker. 'But realizing that you still have a choice as an indi-

More complete as a person

And what if it nevertheless starts to get too much for you, and you feel small and powerless? Get out into nature, is Danker's advice, and count your blessings. 'That makes you more resilient. Getting away from consumerism and surrounding yourself with the beauty of nature will help you feel that you have enough and that you are enough. Realizing that makes you more complete as a person. It is enriching to strengthen your relationship with the Earth in this way, even if that relationship can be very painful at present. And get together with others: it is tremendously hope-giving to know that you are not alone.'

vidual, and that you can work towards the kind of world you want to see, can colour your way of life and give you renewed energy. I hope the WUR community feels that too.' ■

Many elderly people are malnourished

Malnutrition is something that happens in developing countries, right? Not so, according to a study by nutrition statistician Jos Borkent. He did his PhD on malnutrition in the elderly: *Malnutrition during the journey of aging*. And the results are disturbing.

In the Netherlands, over 13 per cent of elderly people (65+) still living independently are undernourished. That means that because they don't eat enough, their BMI is too low, they suffer from weight loss or they have low muscle mass. And as many as 69 per cent of them are at risk of becoming undernourished because they are lonely, infirm, poor or for some reason unable to cook.

The figures are alarming, Borkent agrees. 'We have about three million elderly people living independently in the Netherlands. So we are talking about 400,000 people whose health is suffering due to poor nutrition. With the ageing population, that number is only going to increase. And the older people get, the greater the risk of malnutrition. And people are reaching greater ages than ever before.'

Ready meals

Malnutrition is the final stage of a process. It often starts with the loss of a partner. Men have never learned to cook, and women stop bothering to cook just for themselves. Ready meals seem like a solution, but often they are not because elderly people don't get enough protein from them. That is partly because of the portion sizes. Borkent: 'The portions are too big for many elderly people, so they save half for the next day. That includes half of the meat, so that they still have a complete meal the second time.' The answer is obvious: adjust the composition of the meals: 'Fewer potatoes and vegetables, but the same amount of meat.'

Nursing homes

In nursing homes, the problem is even more acute than for elderly people living at home. Borkent's study shows that 80 per cent of residents do not get the recom-



Photo Shutterstock

mended amount of protein and calories. When they arrive, 10 per cent of the elderly are already undernourished. Another 15 per cent become undernourished in the institution.

These figures raise important questions. 'This can't be solved with an extra slice of cheese,' says Borkent. 'There is also the question of whether you should still aim to improve on the situation. Should you present people in the last phase of their lives with a total

change of diet?

How much point is there in doing so?

Do they want it themselves?

'Should you present people in the last phase of their lives with a total change of diet?'

This should really be addressed on admission, Borkent thinks. 'Nowadays, you can make agreements on whether you want to be resuscitated. You could do the same in the area of nutrition. Malnutrition is an illness. If someone does not want to be treated for it, who are we to insist that they should start eating optimally?'

Yet even simple measures can be beneficial, says Borkent. Like better training for purchasers and nursing staff. 'People often assume that nursing homes have a cook in the kitchen, but it's just nursing staff. Often 17-year-olds in training.' RK

2022

END-OF-YEAR QUIZ

A year whizzes by and we soon forget things that happened. The annual end-of-year quiz dusts off a selection of events and milestones. Tongue in cheek, as ever. The answers can be found elsewhere in this magazine. But as every budding scientist knows: it's the questions that are important. Have fun.

Text Roelof Kleis illustrations Pixels&inkt



1 Former Board President Louise Fresco's bicycle was demolished by activists. Why?

- a They had a score to settle with her
- b The separate parts stand for the fragmentation of WUR research
- c They wanted to auction off the parts for charity
- d To draw attention to the shortage of bike racks

2 New Executive Board President Sjoukje Heimovaara studied in Wageningen. Which degree programme did she do?

- a Molecular Life Sciences
- b Human Nutrition and Health
- c Biology
- d Plant Breeding

3 Since the end of the summer, the WUR buildings have only been heated to a maximum of 19°C. Why, actually?

- a Due to climate change, the temperature has gone up by one degree
- b It is one of the measures to encourage working from home
- c The high price of gas makes cuts necessary
- d A lower temperature encourages people to work harder

4 Students will be allowed fewer resits to pass an exam. Why?

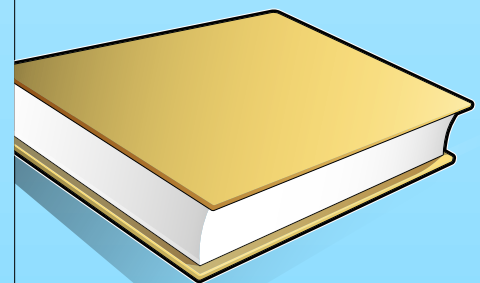
- a The large number of resits puts too much pressure on students
- b Students want to reduce the workload for teachers
- c Teachers want to reduce their own workload
- d Teachers want to reduce the workload for students

5 The *Resource* feature *Seriously?* offers kooky news. Which headline is not from *Seriously?*

- a There is such a thing as a stupid question
- b WUR commits to 100% vegan
- c Cafeteria opens branch in Omnia
- d There is no such thing as a stupid answer

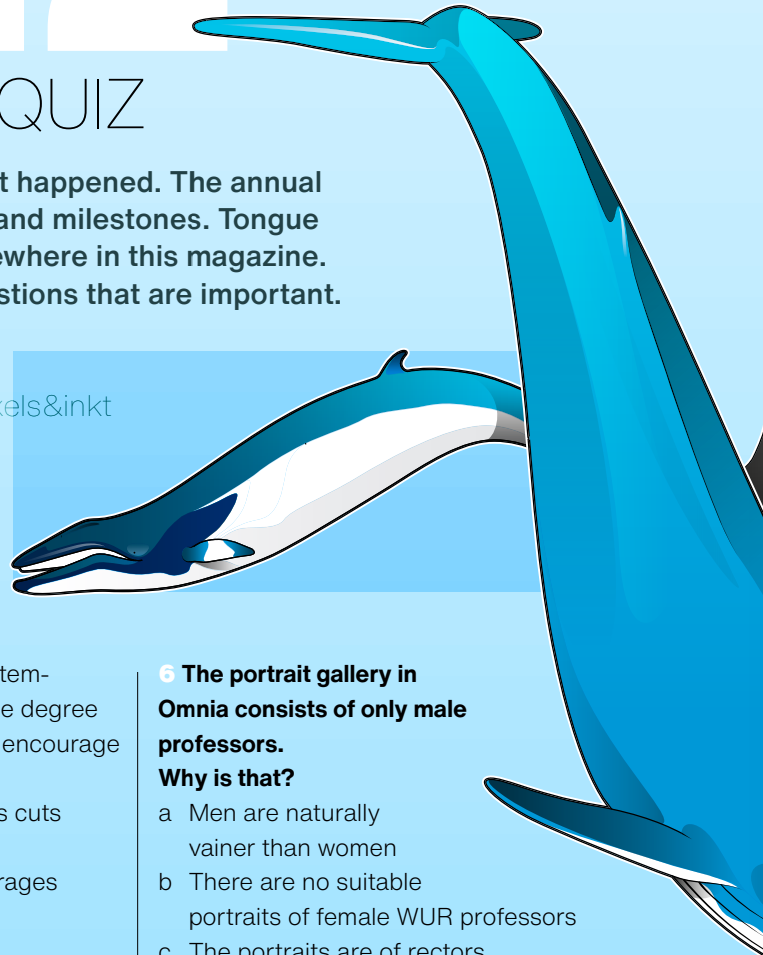
6 The portrait gallery in Omnia consists of only male professors. Why is that?

