WUR from within: straight, sharp, transparent

No 16

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The journalism platform for all at Wageningen University & Research

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Photo Guy Ackermans

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Let's end the silence

Long ago, I had a boss who was rather lecherous. One of those managers who, when discussing a pay rise or contract extension, would give you a meaningful look and say things like 'Convince me', clearly not referring to your professional talents. One of those men who was always keen to 'massage away the tension' when you were suffering from deadline stress and who could hardly keep his hands off you at drinks receptions.
None of the women in that team kicked up a fuss, me included. It was us that felt embarrassed, not him. Quite absurd in retrospect. It is even more absurd that such abuses, and worse, still occur regularly. That is shown by a new Statistics Netherlands (CBS) survey that happened to be published while *Resource* colleague Luuk and I were working on an article about what student societies are doing to stop unacceptable sexual behaviour (p. 12).
While investigating that story, I noticed that people still feel embarrassed about discussing such unpleasant experiences, despite #MeToo. That is probably also the case if those experiences involved a colleague or your boss. And yet I want to hear those stories. Because the inappropriate behaviour revealed in the CBS survey undoubtedly also occurs at WUR. And we need to talk about this together, including in *Resource*. You can contact me via: marieke.enter@wur.nl

Read the latest news and background stories at resource-online.nl

Marieke Enter
Science editor

AULA BECOMES OMNIA

So this is it. The space in Omnia where PhD ceremonies will take place as of 10 May. Its official name is the auditorium. Aglaia Fischer will be first off when she defends her thesis on the circular economy. No, the audience won't have to stand; the room hasn't been finished yet and the 108 chairs still have to be installed. Portraits of professors will hang on the walls. The large LED screen has already been mounted behind the lectern. The auditorium is primarily intended for PhD ceremonies but can be used for other events during quieter periods.
When the new premises come into use, that will mean goodbye to the Aula in town. Read the article 'Bye-bye Aula' on page 22. RK

Photo Guy Ackermans

Africa exhibition will not return

The photo exhibition 'Power of the Wasted', which was removed seven months ago from Impulse, will definitely not return.

That is the result of seven months of discussions behind the scenes between WUR, the African community and alumnus Jurriaan Veldhuizen, the photographer of the series. WUR is therefore going back on its previous promise that the exhibition would only be taken down temporarily.

Instead of the exhibition, there will be debates about an inclusive, safe campus

Veldhuizen's photos show the informal recycling industry in the Ghanaian city of Kumasi, where he did research as a student of International Development Studies. The United Community of African Students (UCAS) found the images offensive and demanded that they should be removed and destroyed.

Permanent

To calm things down, director of Corporate Value Creation Sebastiaan Berendse decided after a week to have the photos removed temporarily. Temporary has now become permanent. According to a statement, the images evoke 'a broader (latent) debate about decolonization and anti-racism within WUR and a deep underlying pain that has come to the fore through this exhibition'.

It has been decided not to put the photos back up so that the debate can be conducted 'in a completely open and safe manner'. Instead of the exhibition, discussions will be held in Impulse in the next month about an inclusive, safe campus. Those discussions will be organized in conjunction with the anti-racism project DARE, which started last year.

The controversial exhibition was the first using the ten new billboards next to Impulse. That initiative was intended to start a dialogue. The billboards have been empty since last October. RK

'One AID, six days of partying'

This year the Wageningen introduction week – the AID, or Annual Introduction Days – shouldn't have to be split into two short introductions, as happened in 2020 and 2021 because of Covid-19.

Another feature of the AID in Covid times was that participants were put into groups of students on the same degree programme because it was more difficult to get to know each other when classes were online. This summer, the groups will be mixed again, says AID committee chair Joris Krol (a student of International Land and Water Management). 'You will still meet your course mates during the degree programme day. The AID will be just like the old days: one AID, six days of partying.' This year's AID takes place from 19 to 24 August.

It might not be exactly like the old days, though as the current board has some ambitious plans. For the largest ever 'cantus' (a beery singsong), for example, with room for 2200 participants. 'We don't want so much glorification of alcohol and we want to emphasize that you don't necessarily have to drink,' says Krol. 'Besides beer, there will also be water, alcohol-free beer, Radler and soft drinks.' Underage AID participants won't be served alcohol in any case.

The AID mums and dads (current students who take a group of AID participants under their wing) also receive mentor training that pays attention to inappropriate sexual behaviour. 'What you should do if something happens, where you can go and how you can get in touch with confidential advisers, that sort of thing,' says Food Technology student Job Esink of the AID board. 'It's our way of trying to do our bit for a pleasant and safe AID for everyone.' LZ

More info on resource-online.nl

The 'cantus' at AID 2019 ◆ Photo Anna den Hartog

9°C

The water temperature for the 2022 edition of the traditional Rhine Dip challenge in which student society SSR-W raises money for charity was a bracing 9°C. The result: about 75 Rhine swimmers with chattering teeth ('never again, I'm never doing this again') and 1200 euros for the National MS Fund. ME

Higher basic grant and first-year tuition fees

The basic grant will be slightly higher and students will qualify more easily for a supplementary grant. However, the tuition fees for first-year students are set to increase by a factor of two. The proposed legislation for the reform of the student financing system was published online last Friday for a public consultation via internet (internetconsultatie.nl/basisbeurs). Anyone can post a comment before the bill is submitted officially. HOP

Sea of flowers

WINDMILL BUILDING SPREE
PAINT THEIR TOWERS
LIKE SPRING FLOWERS
TULIPS OF THE SEA

Herscho Duds

Researchers allowed to dive again

After a 10-month stop, the Animal Sciences Group (ASG) has lifted the ban on diving.

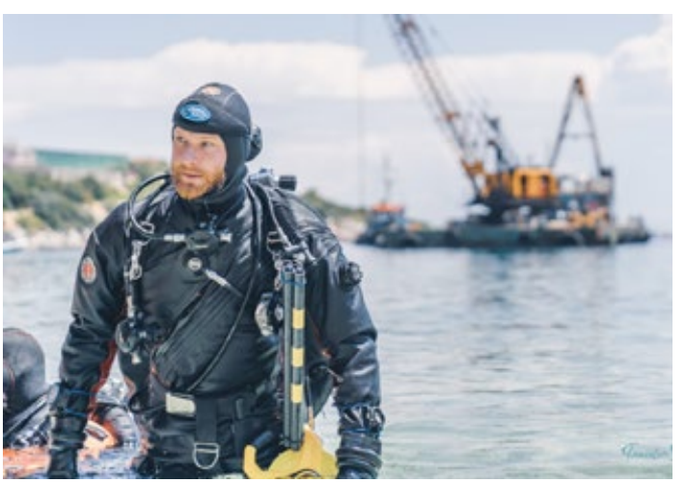
That ban was introduced unilaterally last July because it was not clear what health and safety rules applied to the divers. With the introduction of a new national protocol on diving for scientific purposes, the ASG directors have decided to lift the ban as of 1 May.

Scientists and students who dive for their research officially have to keep to the rules for professional divers. 'But in practice that never happens anywhere,' says professor of Marine Animal Ecology Tinka Murk. 'That would mean a PhD candidate would have to spend two years training to become a professional diver. Half your PhD time would be gone before you could get in the water.'

That does not mean the diving is unsafe, according to Murk. 'But nor does it mean it's safe. It is simply a grey area.' Murk's attempts to get clarity led to a temporary ban by the ASG directors. That caused problems for a lot of projects. Murk: 'Some people resolved the problem by going snorkelling, but that is tougher and much more dangerous than diving.'

Diving lesson

The ban was not WUR-wide. Murk says that led to the strange situation where ASG researchers were unable to dive with compressed air and Environmental Sciences Group researchers at the same location could dive down. To tackle the grey area in the health and safety rules, a national platform was set up for all the institutes that go diving for research.



Eric Wurz of Marine Animal Ecology obtained his qualification last year. He is one of two certified scientific diving instructors in the Netherlands. ◆ Own photo

The result is a uniform protocol for scientific diving that is in line with the rules elsewhere in Europe and the US. The new protocol has now been sent to the Labour Inspectorate for approval. Part of the protocol is a certificate for scientific diving that is valid throughout Europe. WUR will run a training programme for the certificate for staff and students who go diving. RK

5 May can be celebrated again

After two Covid years in which we could only celebrate Liberation Day with two mates and a six pack, we can party in style again this year. A new feature is the Liederlijk Square stage organized by Jojo's cafe. We spoke to organizer and WUR Bio-informatics alumnus Melanie van den Bosch about the new venue.

First, why the name Liederlijk?
'It sounds a bit like Lidl and we're in the square next to the Lidl. We copied their look in our logo too. The Dutch word *liederlijk* means "debauched", going crazy and doing things that aren't really accepted. That was pretty much what we had in mind.'

Like what?
'Various bands will be playing, a real range from rock to reggae. Magic Tom and Yuri will be performing satirical magic tricks and we will end with a DJ duo: Saus System.'

How do you go from bio-informatics to organizing festivals?
'Organizing festivals is not my day job – I'm a software developer. I organize concerts in my free time, for Popronde for example and in Jojo's. That's why they asked me to help with the organization.'

Programme

The festival will also look a little different this year in other respects with some changes to the locations and genres. DanceSquare seems to have gone, the eardrum-challenging Kabaal am Gemaal has moved to Rijnbolwerk and Salverdaplein is no longer the place for World Music as it only features Wageningen bands. CJ

Scan this QR-code to see the full programme for the Liberation Festival.

New garden on campus

The field between Orion and Omnia is currently being turned into a landscape garden.

That means a lot of excavation work and shifting soil around. The most eye-catching change is the relocation of the *Cauldrons* artwork. The seven steel pots have been given a new home to the west of Atlas.

You will be able to set the 'biking fountain' going yourself by cycling

The redesign comes only seven years after the 'amphitheatre' was built in this spot. This mound in the shape of a horseshoe was created from the sand excavated when Orion was built, but it was never actually used as an amphitheatre. The construction of a similar structure next to Impulse that served the same purpose made it unnecessary.

Seepage water

According to the Facilities & Services campus developers, the site needed an update due to the development of the commercial strip and Omnia. The garden design comes from Landscape Architecture students Thamar Zeinstra and Raidun Schott. The design keys into the site's features, in particular the seepage water. The garden also has two 'biking fountains', fountains that you set in motion by cycling.

Photo Roelof Kleis

There is no room for the *Cauldrons* in the new garden, and the Walk of Fame has had to go too. The promenade with tiles commemorating important people and events never really took off. The tiles will now be incorporated in the Impulse patio. The benches, including the one for 100 Years of WUR, will however be kept in the new garden. RK

Less private sector funding for WUR PhD research

The private sector is spending less, not more, on PhD research at Wageningen compared with the past. That is the conclusion drawn by WUR on the basis of an internal study that builds on a survey by *Resource* in 2014.

The links between WUR and the private sector are regularly the subject of debate. Is science sufficiently shielded from commercial interests, is the university putting its independence and integrity at risk, and shouldn't the dividing line be much stricter? In 2014, Resource carried out a survey and now the university has built on that to produce its own assessment of the flows of funds at Wageningen University. An analysis for Wageningen Research will follow, according to the announcement.
The assessment shows that over the past two years, 18 of the 577 PhD projects, which make up the bulk of Wageningen University's scientific 'production', were financed by companies (3.1 per cent). That is less than in 2014, when 15 of the 287 PhDs were paid for by the private sector (5.2 per cent). Another comparison that sheds light on the commercial input: in 2020/21, the number of PhD projects funded by companies (18) was almost the same as the number financed personally by the PhD candidate (16).

Public-private mix

WUR also counted 34 PhD projects in the past two years that were funded with a mix of public and private money from consortiums or the 'top sectors', in which public organizations (often the government) collaborate with science institutions, NGOs and commercial companies on research. This share has declined too. In total, the number of PhD funded entirely or partially from private sources fell from 17.7 per cent in 2014 to 9 per cent in 2020/2021. The complete analysis can be found on the WUR website. ME

Photo Shutterstock

Cabbage with caterpillars reacts faster to fly

Caterpillar damage helps the plant to defend its roots faster.

The cabbage fly is a nasty pest in cabbage crops. The fly lays eggs at the base of the stem, and the larvae work their way down and hollow out the roots. The pest is responsible for enormous losses in agriculture. Peter Karssemeijer (Entomology), who recently got his PhD, studied how the plant defends itself against these underground attacks. That insight is badly needed, he says. 'Farmers are afraid of the fly. They currently use seed coated in pesticides but if the EU decides to ban that, there is no good biological alternative. The fly's natural enemies can't easily be put to work in the field.'

Hormones could be causing the faster response

Help from unexpected quarter

Karssemeijer examined the cabbage plant's active genes after an attack by the fly larvae. A couple of hours after the attack, thousands of the plant's genes had changed compared with the control plants without root damage; some had changed after only half an hour. 'I hadn't expected the fly larvae to have such a widespread effect on the plant.' The larvae also reduce the production of certain defence substances (aliphatic glucosinolates). That helps the fly as the larvae perform worse when large amounts of these substances are present.
Karssemeijer also found the fly larvae do worse if the cabbage has caterpillar damage, with 40 per cent more deaths than without caterpillars. The plant's genetic response to the root damage is almost the same as without caterpillars, but it is 15 minutes faster. The researcher discovered something else too: 'Various jasmonates accumulate in the roots. These are plant hormones that control a lot of defence mechanism paths.' Those hormones could be responsible for the faster response. Do those 15 minutes make such a difference in the larvae deaths? Karssemeijer: 'Possibly. The youngest larvae may be most susceptible to the plant's response.' SS

A Little Wiser

Is a detox good for your body?

In springtime we seem to feel the urge to clean up not just our homes but also our bodies. Detoxes, cleanses, juice fasts... these are more or less synonymous and they all aim to purge your intestines of the encrusted layer of muck and accumulated toxins they have acquired. Then you can start afresh with a clean slate. But is this really so healthy?

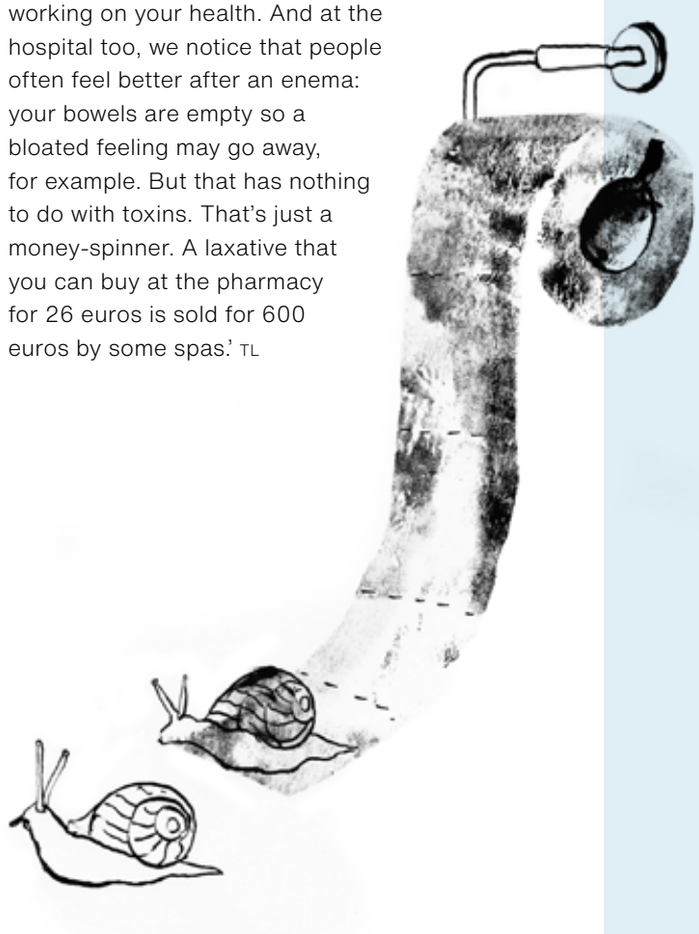
Wellness tourism is hugely popular, thanks in part to influencers who tout it en masse. The claim is that a week spent juice-fasting by the pool or undergoing a macrobiotic detox, perhaps combined with a colon cleanse, will flush all the accumulated toxins out of your body.

Nonsense, says Ben Witteman, a gastroenterologist and professor of Nutrition and Intestinal Health. Your gut doesn't need a cleanse. 'People have the idea that all kinds of muck sticks to the lining of the gut and that you need to clean it out from time to time. But that's not the case. The intestinal wall is clean and smooth and nothing sticks to it.'

According to Witteman, the gut's self-cleansing capacity has been so well developed over millions of years of evolution that it cannot be improved on. Between them, the gut bacteria, the gut lining, the liver and the kidneys run a perfect waste disposal system.

And if you want to give the intestines a helping hand, a juice fast is not the way to go. On the contrary: it will cause you to flush out the good bacteria as well. Witteman: 'They do recover, but it takes them several days. And fruit juice also contains a lot of sugars and not much fibre, while fibre is good for the intestines.' The gut bacteria convert it into free fatty acids, which in turn are good for the gut lining and the gut's resistance to disease.

So juice fasts and colonic cleansing do not do your body much good, and yet people do feel better after them, as Witteman has to admit. 'That can also be the effect of a week of relaxation and the idea that you have been working on your health. And at the hospital too, we notice that people often feel better after an enema: your bowels are empty so a bloated feeling may go away, for example. But that has nothing to do with toxins. That's just a money-spinner. A laxative that you can buy at the pharmacy for 26 euros is sold for 600 euros by some spas.' TL



'The intestinal wall is clean and smooth and nothing sticks there'

Ben Witteman, gastroenterologist and professor of Nutrition and Intestinal Health

Every day we are bombarded with masses of sometimes contradictory information on pressing issues. In this feature, a WUR scientist gives you something to hold on to. What are the facts of the matter?