- a Men are naturally vainer than women
- b There are no suitable portraits of female WUR professors
- c The portraits are of rectors, who have all been men to date
- d Women are by nature more modest than men



7 WUR content editor Koen Janssen wrote a book on World Cup football and politics. What is the title?

- a Football is War
- b War and Peace
- c Ninety minutes of War
- d War in the Penalty Area

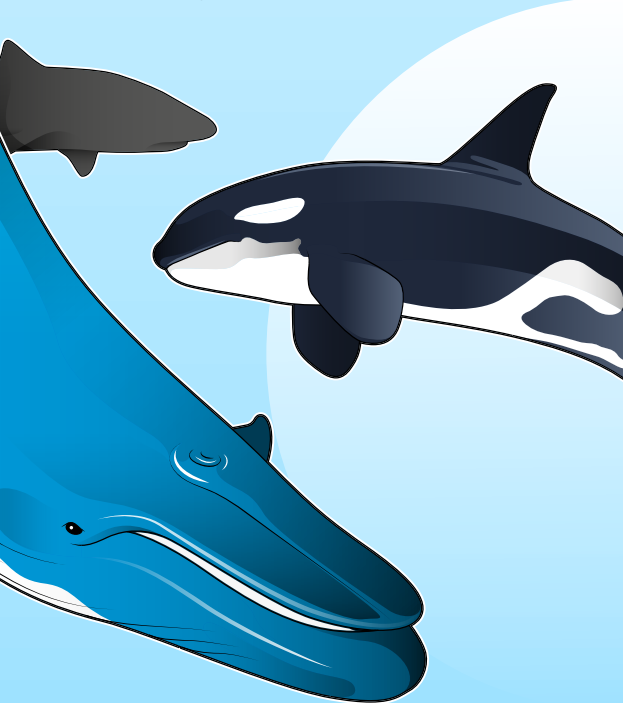


8 'It is fundamental that we cherish and protect our independence at all times.' Who said this?

- a WUR President Sjoukje Heimovaara
- b *Resource* editor-in-chief Willem Andrée
- c Local Scientists4Future founder Ignas Heitkönig
- d AFSG director Sjoukje Heimovaara

9 Fill in the gap: Marine biologist Mardik Leopold was given the stomachs of a dead beached at Cadzand to dissect.

- a minke whale
- b blue whale
- c killer whale
- d tiger shark



10 Researcher Vittorio Saggiomo produced the world's first colouring book made using

- a a mass spectrograph
- b biobased ink
- c an electron microscope
- d a 3D printer

11 Students are being invited to tackle more and more challenges. Which one on this list is not a challenge?

- a ReThink Protein
- b Greenhouse Challenge
- c Fantastic UnPlastic
- d Nature-Based Future

12 'Students like to give me a high five and have their picture taken with me.' Who said this?

- a Rector Magnificus Arthur Mol on all the attention during the AID
- b Mascot WUR Wolf enjoys his double life
- c Teacher Of The Year Birgit Boogaard has to get used to her new status
- d Synchronized swimmer Frederieke Slager gets lots of support after the theft of her 80 medals

13 Idealis started an experiment with housing two international students to a room. Why?

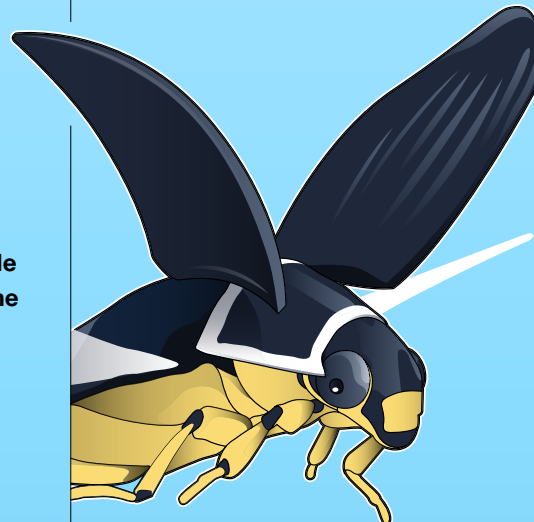
- a To reduce loneliness among foreign students
- b To combat the shortage of rooms
- c To reduce the rent
- d To allow couples to live together

14 Fill in the gap: Food technologists at WUR developed a machine for 3D printing ...

- a a digital twin
- b a 'Wageningen wheel' cookie
- c a taste of your own medicine
- d a veggie burger

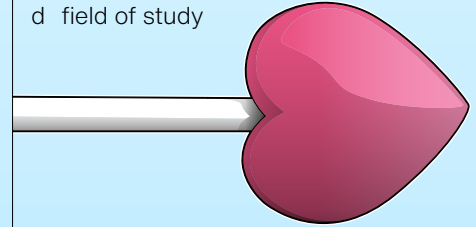
15 In February, a wing case was removed from The Beetle (*Must Leave*, Orion pond). Who was behind this act?