Every question makes you a little wiser. Do you dare to ask yours? Email us at redactie@resource.nl

Illustration Marly Hendricks

Photo Unsplash/ Megumi Nachev

Dairy farming: lactation can be extended

Cows that calve less often, with no harm done to milk production or the animals' health. That is music to the ears of many a dairy farmer. PhD student Eline Burgers concludes that it is often perfectly possible.

In dairy farming it is usual to inseminate cows every year, so that after nine months of pregnancy another calf is born and a new lactation period – in which the cow gives milk – starts. However, the calving period is a relatively stressful time, with extra work for the dairy farmer and greater health risks for the cows.
For example, cows have to be 'dried off' before calving. This sometimes has to be done when the milk yield is still very high, which increases the risk of mastitis. After the calf is born, there is another risk: milk production then increases so rapidly that the cow cannot eat enough feed to fully meet its body's nutrient requirements. Calcium deficiency and ketosis are particularly prevalent at the beginning of lactation. And then there are the 'normal' risks of calving, which does not go smoothly for every cow.

Later

Burgers studied whether the time span between these relatively risky births can be stretched. 'Normally a cow is inseminated in the period when it is fertile ("in heat"), around the 40th day after the birth of the calf,' she says. With modern dairy breeds like Holstein-Friesian, could this be done one heat later? Or two? Or even longer? Burgers' research showed that a longer insemination interval works especially well with cows having their first calf. Milk production or the health of the animal does not suffer when cows are inseminated from 125 days after calving. With 'multi-calf cows', however, the timing turned out to be more critical. When inseminated after the 200th day after calving, they had a somewhat lower milk production per day. However, the cell count of the milk, traditionally seen as an indicator for mastitis, did not appear to be higher. Nor did udder infections occur more frequently. 'That kind of link just wasn't present,' says the animal scientist. 'But it was more difficult to get the next lactation going with animals that got very fat by the end of their extended lactation period.'

With the longer waiting period, fewer calves have to be born

Perfect timing

DSo the perfect interval varies per cow, Burgers' study showed, but what then is the perfect moment for insemination? The 14 dairy farms that took part in the study discovered a yardstick that can easily be applied in practice: as soon as milk production drops below a certain level per day, which can vary per farm and per cow, it is time to inseminate the cow. An additional advantage is that with this lower production at the end of lactation, drying off the cow is not usually too difficult.
The understanding gained from Burgers' research has another important advantage: with the longer waiting period fewer calves have to be born - good for the sector's image, she expects. The various aspects of extended lactation will be discussed extensively during the symposium on 'Customized Lactation', which will be run by WUR on 11 May. ME

Pacing the floor with Koen Arts

Koen Arts (Forest and Nature Conservation Policy researcher) describes our environmental struggles in 50 stories.

In his first book, *Wild Jaar (Wild Year)*, published last year, sociologist Koen Arts talked about his experiment of sleeping outdoors for a full year. But he was a writer long before that. 'I have been writing stories for as long as I can remember,' he says. His latest book, *IJsberen met optimisme (Worrying with optimism)*, contains 50 of his stories. IJsberen translates as 'polar bears', and is also the Dutch verb for pacing the floor restlessly like a caged bear.

Illustration Shutterstock

The title story is about an imaginary pentathlon between the polar bear (a symbol of climate change) and football player Christiano Ronaldo, the personification of human prowess, commerce, consumerism and everything that has contributed to climate change and the melting away of the polar bears' habitat.

We are all familiar with the image of a polar bear stranded on a melting ice floe. Arts: 'That's a harrowing image, but I try to keep on approaching the subject with optimism and a dose of humour. My aim is to illustrate the massive challenges even more sharply. I hope that people will start pacing the floor and worrying a bit more about the topics in my book.'

Absurd

Arts studies the triangle between nature conservation, day-to-day consumption and environmental issues. 'We get served up doom and gloom about the impending destruction of the Earth on a daily basis. And yet for many people, it is still far removed from their own lives. If you don't operate inside the green bubble, what do these issues mean in your daily life?'

The topics Arts writes about range from playing golf with Donald Trump to the joys of sex in nature. The tone is consistently light-hearted, although the story about his fellow philosopher Bas Haring's scepticism about biodiversity is caustic. A few species more or less, who cares? Arts takes this idea to an absurd extreme, conjuring up a world where the only 'species' is the Bas Haring. To find out how that ends, you'll have to read the book. RK

In other news science with a wink

MATHS PRODIGY

Fish can count, researchers at the University of Bonn have discovered. They taught cichlids and rays to add or subtract between one add five, one at a time. That wouldn't be enough to get you through primary school, but it is a start. And it is remarkable enough, say the researchers, given that fish do not have a neocortex like we do. In short: they don't actually have the brains for it.

HONOUR

Researchers at Virginia Tech (USA) have named a centipede after the singer Taylor Swift. The *Nannaria swiftae* is one of 17 newly discovered species of centipede. Swift's music helped one of the researchers through his college days, he says to explain the tribute. What the singer thinks of this honour, we don't know.

PHOTOSYNTHESIS (1)

Life wasn't always better in the past. But for rubisco, the key enzyme in photosynthesis, it was. Twenty to thirty million years ago, the ancient enzyme was used to much higher levels of CO_2 in the air than we have today. Scientists at Cornell University in the US are therefore simulating the protein, in an attempt to make potatoes climate-proof.

PHOTOSYNTHESIS (2)

But how do you get hold of that ancient enzyme? By creating a genetic family tree of the potato and its related species. This led the researchers back to a kind of primordial rubisco. The enzyme appears to work in *E. coli* bacteria, American scientists discovered. The next step is to insert the protein into the modern potato. Meanwhile, the Wageningen Institute of Photosynthesis (currently being established) is still waiting for a name... RK

For the stay-at-homes

Vincent Oostvogels

In early April, Scientist Rebellion, the academic branch of Extinction Rebellion, held an action week. Scientists demonstrated all around the world to draw attention to issues such as climate change. Were you there? No, me neither.

It is a remarkable situation. Many of us study important problems such as climate change, biodiversity loss, social inequality, hunger, you name it. We start our papers or reports by stating that there is a crisis, that previous efforts have not been enough, and that things really have to change. Extinction Rebellion is currently the main organized global movement that is campaigning for this. Yet only a small group of people from Wageningen are active in Extinction Rebellion.

‘Nobody asks us to justify why we stay at home’

We stay-at-homes view their activism with pity at best. Often, we disapprove, asserting that disruptive demonstrations undermine support for sustainability policies or that expressing an opinion damages your scientific credibility. Meanwhile, nobody asks us to justify why we stay at home, and nobody asks us what our strategy is.

Thank goodness for that. Because I don't think we stay-at-homes have a convincing answer to that. We will say that we do not believe in radical activism or that we cannot afford to be arrested. We will say that *our* research is already making a significant contribution and that we are also involved in society in many other ways. There will be some truth in all of that. But it also covers up the fact that we stay in our comfort zone by staying at home. And it allows us to avoid awkward questions about our research: whether we are able to expose those deep, underlying problems and whether all those papers and reports are making such a difference.

So, in the aftermath of the action week at the beginning of April, here’s a call for some soul-searching by stay-at-homes like me: are we really doing all we can? Where does our role lie? Maybe it does not lie in the activism of Extinction Rebellion, but then let us take a serious look at where we *can* make a stand.

Scan the QR code to respond online.

Vincent Oostvogels (26) is in the second year of his PhD research on biodiversity restoration in dairy farming. He dreams of keeping a few cows himself one day.

Student unions tackle inappropriate behaviour

Safe at your clubhouse

Will your student days be the best time of your life, or a period you'd rather forget as soon as possible because you were harassed, assaulted, or worse? Wageningen student societies are currently exploring how they can help prevent unacceptable sexual behaviour.

Tekst Luuk Zegers & Marieke Enter ◆ Photo Guy Ackermans

Unsolicited sexual inuendo. Always getting just a bit too close. Touching you when you don't want it. Being deaf to rejection. Most students who go out regularly see this kind of thing at some point. Or worse, they experience it themselves. Even a minor case of inappropriate sexual behaviour is really annoying. But its impact often goes much further. Some students experience situations that are so intimidating and disturbing that they are affected by them for a long time.

The Wageningen student societies, the municipality, WUR and Idealis all agree that it has got to stop. They got together to discuss how they could make Wageningen a safer place for students, on and off the campus. The initial impetus came from Amnesty International's manifesto 'Let's Talk About Yes at Our Educational Institution', a response to the disturbing results of a 2021 survey by I&O Research. That study, commissioned by Amnesty, showed that half of women students and 10 per cent of the men have experienced sexual intimidation. One in 10 women (11 per cent) even experienced sexual penetration without consent during their student years. This happened to one per cent of the men too.

'Since nightlife started up again after Covid, there have been more cases reported'

Stop dismissing it

Sexual harassment is a widespread problem in Dutch nightlife – including student societies, and including those in Wageningen. SSR-W president Anne van der Molen finds it hard to estimate exactly how big the problem is. 'Since nightlife started up again after Covid, there have been more cases reported. The exact number varies: sometimes it's once a week, sometimes once a month, and sometimes it's quiet for a while.'

That increased number of reports sounds like bad news. Yet it doesn't necessarily mean it is happening more. 'It could also mean that people are now more likely to report behaviour they find unacceptable: a change in the culture,' says Van der Molen. 'You can see that not just at SSR-W and other student societies, but throughout society. Complaints that might have been dismissed 10 years ago, with comments like "oh well, that was because of too much alcohol", can now get you suspended.'

Together with Maarten van der Heide, SSR-W board member and the contact person for members, Van der Molen wrote a policy plan for how their society deals with inappropriate sexual behaviour. 'We consulted other societies that already had policies in place, as well as institutions and confidential counsellors. Then we started talking to our members and things came out of that, such as additional protocols for running party nights. The end product is a policy that focuses on prevention, but also describes how we deal with reports and what sanctions there are if someone does cross a line.'

Prevention

Preventing undesirable behaviour is a worthy goal, but how does one go about achieving this in nightlife settings? Step one: start right from the introduction days. Van der Molen: 'During the introduction camps we invite speakers from Rutgers expertise

Inappropriate sexual behaviour is a widespread problem in Dutch nightlife – including in student societies. Now that there is more partying going on, there are also more reports of such behaviour.

‘Men in particular struggle with questions like: where is the line?’

centre, for example, to talk about this. The confidential contact persons also introduce themselves. Meetings are already being arranged for next year’s freshers, who haven’t even registered yet.’

Opportunities to talk about the subject are also scheduled for other members, such as during the annual general meeting (AGM). Then there are the “Are you okay?” and “This is how we do it” campaigns. Van der Molen: ‘We’ve put up posters everywhere. Asking each other the question “are you okay?” is so simple. Campaigns like this lower the bar for asking such questions.’

Overview

SSR-W wants to arrange additional training for the bar staff on how to act in the event of inappropriate behaviour, because they play an important role on party nights, says Van der Molen. ‘The people behind the bar have the best overview of what’s going on.’ But what do you do as a bar employee if you see something happening that doesn’t seem right, or if someone comes up to you who doesn’t feel completely safe? ‘First of all, you want to make that person feel safe again, by offering a listening ear for example. How you proceed from there depends on the situation,’ emphasizes Van der Molen. You can ask the person who is being a nuisance to leave the premises. Because alcohol is often involved, it is usually better not to have a real conversation about it on the spot but at a later time.’ There is also the Centre for Sexual Violence, an organization that has professional staff on standby in case of emergency, which bar staff can call 24/7.

Conversation

SSR-W’s new policy contains protocols with suggestions for sanctions. ‘These are mainly meant as guidelines, because it is important to assess each situation individually. That was emphasized by all the agencies we had contact with on this matter,’ says Van der Molen. The sanctions described range from an official warning to suspension or expulsion. All cases are reported to the board. Van der Molen: ‘We always discuss the situation with external confidential counsellors as a sounding board, so that we don’t play judge and jury.’ After a report, there is always a discussion with the person about whom the complaint was made. As president of the student union, Van der Molen is present. ‘The offenders find these meetings stressful. They had not imagined that their behaviour would lead to anything like this, and they are shocked at how it is seen by the other person. They are also afraid of what the rest of the society will think. All in all, such a conversation is quite effective.’

Different boundaries

That people can feel unsafe because of sexually tinged remarks and unwanted touching during a night out is rarely disputed anymore. But the point is that everyone has their own boundaries and that these boundaries can differ per situation. You might not be bothered if a member of your fraternity puts an arm around you without asking, but a total stranger shouldn’t try it. Hundreds of SSR-W’ers discussed this with each other at the AGM. Van der Molen: ‘Men in particular struggle with questions like: where is the line? Can I never really touch anyone again?’ A dialogue about this struggle is the first step, says Van der Molen. ‘It’s a matter of awareness. People start asking themselves: is what I’m doing okay? By talking about it and really listening to each other, people learn to set their own limits. We must strive for a culture in which members dare to call each other out for their behaviour.’

The SSR-W members have already presented their policy to other Wageningen student societies and the university. Van der Molen: ‘We are all looking for ways to tackle this problem. It’s good to pull together.’ ■

AND ELSEWHERE?

KSV Franciscus, president Djoeke Dankloff: ‘Sexual harassment is an important topic, especially in student life, where alcohol is often involved and boundaries are blurred. That is why it is good to talk about it. The other day, 800 of us went to Prague for our anniversary gala. We put up posters everywhere saying, “Sharing a bed in Prague? Do ask first. No yes is a no.” That’s how we as a student society are trying to encourage a culture of consent.’

SHOUT Wageningen, board member Rinske de Vries: ‘About half of our members are students. The last time we had an incident with unacceptable behaviour was six or seven years ago during our parties. As far as I know nothing has happened since then. We have drawn up a code of conduct making explicit how we behave towards each other. Girls often tell me that it’s chill for them to party at SHOUT. It is open and friendly and at least there are no boys chasing you all the time, I get told. Maybe as an LGBTQ+ association, we are more aware of the importance of always treating people with dignity and respecting their boundaries.’

New light on lianas

Biologist Paul Hoekstra cut a path through a forest of lianas, discovering 23 new species in the process.

No, he is not into Tarzan. There have been plenty of jokes about that while he was doing his PhD research. The lianas that Paul Hoekstra researched for five years just grew from the ground up. ‘Most lianas can’t be used for swinging from.’

He used the soursop plant family (*Annonaceae*) to do genetic research into the evolution of biodiversity in the tropics. ‘Actually, I focused on *Monanthotaxis*, a genus within the soursop family that only occurs in Africa. The Herbarium in Wageningen already had many specimens of that genus, mainly from Gabon. It is a beautiful, large and diverse group to do biodiversity research on.’

Hoekstra began his study in 2012, when the WUR Herbarium was still located at De Dreijen in Wageningen. A year later, it was moved to Naturalis natural history museum in Leiden. So he spent the next three years there, working fulltime on what may be called a life’s work: an updated review of the genus *Monanthotaxis*. A complete description of 79 species of this genus takes up no less than 238 pages in his thesis *Disentangling Lianas*. There’s a small omission though: he didn’t get around to the 12 known species that occur in Madagascar.

Family tree

‘Disentangling lianas’ is a reference to the mess the group was in. ‘When I started, more than half of the plants collected had not yet been identified. Often it wasn’t even certain that they belonged to that genus.’ Hoekstra not only catalogued the group in an orderly fashion, but also discovered 23 new species. These were plants that had been collected, but had never been studied or identified. No, he has not named any of them after himself. It is an unwritten rule in biology that you do not name species after yourself. ‘But I did name one after my son Arend, the *Monanthotaxis aquila*. Aquila and Arend both mean eagle’.

The study has a firm foundation in genetic research. Based on the evolution of characteristic pieces of DNA, Hoekstra made a phylogenetic tree, a family tree in other words, of the genus *Monanthotaxis*. He linked this family tree to the external characteristics of the flowers of the plants. This yielded a remarkable conclusion: the more recent the species, the smaller the flowers. Why that should be is a matter of speculation for now. Hoekstra: ‘It may have something to do with the method of pollination. In many groups of plants you see that plants adapt themselves to the size of the pollinator’.

The documentation of *Monanthotaxis* not only provides fundamental knowledge, but also has practical value. Some species are known to provide protection against malaria and cancer. Those species have now been well described, are identifiable, and have a name. Hoekstra: ‘And thanks to this phylogeny, you can now search much more specifically for species that may also contain substances with medicinal properties.’ ■

Monanthotaxis couvreurii • Photo Thomas L.P. Couvreur

‘I named one after my son Arend, the *Monanthotaxis aquila*. Aquila and Arend both mean eagle’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BUNKERING DOWN WITH BEER

The work is finished, the beer brewed and bottled. Two more weeks and then it will be party time. On Friday 13 May, the pub in the Bunker block of flats will turn on the tap and let its Bunker beer start flowing. The beer, described by its brewers as 'fresh and thirst-quenching', was developed by and for students. Based in the flat pub, hence the name. Pay 7.50 euros per person and you can drink until it's all gone. RK

Use the QR code to read more about the brewers:

Photo Guy Ackermans

‘Think about the tough questions too: what if it can’t be done?’

The North Sea as a power station

Last month, the Dutch Cabinet announced its intention to generate twice as much wind energy at sea by 2030 as was previously planned. Such a significant increase in scale has implications for life on and in the North Sea. And therefore also for Wageningen research on marine life.

Text Marieke Enter

Offshore wind farms are a relatively new phenomenon in the Netherlands. The first wind farm came on stream 15 years ago off the coast at Egmond aan Zee. It has 36 turbines and a capacity of around 100 megawatts - enough to supply about 100,000 households, or a city the size of Eindhoven, with electricity. Large-scale wind production has only been present in the North Sea since 2016, when Gemini wind farm set a new standard: 150 turbines and 600 megawatts, a global first at the time. At around the same time, the costs at last began to fall, and as a result government subsidies have not been necessary for offshore wind farms since 2018. Offshore wind has since been given a bigger and bigger role in the Dutch energy transition (see inset).