- a Eunice
- b Extinction Rebellion
- c Ceres
- d Willem de Vos



16 Fill in the gap: The new student dating site Cuffed matches partners based on their ...

- a gender
- b profile picture
- c IQ
- d field of study



17 A new study on work pressure met with heated opposition and was called off. Why?

- a There is not enough support for such a study
- b According to many people, we already know what causes work pressure
- c WUR employees want solutions, not a study
- d The study would infringe on privacy

18 After the lockdown in February, how were students enticed to come to lectures on campus?

- a With a muffin
- b With a free Bunker beer afterwards
- c With extra credits
- d With a free WUR face mask

19 There is a new student association: WASA. What do the members do and what do the letters stand for?

- a They engage in climate activism: Wageningen Alumni Sound the Alarm
- b They attack students: Wageningen Anti-Student Alliance
- c They play The Sims: Wageningen Association of Sims Addicts
- d They star-gaze: Wageningen Astronomy Student Association

20 Fill in the gaps: PhD student Hongwei Yu developed a method to use spectroscopy to select the best ... for ...

- a chillies for sambal
- b poo for probiotics
- c tomatoes for ketchup
- d peanuts for peanut butter



Activist scientists: acceptable?

Heaven help scientists who chain themselves to something, start a campaigning group, launch a petition or otherwise swing into action. They can expect their credibility to be questioned - by their opponents, but sometimes even by their colleagues. Do the critics have a point? Are they right that it's difficult to combine scientific objectivity with activism? *Resource* sounded out opinions on campus. Illustration Ilja Bouwknegt



Susanne van Donk

researcher at Wageningen Marine Research and co-founder of Scientists4Future Wageningen

'It is easier to steer clear of controversy than to become an activist. Yet I didn't have to think long about my role at Scientists4Future Wageningen. We are in a crisis, and on your own you can easily feel powerless. It is nice to be able not only to talk about it with like-minded people, but also to take action together. I am not dismissive of criticism that says it damages my credibility as a scientist. Although I don't think that accusation is justified, it still has an impact on me. But we scientists have certain privileges. We have access to a lot of knowledge, and we have been taught how to inter-

pret all that research. **So surely it's not acceptable to keep your mouth shut** when you see things happening that are at odds with the science? No more than you would want medical professionals to say nothing if they have strong evidence that a certain substance is carcinogenic? There has been a scientific consensus about the climate and biodiversity crisis for a long time. In a way, for me, it actually feels like my duty to go into action.' ME



Michiel Köhne

assistant professor of Anthropology of Law

'A lot of knowledge can be used to political ends. **Even your choice of research topic is political.** For instance, do you study what Unilever says about sustain-

ability, or do you go to palm oil plantations to see what is being promoted there as "sustainable"? Any scientist investigating social issues is involved in politics. You can close your eyes to that, but you are just fooling yourself. If you have written a text with the potential to be influential, you can file it away and wait to see who looks at it. Then there's a good chance that nothing is done with it, or that someone else will run with it. In that case, you have no more influence over it. So it is almost your responsibility to ensure that the knowledge you produce is used for purposes that you see as important. Many scientists are afraid of being taken less seriously if they engage in activism. What's interesting is that Dutch universities are not very activist these days; they used to be much more so. And it never really damaged public confidence in the sciences.' CJ



Marielos Peña Claros

personal professor of Forest Ecology and Tropical Forest Management

‘This sounds like a simple question, but what is an activist? Images spring to mind of people blocking roads or occupying buildings. But that’s not always what it involved. An activist could also be someone who lobbies for change. In both cases, I think: yes, it’s OK for a scientist to be an activist. Especially if you are a researcher in the field of environment, biodiversity and forests. I am worried and **I see that my work – if I don’t speak out – doesn’t contribute much to decisions** that are made. That’s why I joined in the campaign against our pension fund ABP, when it was made known that the fund invests our money in activities that contribute to the deforestation of the Amazon. Within five minutes, I and my colleagues in the Forest and

Nature Conservation Policy Group knew we had to go into action. We held discussions with people from the pension fund. ABP has now committed itself to zero deforestation and I hope they announce this officially soon.’ ^{WA}



Arthur Mol

Rector magnificus

‘Scientists have their opinions and concerns. That always affects their pursuit of science and sometimes sets their research agenda. And it’s not a problem if you’re an activist in a personal capacity. But I draw the line when scientists start using their academic status – with titles and with the name of the organization they work for – in an activist cause they are not experts on. I admit it’s a difficult line to draw. The same applies when a scientist expresses a strong

opinion in the media. For example, don’t express your views on religion if you are featured in the newspaper as a climate scientist. If I see something like that happening, I have a chat with the people in question. The issue at stake is reputation: their own, our organization’s and that of science itself. We have to protect the good “image” of science: it is not all a matter of opinion. But at the same time: I too am worried about climate change, and I get involved in discussion about it. **But as a scientist, I would not take to the barricades.**’ ^{WA}



Pieter Zuidema

professor of Tropical Forest Ecology

‘I won’t say it’s not OK, but it’s not how I operate. In my role as a scientist, I want to be able to be independent. A link with a campaigning organization can hamper that independence. My role as a scientist is to explain and interpret things and give warnings, for example when the media ask me for my views on deforestation or the illegal timber trade. But I don’t go looking for it, that’s not in my nature. Although I have changed a bit in that respect. **I’ve found myself voicing more criticism lately.** For a lot of ecologists like me, it is increasingly frustrating that you know what is wrong and how it can be righted, but it is still not being done. I formulate things more sharply than I used to. And in my lectures, I am clearer about the urgency of the problems. But gluing myself to a tree? No, not this year, not yet.’ ^{RK}



THEY'VE GOT GRIT

The climate crisis, declining biodiversity, global conflicts — despite all the sombre news, we have to find a way of keeping going. These four gritty WUR people know better than anyone what that takes.

'I feel guilty that I'm living in peace here'

Homa Esmaeli Sooderjani is a PhD student in the Farm Technology Group. While her home country of Iran is in turmoil, she is continuing the research for her PhD with help from her supervisor. Photos Eric Scholten

The protests in Iran started after the death of Mahsa Amini last September. She was an ordinary girl who was killed by the regime because she wasn't wearing her headscarf the right way. Mahsa Amini became a symbol for so many women in Iran. There are no human rights without women's rights.' 'The past few months have been difficult. Physically I am here, but in my head I'm thinking about the people who are sacrificing their lives for a better future. What can I do to make an impact? I go to protests and tell people about what's going on in Iran. At the same time, I feel guilty that I'm living here in peace while back home people are being killed. Because of the protests, the Iranian community in Wageningen has come together. Together we are trying to figure out what our role is in this revolution.' 'Sometimes it's hard to keep

going. Talking with my psychologist helps me to find hope and joy in the little things, like a good conversation. I talk a lot with my roommate from Belarus. I don't need to explain everything to her because she understands what it's like to live in a dictatorship. Last summer we got a cat and I can feel that he cares about me. When it's tough, he comes to me and lets me pet him.'