The North Sea is now being transformed into the Netherlands’ main source of energy. This inevitably has an impact on marine life, but what impact? Wageningen Marine Research has been researching this since around 2000. Coordinator and team leader Josien Steenbergen estimates that there are now about 40 people working on this theme – ‘not all of them full time, though’ – and that the research budget is about 3 million euros per year. The researchers are working on a wide range of topics. Examples include mapping the flight patterns of migrating birds and bats over the North Sea, finding out how much sharks and rays are bothered by the electromagnetic fields of undersea power cables, and identifying opportunities offered by wind farms located outside fishing grounds for commercial seaweed farming. Although private parties are increasingly interested in research – more on this later – the Wageningen researchers work primarily on behalf of central government. Together with NIOZ and Deltares, Wageningen Marine Research is one of the larger research institutes within the government’s programmes Wozep (wind at sea ecological programme) and MONS (monitoring, research, nature enhancement, species

Wind energy in the North Sea

Previous governments had already designated six large wind areas to generate some 9.8 gigawatts of additional offshore wind power by 2030. Last month, the cabinet added three new areas: Nederwiek, Lagelander and Doordewind, which will generate 10.7 gigawatts between them. By 2030, the Netherlands wants to have a total offshore wind capacity of about 21 gigawatts. This will make the North Sea by far the main source of energy for the Netherlands.
Source Rijksoverheid.nl

Building a new offshore wind farm off the Dutch coast ◆ Photo Shutterstock

‘Apart from wind farms, there are many other factors that put pressure on the North Sea’

protection). MONS is a 10-year research programme due to start in the course of this year, which has been developed with input from Wageningen Marine Research.

Next level

According to Steenbergen, the cabinet’s decision to more than double the use of offshore wind has brought things to the next level. ‘The research done so far has produced the knowledge we needed about the effects on specific species – and how to limit the damage, for example by using “bell screens” to keep porpoises away from the wind farms or by shutting down the turbines when flocks of birds or bats approach. But there is still a tremendous amount we don’t know at the population level, and even more so at the system level. And that knowledge will become even more important as more wind farms are constructed in the North Sea.’

Asked whether Marine Research was involved in the selection of the three recently designated new areas, Steenbergen says: ‘To a limited extent. Two years ago we ran a workshop for the Public Works directorate on which areas in the North Sea are important for which animals. The maps that a colleague made then of the seabird habitats were used by the ministry in the selection process. The tricky thing is that an awful lot of factors are involved in the selection of the wind farm locations: from defence interests to shipping routes to fishing grounds and

Natura 2000 areas and underground cable routes. These factors are all topographically fixed, while ecology is not usually. So unfortunately, ecology does not tend to end up at the top of the list of selection criteria.'

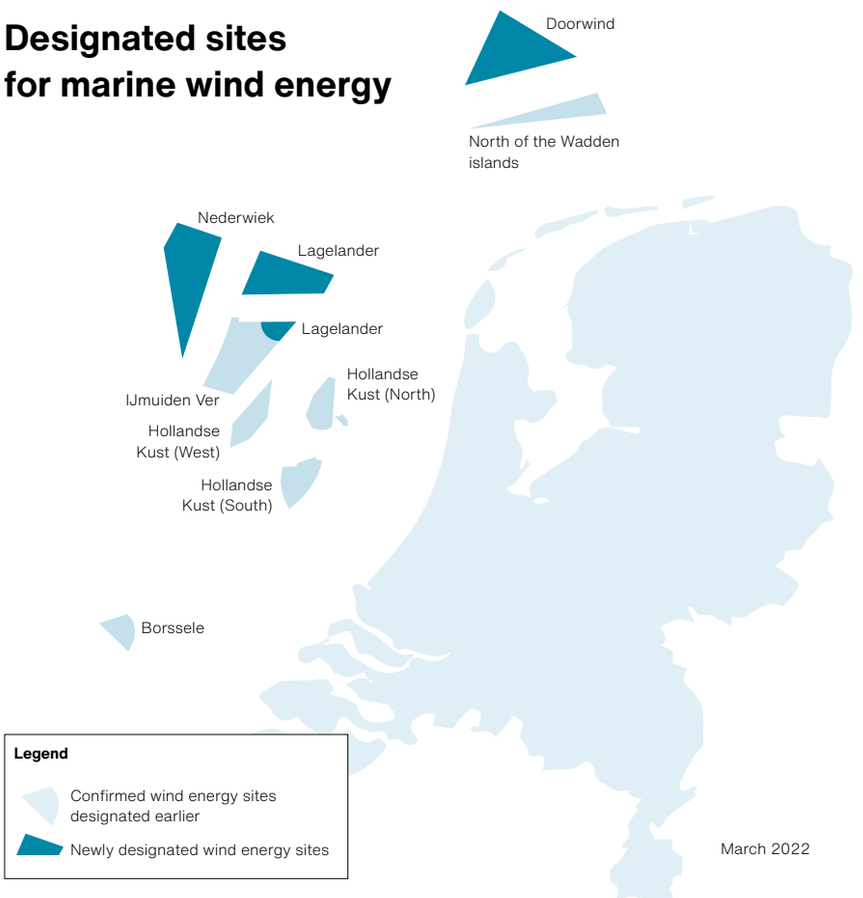
Simultaneous

The upscaling of offshore wind energy increases the urgency of a solid knowledge of its ecological implications, says Steenbergen. Her view is: 'It would be good if, on top of the research already going on, additional modelling studies followed to chart the cumulative effects. And preferably from as broad a perspective as possible, because in addition to the wind farms, there are many other factors that put pressure on the North Sea, including shipping, fishing and sand extraction. All that affects marine life as well, so you can't study the different factors separately from each other.'

But isn't it a bit late to be starting this kind of study, knowing that the new wind farms have to be up and running by 2030? 'There is a risk of a mismatch between the pace at which the necessary knowledge becomes available and the pace at which offshore wind develops,' agrees Steenbergen. 'So a degree of adaptability will be important. Research often provides insights as you go along that can guide further action. But some studies simply take time. If in MONS we set up a basic monitoring programme for phytoplankton or small pelagic fish species*, we cannot do without multiannual data sets. That kind of monitoring poses a methodological challenge anyway, because we are measuring in a system that is in fact

'There is still much we don't know at the population level, and even more so at the system level'

One of the topics WUR researchers are working on is mapping the flight patterns of migrating birds and bats over the North Sea • Photo Shutterstock



already changing: some of the wind farms are already under construction. All the more reason to approach the research with care and not to jump to conclusions.'

Partners

Besides the government, Marine Research increasingly often works for private parties such as wind farm developers. 'In the most recent tender for a location, the government took ecological aspects into account. Our knowledge is welcome, because the more nature-inclusive the wind farm design, the more points it scores in the tender,' explains Steenbergen. Marine Research is also working with partners to investigate multiple uses of the wind farms. Trawling is not permitted in the vicinity (there are quite a few cables in the seabed) and that offers opportunities for other forms of fishing or farming, not to mention nature restoration. Efforts are ongoing, for example, to bring the flat oyster back in the North Sea and there are experiments with artificial reefs to increase underwater biodiversity. Steenbergen notes that it is important to remain critical of these initiatives. 'You might well question whether hard reef structures should be encouraged in places where the seabed was originally sandy. Or what effect all those extra shellfish mouths have on the nutrient levels in the water.' Practical feasibility can be an issue too, as it is for ideas about fishing in wind farms, for example. 'The safety requirements are so stringent that in the four years of our pilot project in Amalia Wind Farm, the conditions have never been right for a fisher to actually enter the wind farm. But there are a few young, enthusiastic fishers who would like to go into the wind farms, so we continue to look for opportunities. We are working closely with Wageningen Economic Research on this dossier, incidentally.'

'Ecology does not end up at the top of the list of selection criteria'

Worst case

These two institutes, Wageningen Marine Research and Economic Research, are also working hard on the governance of offshore wind, explains Steenbergen. 'There's quite a lot that scientists don't know about the effects of offshore wind farms. We will find many answers in the coming years, but they may not all be entirely positive. Suppose we discover that the North Sea system is seriously disrupted, or that a particular species is seriously endangered by the wind farms? What should we do then? Does the wind farm go out of business? Or do we accept the loss of nature, because the Netherlands cannot do without offshore wind energy for its energy transition? And is that legally permissible? No one can answer that yet. We need a proper assessment framework which gives all the ecological, economic and social interests the weight they deserve. The Netherlands really needs to start thinking about those kinds of difficult questions, especially after announcing the doubling of offshore wind capacity.' ■

** Fish species that swim at all levels in the water, such as mackerel and herring. As opposed to demersal fish species such as red gurnard and sole, which live close to the seabed.*

WUR leaves town

Bye - bye Aula

Today, on Thursday 28 April 2022, after the last degree ceremony in the Aula, WUR is pulling out of the town centre completely.

'I don't know if I will cry over it,' says beadle Renata Michel after some thought. 'But I do have strong feelings about this building.' 'They're mixed feelings,' adds her colleague, Lily Kroon. 'The link with the town will be lost. We are moving to Omnia, a new building on campus. It's not that new is either better or worse, but it is different. This is the last university building in town and I think that's a pity.'
'I'm a real WUR kid,' Michel continues. 'My father was an amanuensis at Entomology, and my mother worked at Stiboka, which later became the Staring Centre and now Alterra. I grew up with this Aula. I can still see my father sitting in his regular spot up there in the gallery. My mother prepared the theses at the printer's. And I eventually became a beadle. How nice is that?'
She has been working as a beadle for 16 years. Since 2006, there have been over 4000 PhD defence ceremonies. Of course, she didn't preside over all of them herself. But she was at a lot of them, as well as many inaugurations, farewells and graduation ceremonies. However, the very first ceremony in the building took place well before that time. On 5 April 1935, to be precise, when the building was officially opened by Queen Wilhelmina.

Text Roelof Kleis

Gift

The queen was really unwrapping a gift that had been presented nine years previously. On 15 September 1926, former minister Folkert Posthuma, who chaired the executive committee for the commemoration of Wageningen's 50th anniversary, gave the agricultural college an auditorium. It was then exactly 50 years since the National College for Agriculture, Horticulture and Forestry had been founded in Wageningen. That college was the direct predecessor of the current university, which was founded in 1918 as the Agricultural College. And the college could do with a showpiece building: that was the idea behind the donation of the Aula.
That it took nine years before the auditorium was actually built was due to disagreements about the design and the location. A competition was held for the design, which was won by the Haarlem architect Henry Timo Zwiers. But his design, *Hoe 't groeide* (How it grew), was never built because the

Cinema

The Aula will become part of the new Heerenstraat Theater. 'So the main hall will become a cinema auditorium,' says project coordinator Sandra Labree of architectural heritage developer BOEi. 'We are preserving as much of the building as possible. The idea is to turn the gallery where the organ is into an upper circle, and that's where the projector will be too. It is not yet clear whether the organ will be kept. All the fixtures, like the plaques, will stay. The portraits of professors will go to Omnia. The Small Auditorium will become a kind of Wageningen Experience, where a 10-15-minute film will show visitors what the city has to offer. Paying a lot of attention to its history, the war and WUR, of course.'

The three beadles in the Aula. From the left: Renata Michel, Arianne van Wijk and Lily Kroon ◆ Photo Guy Ackermans

municipality was opposed to it. A second design was eventually approved. Construction began in 1933 and two years later the university had its showpiece.
But who were the generous donors? The story goes that the building was mainly paid for by former students of tropical forestry who had made their fortunes in the colonies. They collected 55,000 guilders to express their gratitude for their education. The stained-glass windows at the front bearing the coats of arms of Batavia and Suriname are a silent witness to their role, and make the auditorium a piece of colonial heritage.

Tourists

'Can I name two?' asks Lily Kroon when asked about her favourite part of the Aula. 'The Small Auditorium, when those portraits of the rectors were still hanging there. I was always so proud of that hall. And the stage of the main hall. You have such a good view there of the sun-shaped clock at the other end and through the windows to the outside world. It always feels good to be there.' 'I like the spaciousness of the room,' adds Renata Michel. And it's a nice place to work, even though it's draughty in the winter and it gets very hot in the summer. It has charm and character.'

'The building has charm and character'

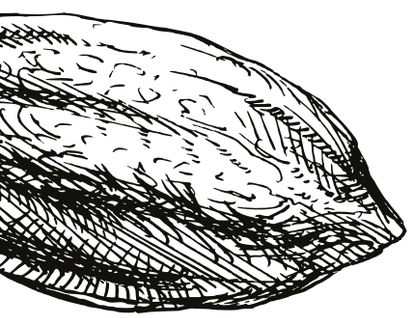
'The building has history too,' says Kroon. 'A lot of the people who come here think that's fantastic. Grandpas and grandmas come along to Master's degree ceremonies. And of course everyone knows that the Aula played a big role in ending the Second World War.'* Michel: 'Quite a few tourists ask if they can take a look inside too. They are very interested in its history. Of course, this is and will always be a very remarkable building.'
But the beadles agree that you have to look ahead as well. Michel: 'What's that saying, again? "There's a reason why your windshield is bigger than your rear-view mirror." We've got to move on. We are going to a new, big and beautiful building and I'm sure things will be good there too. And we have each other. It will be different, that's all.' ■

** On Saturday 5 May 1945, in Hotel De Wereld in Wageningen, the German General Blaskowitz and the Canadian Lieutenant-General Charles Foulkes signed the Orders on the Surrender, which brought an end to the war in the Netherlands. On Sunday 6 May the technical details of the 'orders' were worked out in the Aula of the Agricultural College.*

COCOA FARMERS ARE STILL DIRT-POOR

Every day around the world one billion people eat chocolate. And yet few cocoa farmers make a decent living. WUR researchers Yuca Waarts, Ken Giller and Niels Anten on the causes and the solutions.

Text René Didde ◆ Illustration Shutterstock



In the West African countries Ghana and Ivory Coast, where 70 per cent of the cocoa comes from, three quarters of the three million cocoa farmers live below the poverty line. 'Their meagre income goes on primary needs such as food, medicine and school fees. There is little left over to invest in the much-needed improvements to farming methods,' notes economist Yuca Waarts of Wageningen Economic Research. The cocoa farmers go on farming with old cocoa trees and exhaust the soil for lack of compost and fertilizer. So they often take new land into production by cutting down a piece of rainforest. And climate change, drought in particular, is adding to their woes.

Quality labels such as Fairtrade and Rainforest Alliance were created with a view to improving the position of small cocoa farmers. But these labels are not combining with the increased demand to lead to a decent living income, notes Waarts. In fact, in the November 2021 report *Balancing* the *Living Income Challenge*, she calculated that even if we paid twice as much for chocolate, many farmers would still not earn a living income. This is because about 70 per cent of the farmers produce only 30 per cent of the cocoa. 'It would only increase the income per farmer a little bit. The price increase mainly goes to the larger-scale farmers. And the higher prices can also lead to overproduction.'

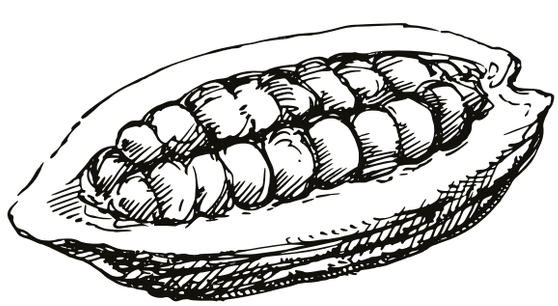
Profits to traders

'Larger-scale farmers work more professionally and have money to spend on fertilizer and on pruning the cocoa trees,' says Niels Anten, professor of Crop and Weed Ecology in Wageningen. According to Anten, the small cocoa farmers are difficult to reach and agricultural extension services are failing them. 'If they prune back the cocoa trees, a higher density and harvest are possible.'

At the research stations of the Cocoa Research Institute in Ghana, Anten saw cocoa yields easily increase fivefold from 550 kilos to 3000 kilos per hectare. 'In reality, though, the yield on the larger farms stayed at 1200 kilos. That is less than in the trials, but it's still more than double the national average. Together with the research institutes, we still have to answer some fundamental questions, such as which fertilizers make a difference for which type of soil,' says Anten.

Ken Giller, professor of Plant Production Systems, sees the poverty trap at work among nearly all farmers in Africa, including those growing coffee or maize. 'It is the poverty of a growing population, 90 per cent of whom work in agriculture and on ever smaller farms,' says Giller, who has made the problems of small-scale African farmers his life's work.

In addition to the inadequate agricultural extension services, Giller



‘BARELY EIGHT PER CENT OF THE PRICE OF A BAR OF CHOCOLATE GOES TO THE FARMER’

points out that governments invest too little in knowledge and the development of infrastructure. ‘There are subsidies and price guarantees for cocoa, but fertilizer, for example, is 10 times more expensive in Africa than in Asia, because it isn’t subsidized.’ He also blames the poverty on the neo-liberal trend in the world food economy. ‘Twenty years ago, 16 per cent of the price of a bar of chocolate went to the farmer, but now it is barely eight per cent. Nearly half the profits go to traders, the chocolate manufacturers and the supermarkets.’

But there are opportunities, says Giller. ‘In Ghana and Ivory Coast, there is increasing diversification in the cocoa sector and agriculture is being combined with forestry – agroforestry, in the jargon.’ This could mean planting cocoa trees in amongst the giant trees of the tropical forest. ‘The cocoa trees benefit from the shade of the tropical trees. And the leaves that fall from the trees provide compost that benefits the soil after one season,’ explains Giller. Another option is to plant banana trees when planting young cocoa plants and new tropical trees. ‘With their enormous leaves, the bananas provide enough shade during the cocoa trees’ vulnerable first few years. Later, the tropical trees take over the provision of shade,’ says Giller. ‘And the bananas give the farmers a useful second crop.’

Economist Yuca Waarts sees the benefits of diversification in cocoa farming too. ‘Besides cocoa beans, farmers can also earn an income from cashew nuts, coffee and palm oil trees. Subsidies from the government and corporations could also help ensure a living income,’ she says. Planting trees could also generate income through ‘carbon credits’ for the storage of CO_2 by trees.