'Because of the situation back home, I am concerned that my PhD research will get delayed. My supervisor came up with a system to help me focus on work. I can't help it that the situation back home makes me feel sad, but if that made me do badly in my work, I would feel even worse. My supervisor pushes me to keep going.'

'I hope that the people of Iran succeed sooner rather than later, because the longer it takes, the more people will be put in jail or killed. Deep down I believe it will be a success. The motto of the protests is "Woman, Life, Freedom". If we achieve that, we have everything we need.' LZ

'If feeling sad made me do badly in my work I'd feel even worse'

'I walked away from the doctors' discussion, I couldn't bear to hear it'

Esma Staal is a third-year Bachelor's student of Nutrition and Health and a handball player with premier league club VZV and with the Dutch Junior Team (under 20). After two serious knee injuries, she is trying to pick up the threads.

I knew it was bad straightaway. We were playing against three other premier league teams during the Noord Holland Cup in August 2020. In the second game, I jumped to shoot, got pushed and landed awkwardly. A sharp pain shot through my left knee. I have watched the moment many times and you can see it snap weirdly: the anterior cruciate ligament was torn. I had to have surgery followed by rehabilitation. I was so keen to go to the European Championship with the Dutch under-19s, but I didn't expect that to work out, so I put it out of my mind. But after a slow start, my rehab went well and I was able to join as a defender. That was such a cool experience. Then I started a new premier league season and everything went well. Until April this year. I stepped to the left during a game, and didn't feel any pain, but suddenly I couldn't walk. 'I've got to stop a moment, my knee is playing up,' I said. The following Monday it turned out that the cruciate ligament and both menisci were broken. I was angry and thought it was unfair. Why me? I didn't get it, I was extremely fit. I started out at the handball academy with a dream. It may sound over the top but at a moment like that, your world falls apart. I lived for handball. My studies, my friends: I had organized everything so that handball came first. And suddenly it all

'Now I have been in rehab for seven months and have just been allowed to start running'

seems so out of reach. I had a brief discussion with the orthopaedist about going back to the game quickly with tape and a brace. But that could cause permanent damage. So I had to change tack. A second operation was necessary after all. Hearing them talk – 'take a tendon from the hamstring, put the cruciate ligament in...' – I walked away. I couldn't bear to listen to it. I finally had the operation in May. Recently, I also developed bursitis in the same knee. I thought: it seems like my body is sending a message that I should give up top-level sport. Now I have been in rehab for seven months and have just been allowed to start running. I have no specific goal, except to recover and hope to be back to normal by September. I am going all out for that. The only upside is that I have never been on campus so much, ha-ha. I am focusing completely on my studies now.' ^{WA}



'Feeling sorry for yourself doesn't help'

Jos Borkent was told as a child that he would never be able to work. Last month, he obtained his PhD with a study on malnutrition among the elderly.

This process meant more to me than just a PhD. I became seriously ill when I was 13.

I have Crohn's disease. The medication didn't work and it went from bad to worse. I would never be able to work, was the message I got. In other words, figure out what you are going to do with your life, because it's not going to get any better than this. To all intents and purposes, I had already been declared unfit for work.

I did my secondary education at home. At one point I was sleeping for 20 hours a day, until I was put on different medication and things suddenly got a lot better. I completed an applied sciences degree in Nutrition and Dietetics and then started my own business, investing in gold and silver. I turned out to be good at that. But at some point it began to take over my life too much and I sold up. Then I went back to university and did Health Sciences at VU Amsterdam. I wanted to go to Wageningen, really, but my grades weren't good enough. I had to do my internship online because of my health. I was able to do it at HAN University of Applied Sciences in Nijmegen with Marian de van der Schueren. She said: data analysis and writing papers can be done at home. That internship eventually

'If I am only as good as the next person, I am still at a disadvantage because I am sick'

resulted in a PhD with Marian, who had since become special professor of Dietetics at Wageningen. From the moment I fell ill, I have always had to adapt. I learned that at the age of 13 when I spent eight weeks in the Wilhelmina Children's Hospital in Utrecht. All the children there have serious illnesses. The message you get is: try to make the best of it. Feeling sorry for yourself doesn't help. They really focus on fighting and keeping going. I learned there that it was up to me.

I now work at HAN University for 20 hours a week. I'm only in Nijmegen for one day, and work at home on the other days to reduce travelling time. That works well. I have learned to be creative, because the illness limits what I can do. So I try to be outstanding at something, to compensate. If I am only as good as the next person, I am still at a disadvantage because I am sick and they are not.' ^{RK}



Life is far too good to give up'

Bachelor's student of Forest and Nature Management Ilja Bouwknegt writes for *Resource* as a columnist and student editor. In her last year at secondary school, her mother Annemieke died of metastatic breast cancer.

'My mother passed away in December 2016. I was not yet eighteen and was in my exam year. Even without losing your mother, that is a special transition period in your life, when you leave high school and go on to university. I just carried on with the exams during the period of mourning. I thought: I might as well try, and if it doesn't work out I'll repeat the year. But I did pass and I came to Wageningen to study Biology. Why? Because I love nature and all that's alive. Later it turned out not to be a perfect fit and I transferred into Forest and Nature Management. My mother was fun, enterprising and very lovely. She wrote columns for the local newspaper and kept a blog, which is still online. I do a lot of the things that she enjoyed doing, like writing. Like her, I am always discovering and creating new things.

'For me, it's nice to talk about my mother'

The death of my mother was and remains a great sadness. Besides the grief, it also changes your perspective on life. There are more important things in life than how you perform at school or uni. I went to university primarily to make new discoveries and gain new experiences, not to get good grades.

Every year my family gets together at home on 1 December – the day she died – and go for a walk and have coffee. Then we talk about her; it's a day for memories.

Most of my peers don't know what it's like to lose a parent – fortunately. So they don't always understand HOW it feels for me and they don't always know how to react. That's not surprising, because nobody teaches you how to do that. But for me it's very nice to talk about my mother.

A friend once said to me: it's so good that you have moved on. But what else can you do? Life is far too good to give up on it. You have to go on.' LZ



Frans Timmermans was here

‘WE REALLY NEED THIS GENERATION’

When Frans Timmermans said ‘yes’ to an invitation from three WUR students to come to their symposium Let’s Talk Climate Policy, they were quite surprised. The penny dropped during the evening itself, when the European Commission vice-president told a room full of students: ‘I am here for selfish reasons: I need your help.’



Text Luuk Zegers

The blue flag with a ring of stars is flying outside the Forum. In a couple of hours, Frans Timmermans will arrive to discuss

climate policy with WUR students. Bachelor’s students Floris Helmendach (20, Molecular Life Sciences), Gerline van Beusekom (21, Biology) and Eva van der Wolf (22, Nutrition and Health) are organizing the symposium and will be the moderators. Are they confident about it? ‘Absolutely,’ says Van Beusekom firmly, ‘Floris and I have known each other a long time and we have prepared thoroughly.’ There is a bit of healthy nervousness, Helmendach admits, but that’s to be expected. ‘Mainly, I’m really looking forward to it.’

A few hours later, the room is bursting with students. Three groups of students have prepared climate policy pitches and one student from each group comes onto the stage to speak in turn about climate justice, agricultural policy and the energy transition. The first kicks off

with: ‘Our current economic system eggs us on to use all the resources we can find. Meanwhile, the southern hemisphere is only allowed to develop on our terms. Economic innovation may be more important for achieving climate justice than technological innovation. Question growth and start by taking a critical look at our economic system.’

Redistribution

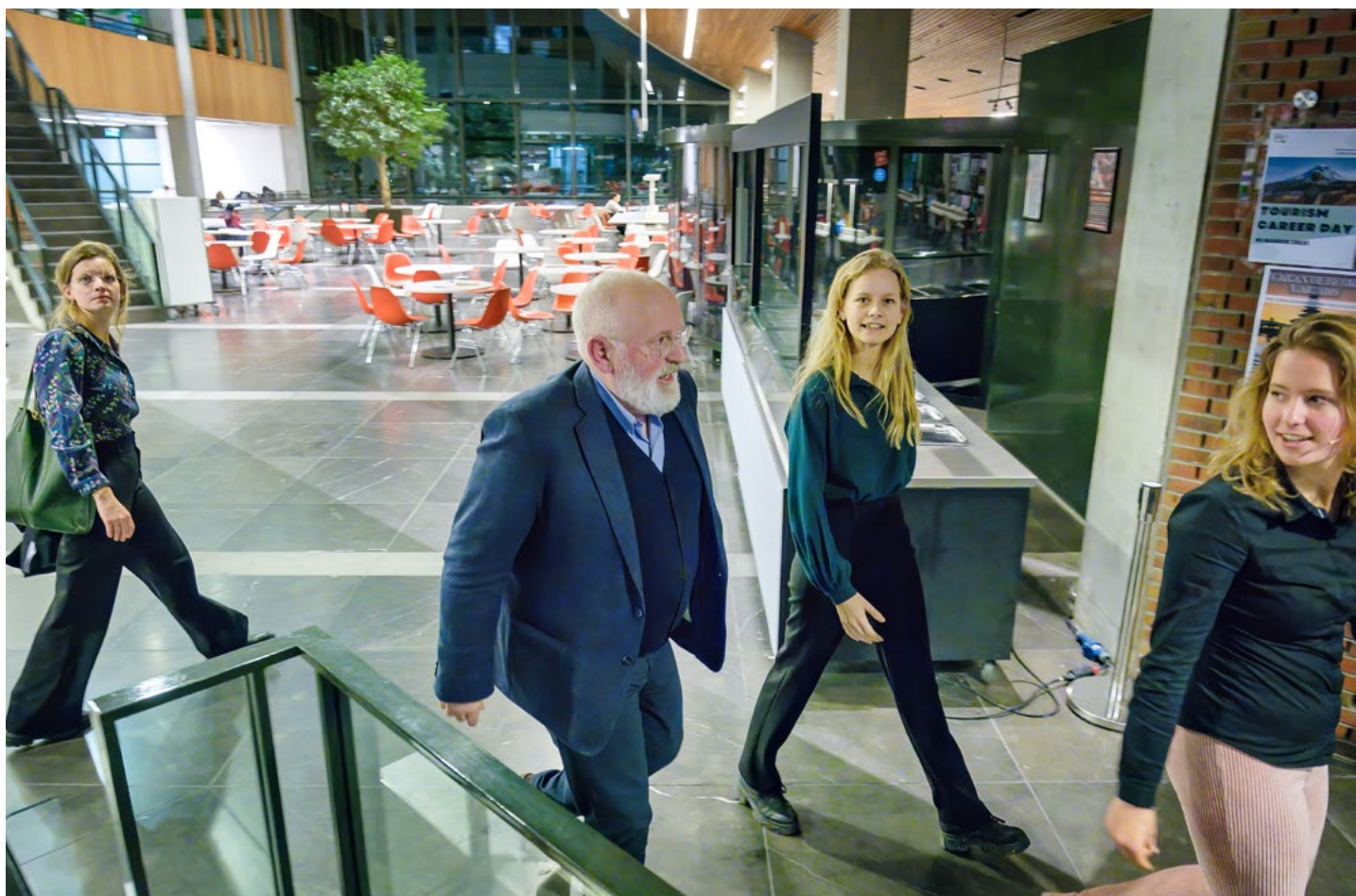
A convincing argument, says Timmermans. ‘Let’s look at the situation in all its complexity. We are in the middle of the biggest industrial revolution ever; there is a climate crisis that threatens our survival but is solvable; and there are global injustices that have got to be addressed. Politically, the bottom line is: redistribution. How we distribute the limited capacity of this world will determine whether humanity has a future.’ According to Timmermans, political

opponents try to frame the climate issue as something that clashes with social issues. ‘And yet the poorest suffer most from climate change. The climate issue *is* a social issue.’

Rapid-fire questions

So poorer countries should be allowed to develop, says Timmermans. ‘But it really has to be done sustainably. It’s possible for 10 billion of us to share this planet, but to do so, absolutely everything has to change. For that, we desperately need your generation, your brains and your talent.’

It quickly becomes clear that this generation is keen to join in the debate, and one student after another stands up and asks critical questions about European agricultural and energy policy, what they can do to save the world, and – not unimportantly – how they can arrange an internship at the European Commis-



Frans Timmermans on his way to the meeting in Forum where students talked to him about climate policy. ♦ Photo Guy Ackermans

‘SOCIETY IS SCARED AND CLINGS TO THE PAST. BUT THERE IS NO FUTURE IN THE PAST’

sion. The students lap up Timmermans’ answers, sometimes rewarding them with applause, like his answer to the question how ‘big tech’ can help solve the climate problem: ‘By paying taxes,’ says Timmermans.