Trend break

Tackling this issue calls for a raft of measures, according to Frank Joosten of IDH, the Sustainable Trade Initiative. This NGO’s activities include co-financing development projects in the cocoa sector. ‘The problem is that governments, credit providers and multinationals are still not working together enough. For example, micro-credit organizations and banks in Ivory Coast lend to cocoa cooperatives and their members, but often do not coordinate this with the government extension services or the multinationals’ sustainability programmes.’

According to Joosten, a plan announced in January by the Swiss multinational Nestlé may be able to reverse the trend. The company pays farmers a bonus on top of the price for certified cocoa if they grow other crops besides cocoa or keep livestock. ‘They also get money if they prune their cocoa trees, plant other trees than cocoa trees and send their children to school. If they implement all the measures, they get about 475 euros per year, a substantial addition to their income.’ ■

FIRST STEP TOWARDS GLOBAL SOIL RESEARCH

Soil life takes care of key soil functions such as water purification, disease control and the carbon cycle. The new BIOSIS tool helps researchers and government bodies find the most suitable method of measuring soil quality, and is the first step towards a global dream of describing all the soils in the world.

Text Stijn Schreven

Wherever you go in the world, the soil is always different. Yet soil scientists have always sought to assess soil quality anywhere in the world using a fixed set of methods. Rachel Creamer, professor of Soil Biology, outlines the situation she hopes to change: 'We usually opt for a minimal-dataset approach. We use a list of only the essential measurements required for assessing soil health, and that is often a fixed list. But some methods only work in certain climates or soils. So people develop their own methods.'

Creamer and her colleagues decided to design a tool with which researchers could select methods of measuring soil quality, drawing from a list of 195 validated methods of measuring soil life and 98 methods of measuring processes.

Soil biology

In a previous project, Creamer developed the Soil Navigator tool, with which farmers could select simple, tried and tested methods for finding out how healthy their soils were. But the tool was too one-sided, says Creamer: 'It didn't measure the soil biology. Methods that do that are expensive and produce results that are hard to interpret.'

The newly developed BIOSIS tool is for researchers and government bodies, and does include soil biota such as earthworms and bacteria. It builds on a new framework that Creamer published together with the tool, which provides an overview of the links between soil functions and soil biota. The framework includes four soil functions: carbon and climate regulation, water regulation and purification, the nutrient cycle, and disease and pest control.

'The framework is based on the idea that all soil biota groups are important and that they usually support multiple functions in the soil. Bacteria, fungi and archaea are truly multi-functional in their role, supporting all four soil functions.'

Besides providing an overview of the methods and facilitating soil research and monitoring, Creamer hopes the tool will help raise awareness of the importance of soil life to how the soil functions.

The BIOSIS tool can also update the measurements currently used in soil

'DATA FROM BIOLOGICAL ANALYSES ARE INCREDIBLY COMPLEX'

THE NEW TOOL LOOKS AT SOIL LIFE AS WELL

monitoring. For instance, a simple, cost-effective method is in use that measures the number of bacteria in microbial biomass. But the method is outdated and not very informative. ‘The science has developed tremendously since microbial biomass measurement was thought up about 30 years ago,’ says Creamer. ‘Now we know which microbes are responsible for decomposition, denitrification, etc. All that information is lost in the microbial biomass method, yet it is still recommended in many minimal-dataset monitoring systems.’

Three steps

Scientists can use the tool for research, and the agricultural sector can use it for monitoring programmes. The most suitable methods are selected in three steps. First, the user states which soil functions they want to research. The tool then identifies which soil biota are most important for this function. The second step is to check if these soil bacteria are relevant to the land use in question (arable farming, grassland or forestry). At the moment the tool works for arable and grassland systems; plans to expand it to forestry are underway. The third and final step is the logistical criteria: the user can use filters to fine-tune the method to suit their needs. Creamer: ‘They can indicate that they only want to measure once every five years, or that they have a limited budget or laboratory facilities.’

Free and accessible

Creamer has big plans for the future. ‘I would like to make a list of standard methodologies (standard operating procedures or SOPs, ed.) and make them available on the website, so that people can access them from anywhere in the world. They should be free and in the public domain, but we need to make sure they are peer-reviewed and up to date.’

Finally, she would like to help users with interpreting their results. ‘Anyone can use these methods and offer them for analysis. But when the results come in, what do they mean? Data from biological analyses are incredibly complex.’

Her biggest dream: ‘To give meaning to the results, we need soil samples from a great many locations. My long-term ambition is to establish uniform and consistent global benchmarks for a whole series of methods. We’ve already written a proposal for doing that in Europe, but the dream is to do it worldwide. Publishing the tool and framework is a start. Now we can open doors.’ ■

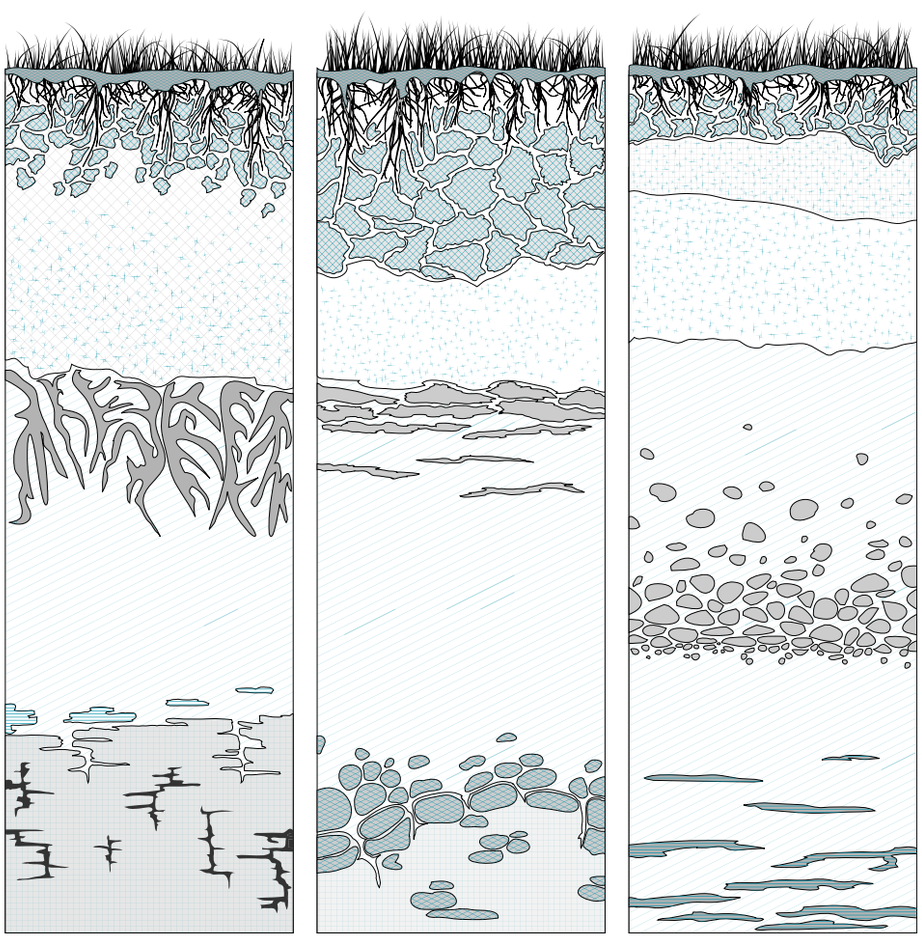


Illustration Shutterstock

Key people: Wouter Suykerbuyk

Everyone on the campus is indispensable, but not everyone is in the spotlight every day or gets much of the credit for the hard (team)work that goes on. *Resource* puts these colleagues in the limelight for the Key People series. This time, meet Wouter Suykerbuyk, a researcher at the Wageningen Marine Research Institute in Yerseke.

Text Julia van der Westhuyzen • Photo Guy Ackermans

‘One of my favourite activities that we do in the Southwest Delta is fieldwork. We often need to reach tricky places like tidal flats. For this we use longboats. A longboat (the Dutch name is “*sloep*”) is an aluminum motor boat that is our essential tool for doing fieldwork here in the delta. At the moment we have two of them - one of about 6 metres long and one of about 4.5 metres. They are terrific boats! Every project leader has their own requirements and wishes, so we have combined these requirements in boats that we’ve equipped specifically for our work. So our longboats have to be like “a sheep with five legs”, as the Dutch saying goes. One of my jobs is maintaining the longboats and sometimes looking for the extra “leg”. I work on the principle that the boats should be “click and collect”: ready for researchers to take them out of storage and go.

‘I don’t care how tough (or muddy, cold or wet) it is’

I have a lot of other day-to-day tasks besides this. Everything from collecting data in the field to writing reports and papers. Every day it’s a battle to time your work right for between the tides. No two days are the same and that’s what I like about my job. Something really important (besides drinking coffee) is connecting with project leaders to plan data collection and fieldwork. Since I have a background in research, having done a PhD, I know from experience how important it is to have reliable data. So I try to be the project leader’s eyes and ears in the field. I always explain to people that I have two speeds: fast and extra fast. In the field I just want to get the job done and I really don’t care how tough (or muddy, cold or wet) it is. I’m a real fieldwork tiger.