The second student pitch shreds the Green Deal’s agricultural policy: the money would mainly go to large, less sustainable farmers, and the EU requires too little sustainability in exchange for subsidies. Timmermans: ‘I agree 100 per cent. Because of the war we are given the impression that food is becoming scarce, so governments aim at producing more in the same old way. Society is scared and clings to the past. But there is no future in the past. The

science is clear: things have to change. So I’m asking you to help me get that message across.’

The third pitch is razor-sharp too. ‘For decades, scientists and activists have been asking the EU to phase out fossil fuel. Did a war really have to break out in Ukraine to get us moving? And what does the EU do? Invest in new fossil projects in the Middle East and Africa.’ That’s right, says Timmermans, who agrees that more must be done to speed up the energy transition. But: you can’t

just switch off an energy system based on fossil fuels overnight. ‘So we will need fossil fuels for a while yet. To keep Europe supplied with fuel, we have to sign long-term contracts. It says in those contracts that we will eventually switch to sustainably produced gas such as hydrogen, so that we are not stuck with fossil fuels. The countries we sign those contracts with know that fossil fuels are on their way out. For them, renewable energy is a new business model.’

Hopeful

Earlier in the evening, Timmermans said students have changed. ‘Twenty years ago, they wanted a comfortable job, a car and a house. Now they want to save the world.’ When moderator Van Beusekom announces the last question from the audience, dozens of students stand up. Timmermans can return to Brussels hopeful: this generation is raring to go. ■

A guide to a habitable Earth

DON'T DESPAIR,
ALL IS NOT LOST

A liveable future is still achievable. Climate expert Tim van Hattum wrote a guide, *Only Planet*, offering seven routes to a sustainable future.



Text Roelof Kleis

The title of the book (which is in Dutch) is a nod to Lonely Planet's famous series of travel guides. Even the cover hints at the book's model. Van Hattum himself grew up with that series. 'I feel part of the backpacking generation. I wore out a lot of Lonely Planets. Before the internet, mobile phones and booking.com existed, a Lonely Planet guidebook was *the* survival kit to take with you when you went travelling.'

And that is exactly what he wants *Only Planet* to be: a book that is of some use to you. To be more precise, of some use to anyone who is fed up with all the gloom and doom about the climate and the deterioration of nature. 'We tend to focus a lot on everything that's going badly in the world,' Van Hattum thinks, 'and on the terrible things that are coming our way. I lead the Climate programme at WUR. My programme is called Green Climate Solutions and we do research on ways of solving the climate problem. Those solutions tell a completely different story. And we don't hear that story nearly often enough.'

For Van Hattum, the penny dropped after a painful guest lesson he gave for a class of 10-year-olds at his daughter's primary school. 'They were doing a project on water. The teacher asked whether I could tell them a bit about climate change. So I gave my usual presentation on climate change, full of images of floods, drought, forest fires and kangaroos running for their lives. The children were staring at me wide-eyed.

I watched them go pale and I could really see the fear in their eyes. In that moment, I realized how bizarre this narrative is and what it does to us. Not just to children, but to everyone.'

You are shifting the focus of the narrative from the problem to the solutions. That fuels hope. But things are going to get worse before they get better. That's not a hopeful perspective, is it?

'All the extreme weather we are seeing now is happening in a world that is 1.2°C warmer. We are going to reach 1.5°C, so those extremes will get worse. The hopeful thing is that most of the solutions we need for tackling the problem already exist. It's true that they cost a lot of money, but they prevent damage that would cost us five times as much. And they benefit society, in terms of clean air, clean water, better health, more well-being, more equality and more happiness. And it is not too late to end up somewhere close to one and a half degrees. Every tenth of a degree counts. It is never too late to go into action. That is the hopeful message.'

The solutions have been known for some time, but we still don't get our act together. Why is that?

'It's because our society is geared to the short term. There are a lot of interests invested in continuing down the path we're on. But business-as-usual is not viable in



'The first step is to develop a long-term vision. A picture, like the one we created two years ago with the Future Map of the Netherlands in 2120.' ♦
Photo Guy Ackermans

'WE DON'T HEAR THE SOLUTIONS STORY NEARLY OFTEN ENOUGH'

the longer term. I try to show what the future could look like if we act on what we know and, above all, if we put nature first as the source of solutions.'

Your solutions require radical transformation. How can that be achieved?

'The first step is to develop a long-term vision of what the future we are all aiming at will look like. A picture, like the one we created two years ago with the Future Map of the Netherlands in 2120. A picture that inspires people and invites them to engage with that future. And another thing you need is leadership. Not only in politics, but perhaps even more so in communities. There is a whole bottom-up movement going on, driven by initiatives, parties and people who want to go faster. Young people are playing a big role in this and that gives me hope.'

You argue for a Ministry of the Future. What is that?

'The existing ministries are organized along sectoral lines, and tend to focus on short-term solutions. My

Ministry of the Future is an overarching ministry that looks after the interests of future generations and keeps its eye on the long term, with an interdisciplinary approach spanning the different domains.'

You call nature the most important climate solution we have. Can you explain that?

'You can't separate the climate problem from how we look after nature. That is the core message of my book. Protecting and restoring natural systems can contribute a third of what it will take to limit warming to 1.5°C. It is a crucial solution to the climate crisis and also helps create a buffer against the extreme weather that we face. Preventing floods, retaining water, cooling cities – all this can all be done by treating the nature around us well. Until now, the climate problem has mainly been tackled with a technological approach: reducing emissions, electric vehicles, the energy transition. All of that is important, but don't forget nature. Otherwise we'll end up with lower CO₂ emissions but a dead planet.' ■



Only Planet

Author Tim van Hattum
Publisher Bertram + De Leeuw
ISBN: 9789461563033
Price: €24.95

On Thursday 19 January 2023, Tim van Hattum will give a lunchtime talk about his book in Impulse, from 12:30 to 13:30.



THE SIDE JOB

You've got to make ends meet somehow. We can all borrow from Uncle Duo, but there are also students who earn money in unusual ways. In this series, we put some interesting side jobs in the spotlight. This time we meet Maartje Meyboom (21), a Bachelor's student of Biotechnology, who sells and explains sex toys.

Text Steven Snijders

'You don't need a lot to study. Just a laptop, basically. But you can make it a lot more chill with things like a separate mouse or keyboard, for example. So you buy them. That's the way I look at sex toys. I work as a freelancer for Willie Homeparty. They get bookings and I visit people in their homes as a consultant, and put on a fun night. It's

'I am never uncomfortable talking about sex'

a bit like a Tupperware party. I take along a big suitcase full of sex toys. It contains all kinds of things like vibrators, lubricants, cock rings, butt plugs, jerk-off eggs and bondage rope. I talk about what the toys are, how to use them and my own experiences with them. The articles are passed around the group, often accompanied by a lot of laughter and shrieks. The groups are usually very curious and hyper. I leave feeling like I have made a new group of girlfriends. An added benefit of this side job is that I get to try out the new toys in the range. I've got to know what I'm selling, of course.