The projects I’m involved in take me to the most extraordinary and beautiful places in our delta. One of my favourite projects at the moment is about optimizing oyster farming in the sea. With my background as an oyster farmer, I can bridge the gap between the oyster farmers and the researchers. Another special project of ours focuses on the Oosterschelde lobster. We are trying to gain a fuller understanding of the lobster’s biology and ecology.’

Campus ◆ residents

Livestock Robotics

From a jukebox for chickens to a self-propelled wheelbarrow that follows you around. As a country boy, Bastiaan Vroegindeweij has an unerring instinct for inventions that can make the life of farmers or farm animals - and preferably both - more pleasant. Devising and making them is the core business of his company, Livestock Robotics. 'Really, we are just inventors who are bridging the gap between the lab and the barn,' is how he sums it up.
It all goes back to Vroegindeweij's PhD research at the Farm Technology Group, when he succeeded in developing an egg retrieval robot that detects and collects eggs fully automatically in cage-free layer barns – without breaking eggs or running over the hens. Nobody doubted the usefulness of this PoultryBot, but the long payback period kept investors from backing it.

'Really, we are inventors who are bridging the gap between the lab and the barn'

The company has now broadened its scope to almost anything at the cutting edge of robotics, vision and agriculture. 'As long as we get to do fun stuff and can earn a decent living,' says the founder.
This autumn, Livestock Robotics will move from Plus Ultra II to the town where Vroegindeweij lives. 'We are short of space here,' he explains. A glimpse of the office confirms that: it is stuffed from floor to ceiling with boxes of screws, sensors, wiring and other inventor paraphernalia. But there is always room for new ideas. 'So if there are any more people at Wageningen that we can help with solving a problem...?' ME

There are about 100 companies on the campus. We introduce them to you in *Resource*. This time: Livestock Robotics

All the flavours of the world can be found in the WUR community. Elena Gallina, a post-grad intern at NIOO-KNAW from Italy shares her recipe for a chickpea 'omelette'.

Flavours of WUR

Vegan chickpea 'omelette'

'I discovered this recipe when I had to cook something for a vegan, gluten-free and lactose-free dinner with friends. It was a great success and many people have asked me how to make it since.'

Ingredients (for 3 to 4 people):

- 200g chickpea flour
- 600 ml warm water
- 1/2 teaspoon of salt
- 50 ml olive oil
- Whatever vegetables you want

1. Pre-heat the oven to 220°C.
2. Whisk the flour, salt and water together.
3. Skim off the foam, which is bitter and could affect the taste of the omelette.
4. Stir the oil into the mixture.
5. Add the veggies (I usually make it with half a courgette, fried in oil with a clove of garlic. Add herbs or spices if you want).
6. Pour the mixture into an oven dish and bake it in the oven for 30 minutes at 220°C.

Elena Gallina
Post-graduate intern at NIOO-KNAW, from Italy

10-euro lunch voucher
Share your recipe with *Resource* and get an **Aurora voucher worth 10 euros.** resource@wur.nl

UNIque houses

There are student houses and then there are weird and wonderful student houses. In this feature we visit those UNIque houses. This time: B2.

Beurredeux (B2)

Residents:
Ahmed Nakha, Ana Diaz, Anna Gkakou, Leon Munk, Marleen Arts, Marta Boronat Demattey, Melanie Häusel, Michele Cavallero, Naomi Willems, Nicholas Been, Rohit Pawar, Siri Tuinema, Sara Sottoriva, Valentina Verduchi

UNIque because:
The parties here are world-famous (in Wageningen)

Sara: 'Before Covid we had a rather notorious house party here every year. Half Wageningen came to it. We used to paint the wall of the living room to match the theme of the party. Then we had to look at it for the rest of the year.'
Marta: 'In the weeks before that party we always sat in a half-empty living room full of paint pots.'
Sara: 'We're throwing a party this year but we're doing it on a much smaller scale because it's the first post-Covid party.'
Leon: 'I can't really imagine what it will be like when it's full of people here. I feel like you couldn't get more than 50 people into the house, but the others tell me there were easily 200. I came to live here during the lockdown and I was just glad that at least I could socialize with the others in the house. Otherwise I would have come to the Netherlands just to take online classes on my own throughout my Master's.'
Naomi: 'During Covid we turned the guest room into a study so you could separate your private life from your studies. It was quite difficult at times, as you've got 13 captains on one ship here, and they've all got their own opinions of the Covid regulations.'
Sara: 'But it was a really fun time too. We painted the game Twister on the floor, and we celebrated 5 May together.'
Naomi: 'Of course it is a close-knit house on the whole. Relationships have even started here.'
Anna: 'A couple rang the doorbell recently who had lived here 15 years ago, and dropped in now with their little girl.'
Naomi: 'We get visitors regularly. They say things like, "We lived here in 1992. Can we have a look?" And they always say that the beer fridge was there back then too.'
Sara: 'It certainly isn't the best fridge in the world but it still works.'
Naomi: 'It keeps the beer cold, that's all that matters.' CJ

If you too want your UNIque house in *Resource*, send an email to resource@wur.nl

Marta, Naomi, Leon, Anna, Melanie, Siri, Rohit, Ana and Ahmed ◆ Photo Guy Ackermans

IN MEMORIAM

HARDY TEMMINK

We have learned to our sorrow that our colleague Hardy Temmink passed away unexpectedly on Friday 8 April. We knew Hardy as a true Environmental Technologist: passionate about biological water treatment and the recovery of valuable substances from waste water. Hardy studied water pollution control in Wageningen and had worked since 1989 at the department of Environmental Technology, first as a PhD student and later as associate professor. Since 2004 he also worked as a senior scientific staff member at Wetsus. Thanks to his energetic commitment, enthusiasm, humour and charm, his students will remember Hardy as a gifted teacher. He helped PhD students to grow through his personal commitment to their wellbeing and his incisive way of looking at their research. He made his colleagues happy with his many good ideas for improving education and research. He was always there for us to consult, whether in the office or during a walk. We have lost a fantastic colleague. We wish his partner and our colleague Miriam, their son Sam, and their family and friends a lot of strength at this sad time.

Colleagues from Environmental Technology and Wetsus

Colophon

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Disrespectful

‘In course evaluations students write anonymous assessments of a course they took. That usually goes well, but sometimes the comments are hurtful, personal or rude. Recently, one student wrote: “It’s pure bullshit we had to learn this”. How can we make sure students are respectful and polite when communicating with their teachers?’

Jan Kammenga, personal professor of Nematology

Filtering

‘Unfortunately, this description of personal, hurtful, and rude course evaluations is all too familiar to me. The impact of this on teachers (especially new ones) and course coordinators cannot be underestimated. Criticism is always welcome, but it must be constructive. So I recommend that subject coordinators filter out personal hurtful or abusive responses before the evaluations go to the lecturers. Sadly, that kind of censorship can be necessary sometimes to keep everyone on track and maintain teachers’ morale.’
Tjerk Sminia, teacher and course coordinator of Organic Chemistry

See through it

‘If a student writes a nasty remark like that, I think it’s because they are annoyed about a low grade. Try to see through it and not to take it personally. Another possible solution would be a disclaimer above the course evaluation in which you inform students that unprofessional feedback is not welcome and will not be taken into account.’
Elke Klein Holkenborg, Master’s student of Plant Sciences

Personal

‘While you are teaching, connect with your students by sharing personal stories. For example, during my lectures I show pictures of my Belgian hometown and I talk about my own student days. As a result, the students learn a bit about the person behind the lecturer and they might be more respectful in their evaluations.’
Jente Ottenburghs, lecturer at FEM and WEC

Mid-term feedback

‘Online education has created a gap between students and teachers. It transformed teachers from people into a concept. Reduce that distance by using breaks, time after class or practicals as moments to discuss the course with one or more students. Ask directly for feedback at that point. Of course, it is impossible to talk to every student like this, but it does give the students the feeling that they are being heard and with a bit of luck they will become even more involved in the course.’
A Master’s student of Biology

Note

‘The anonymity of course evaluations is very important, but I understand that it has its drawbacks too. I think teachers should therefore clarify their wishes and limits regarding the subject evaluations. You can say that all criticism is welcome, as long as it is expressed in a constructive, respectful way. I recommend reiterating this before the open-ended questions to remind students of it at that point. Students don’t read the general introduction to an evaluation very carefully, so a remark about respectful communication probably has less effect there.’
Juliette Bleijs, Master’s student of Nutrition and Health

NEXT WURRY

Joining in

‘Our chair group is a close-knit club and we regularly organize activities or drinks after work. A new colleague started a couple of months ago. He is very shy and reserved, and doesn’t join us during coffee breaks or in our activities. How can my co-workers and I put him at ease and get him more involved in the group?’

A., employee in Plant Sciences

Do you have advice or tips for this WURrier? Or could you use some good advice yourself? ***Email your tips or your question (100 words max) by 5 May to resource@wur.nl*** *subject noWURries.*