I booked a consultant once myself, with

my flatmates in Duivendaal. I found it very interesting and that's how I ended up with my employer. I never feel uncomfortable talking about sex, although I sometimes notice embarrassment among others in the group or people I know. I don't talk much about my work with my in-laws, for instance. I had a very free-thinking upbringing. Sex takes a lot of practice, I was advised. Now I can share my knowledge with others during a consultation. I also give jerking-off workshops. And on my insistence, a fingering workshop is offered now too. I want to help reduce the orgasm gap. I am very feminist about that.'



Photo Guy Ackermans

Maartje pays home visits

Who: Maartje Meyboom (21)

What: educator and seller of sex toys

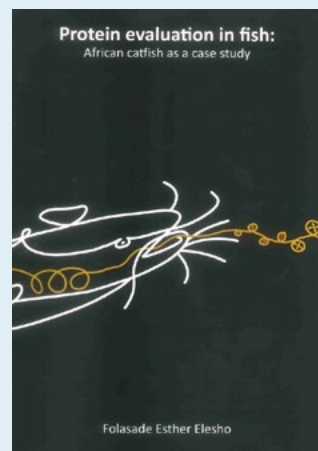
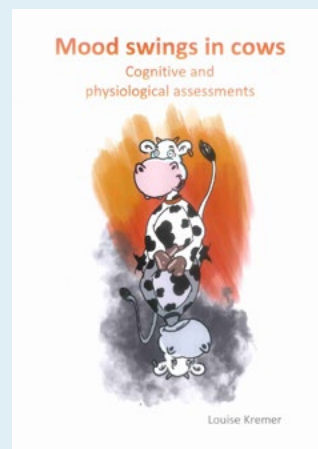
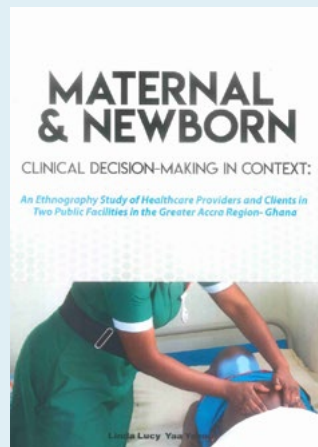
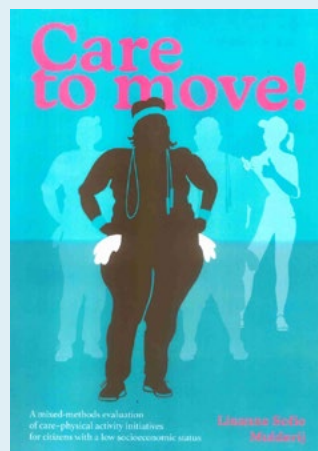
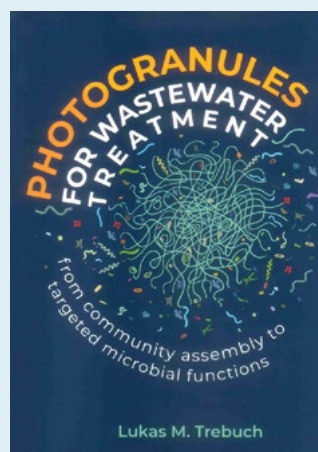
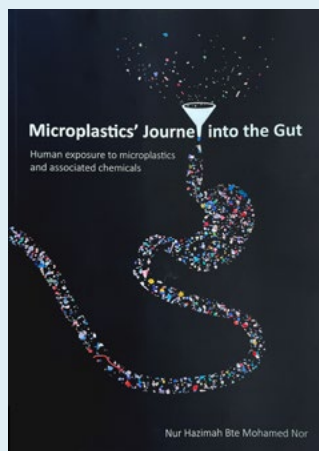
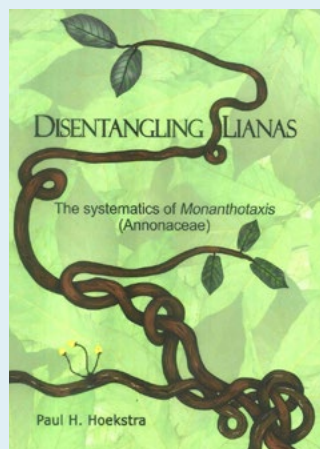
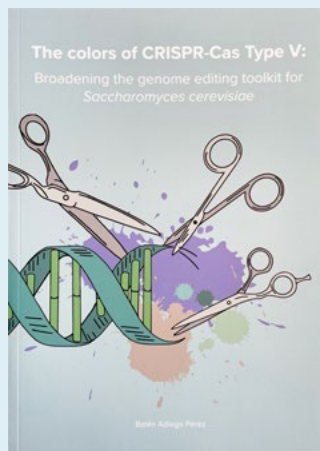
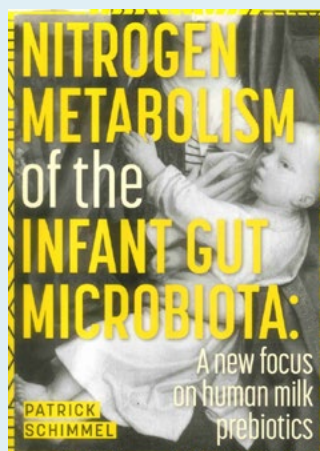
Why? She recommends sex toys to everyone

Hourly wage: €10 - €30 per hour (commission based on sales)

Do you have an unusual side job or know someone else who does? Send an email to steven.snijders@wur.nl

2022 COVER PRIZE

The nine covers on this page have been nominated for the 2022 Cover Prize. Which doctoral thesis of the past year had the most attractive, most unusual and most appropriate cover? Over the next few weeks, our readers (that's you) can help our jury choose. Go to www.resource-online.nl to vote online: polls close Monday 9 January at 12 midday. Text Roelof Kleis



Irregular Opening Hours

Christmas Holidays 2022

In the previous issue (no. 7), some errors got into the tables showing the opening hours. The tables on this page give the correct opening hours.

Forum		Building	Library	Student Service Centre	ServicePoint IT	Restaurant	Grand Café	Wageningen in'to Languages
Sat / Sun	10/11 Dec	9 am - 7 pm	9 am - 7 pm	closed	closed	closed	closed	closed
Mon - Thu	12 - 15 Dec	8 am - 11 pm	8 am - 11 pm	10 am - 2:30 pm	8 am - 5:30 pm	9 am - 3 pm	8 am - 5 pm	10 am - 2 pm
Friday	16 Dec	8 am - 11 pm	8 am - 10 pm	10 am - 2:30 pm	8 am - 5:30 pm	9 am - 2 pm	8 am - 5 pm	10 am - 2 pm
Sat / Sun	17 / 18 Dec	9 am - 7 pm	9 am - 7 pm	closed	closed	closed	closed	closed
Mon - Thu	19 - 22 Dec	8 am - 11 pm	8 am - 11 pm	10 am - 2:30 pm	8 am - 5:30 pm	closed	10 am - 2 pm	10 am - 2 pm
Friday	23 Dec	8 am - 11 pm	8 am - 10 pm	10 am - 2:30 pm	8 am - 5:30 pm	closed	10 am - 2 pm	10 am - 2 pm
Saturday	24 Dec	10 am - 6 pm	closed	closed	closed	closed	closed	closed
Christmas	25 Dec	closed	closed	closed	closed	closed	closed	closed
Christmas	26 Dec	closed	closed	closed	closed	closed	closed	closed
Tue - Fri	27 - 30 Dec	8 am - 8 pm	8 am - 6 pm	closed	8 am - 5:30 pm	closed	closed	closed
Saturday	31 Dec	10 am - 6 pm	closed	closed	closed	closed	closed	closed
New year	1 Jan	closed	closed	closed	closed	closed	closed	closed
Monday	2 Jan	8 am - 11 pm	8 am - 6 pm	closed	8 am - 5:30 pm	closed	8 am - 5 pm	closed
Tue - Thu	3-5 Jan	8 am - 11 pm	8 am - 6 pm	12:30 pm - 2:30 pm	8 am - 5:30 pm	closed	8 am - 5 pm	closed
Friday	6 Jan	8 am - 11 pm	8 am - 6 pm	12:30 pm - 2:30 pm	8 am - 5:30 pm	closed	8 am - 5 pm	closed
Sat / Sun	7 / 8 Jan	10 am - 6 pm	closed	closed	closed	closed	closed	closed

The buildings below are closed from 24 December until 8 January. Employees and student are welcome in Forum building.

Orion		Building	Bike basement	The Spot	Restaurant
Mon - Fri	19 - 23 Dec	8 am - 7 pm	8 am - 9 pm	8 am - 8 pm	11:30 am - 2 pm
Saturday	24 Dec	closed	closed	closed	closed
Christmas	25 Dec	closed	closed	closed	closed
Christmas	26 Dec	closed	closed	closed	closed
Tue - Sat	27 - 31 Dec	closed	closed	closed	closed
New Years	1 Jan	closed	closed	closed	closed
Mon - Sat	2 - 7 Jan	closed	closed	closed	closed

Aurora		Building	Bike basement	Your Barista	Blend	Plant	World Flavours
Saturday	24 Dec	closed	closed	closed	closed	closed	closed
Christmas	25 Dec	closed	closed	closed	closed	closed	closed
Christmas	26 Dec	closed	closed	closed	closed	closed	closed
Tue - Sat	27 - 31 Dec	closed	closed	closed	closed	closed	closed
New Year	1 Jan	closed	closed	closed	closed	closed	closed
Mon - Sun	2 - 8 Jan	closed	closed	closed	closed	closed	closed

Leeuwenborch		Building	Coffee Bar / Restaurant	Library
Mon - Fri	19 - 23 Dec	7 am - 10 pm	10 am - 2 pm	Closed
Saturday	24 Dec	Closed	Closed	Closed
Christmas	25 Dec	Closed	Closed	Closed
Christmas	26 Dec	Closed	Closed	Closed
Tue - Fri	27 - 30 Dec	Closed	Closed	Closed
Saturday	31 Dec	Closed	Closed	Closed
New Year	1 Jan	Closed	Closed	Closed
Mon - Sun	2 - 8 Jan	Closed	Closed	Closed

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Design Alfred Heikamp, Larissa Mulder

Overall design Marinka Reuten

Cover Photography Eric Scholten

Printing Tuijtel, Hardinxveld-Giessendam

Subscription A subscription to the magazine for one academic year costs 59 euros (135 euros if abroad). Cancellations before 1 August.

ISSN 1389-7756

Publisher Corporate Communications & Marketing,
Wageningen University & Research





‘RIB - FREE’ PIG

Anyone with spare ribs on the menu this Christmas will be familiar with the way the ribs between the meat make eating spare ribs awkward and unappetising. The gnawing, the greasy hands, the meat you can’t get off the ribs properly.

Researchers at WUR are working on solving this problem. Several departments and companies are joining forces to create a ribless pig in a major EU project called Spare the Rib (Supporting Porcines with ARTificial intElligence THrough Evidence-based Rigid Biomimicry).

The EU has praised the project for its simplicity and the team for its bold vision. ‘It might seem straightforward, but the spare rib is a complex part of the pig,’ says project leader Henk Boner. ‘The ribs provide strength and are formed early in the pig’s development. To stop the construction of the ribs, we had to collaborate with geneticists.’ A collaboration that proved fruitful. Animal breeder Dries Hoof: ‘We eventually managed to create a mutant piglet in which the main genes for ribs were deleted from the DNA.’ But they had to find another way of providing the firmness that the ribs give, so the pig could breathe properly. That is where the robotics experts of Delft University came in. Attaching steel frames to the pig’s chest wall controlled from a small computer on its back enabled the animal to breathe freely. ‘It is a clever

piece of machine learning,’ says Boner. ‘An added advantage is that the frame can then be hung from the meat hooks in the abattoir.’

There are criticisms of the project, however. ‘We have concerns about the welfare of this robo-pig,’ says Magda Fluff of the Cuddly Animal Foundation. No need for that, says Boner: ‘The frames are attached to rails at the top of the stall, and that prevents the pigs from collapsing.’ In consultation with Cuddly Animal, the researchers created a digital twin and hung cameras in the barn, which provided big data. Boner: ‘Both the digital twin and the camera data show that the pigs have no symptoms such as joint pain, collapsing and so on. So the level of discomfort is very low.’

All in all, this marks a new era for the livestock sector. Thanks to new technologies, the animals can be adapted to consumers’ needs better than ever before, without compromising welfare and sustainability. ‘The beauty of this pig is that the quality of the meat is still the same,’ says Boner. ‘You get the same mouthful, but without the inconvenience of those bones.’