

WUR from within: straight, sharp, transparent

No 11

Resource

MONTH **2021** VOLUME **15**

Radar satellite
detects felling in
tropics

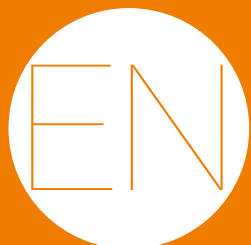
Mushrooms stick
better than Velcro

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due to Covid
pandemic

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not recycled

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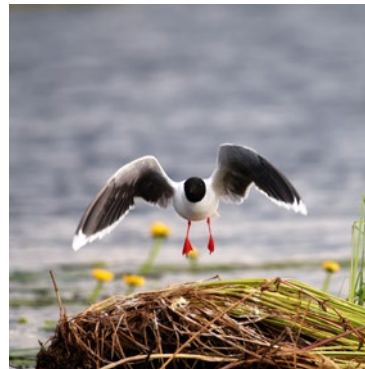
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FOREWORD

Warmed by love

My fingers are cold. That's because my study always warms up later than the rest of my house. I can see the thermometer in the garden from my desk: minus seven and snowflakes are falling again. Tits, finches and blackbirds flit from branch to branch, knocking off snow when they land. How can I warm up? With love, of course! This issue of *Resource* has a heart-warming article about three international WUR couples facing fundamental choices: stay in the Netherlands, move abroad or go for a Skype relationship?

I also find the independent journalism heart-warming in the *Resource* stories about science and other topics. I mean it... Why is the Wageningen memorandum on spending part of the EU agriculture subsidies on landscape and biodiversity such a hit with Louise Vet and with dairy farmer Alex? And why do they have their criticisms too? How come Sierra Leone has few coronavirus cases but is still suffering an economic crisis? What lessons can we draw from one year of online internships? And much more besides in this *Resource*. Hopefully you will find it as heart-warming as I do.

Willem Andrée
Resource editor-in-chief



VLOGGING WITH FISH

How do you teach students about managing aquaculture systems and caring for fish in a remote learning environment? By giving someone (research assistant Taofik Momoh in this case) a vlog camera and making them the hands and eyes of the students. Students could watch a live video stream showing them how the fish tanks should be cleaned, whether the fish were healthy and so on. They then discussed with the lecturers what should happen next, and Momoh carried it out for them. Student Vera van der Niet (22): 'You still think through all the steps; it's just that someone else performs the actual tasks now.' ^{LZ}

Photo Guy Ackermans



Polder frames save tropical forest

You don't need to cut down tropical forest to make window frames. Now there are 'polder frames' on the market, thanks in part to WUR.

As the 'polder' label suggests, the wood comes from the Flevopolder – from a WUR trial field, to be precise. The window frame is the tangible result of a successful EU project to develop a sustainable alternative to tropical hardwood frames. WUR selected the wood type (maple) and assessed its availability.

Researcher Ute Sass-Klaassen (Forest Ecology & Forest Management) is enthusiastic. 'Wood is a fantas-

tic renewable resource. If you harvest wood from sustainably managed forests, it is a

CO₂-neutral construction material. Wood is incredibly important for the bio-economy.' The wood is treated with acetic anhydride to protect it against mould and warping. The polder frame is modular. The treated maple wood is only used for the outer part, which needs to withstand the weather. The inner part is pine. The two parts click together in a simple fashion.

The new window frames are already in use on campus: the education building Aurora has them. Sass-Klaassen: 'But unfortunately not with the sustainable maple. The architect and WUR did not want to go for that, so they chose aluminium for the exterior. A missed opportunity.' ρκ

'Wood is a fantastic renewable resource'



Photo Shutterstock

More students due to Covid pandemic

The number of students at Wageningen University has grown by 5 per cent to 12,973. That's a big increase, but less than the nationwide increase of 8 per cent.

The numbers refer to total registrations as at 1 October 2020. Data often comes in from the education agency DUO after 1 October that then has to be incorporated retrospectively, which is why we only now have the definitive figures. The number of first-year BSc students in Wageningen rose by 6 per cent. A big jump but not compared with the national average: nationally, the intake of Bachelor's students grew by 13 per cent (!) compared with the same time in 2019.

No central exams

The increase is largely because the central school exams were cancelled, which meant more school-children got their leaving certificate than usual. In addition, more school leavers decided against a year off so a bigger proportion went straight on to university.

The number of students starting a Master's at Wageningen grew by 4 per cent. As in the Bachelor's pro-

grammes, this was mainly due to a rise in the intake of Dutch students. It was unclear for a long time how many international students would come to the Netherlands during the pandemic. The intake of international students has fallen in Wage-

Many school leavers decided against a gap year

ningen, but not as much as was feared. There was a big drop in students from outside Europe (of 28 per cent for Bachelor's and 12 per cent for Master's) but student numbers from the European Economic Area saw less change: a drop of 6 per cent in BSc students and stable numbers for MSc students. LZ

Read more at www.resource-online.nl

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Zero euros: that's how much an extra year of higher education should cost students who have fallen behind in their studies because of the Covid crisis, agree a majority in the Lower House of the Dutch parliament. Prime Minister Rutte is making no promises, but says the idea will be considered when drafting the multi-year national programme to combat study delays. The national student union LSVb thinks that all students should be allowed an extra academic year, not just those who have fallen behind. HOP

'Thank you'

Students of Forest and Nature Conservation have made a thank-you video to boost their teachers' morale. The initiative for the video came from Bachelor's student Erine de Man (23): 'We read a *Resource* article in which teachers said that these times are rather difficult for them. So we decided to show our appreciation of their efforts, to remind them of the reasons why they chose this job in the first place.' 'We received many wonderful reactions,' De Man says. 'One teacher, for example, said: "Whenever I feel down in times of corona, I check the video and instantly feel better."' LZ

To see the video, go to resource-online.nl (the story with the headline 'Small gesture, big effect')

Typical (old) Dutch Mountains

From my early lessons in geography I had learned that Holland was a flat country and lay below sea level. During my early days here a Dutch friend was telling me about Wageningen and what a special place it is, what with the surrender of the Germans at the hotel on 5 Mei Plein. Then she went on to say that we have a mountain near Wageningen as well.



This Typical Dutch was published in *Resource* on 6 April 2010. It was submitted by Haider Ali Javed, who was doing a PhD in Environmental Policy at the time. Illustration Henk van Ruitenbeek

I was very surprised to hear about it and showed an interest in visiting it. The next week we went to see the mountain. I was very excited about going for a climb and was fully prepared for a bit of hiking. And then we were there. The conversation went something like this: My friend: Here we are.

'It sounds to me like some sort of urban legend'

Me: (looking around) Where?
My friend: This is it.
Me: (chuckling and thinking she was playing a joke on me) This is what?
My friend: The mountain. We are standing at the top. I looked down at my feet, fully expecting to find the word 'mountain' carved in the ground and to find

myself the victim of a practical joke, but alas – she was serious. Then she sensed how dumbfounded I was, and said 'I know it's not much but this is our mountain! And I was like, 'This is not even a hill. How can you call it a mountain?' Even now I often hear about this *Wageningse berg*, which sounds to me like some sort of urban legend. You see, I come from Pakistan which is home to over 100 peaks above 7000 metres and probably the same number above 6000 metres. The Dutch apparently don't want to believe the obvious: Holland is a flat country and there are no mountains in Wageningen.

Law against Anglicization on hold

The Upper House of Parliament does not wish to discuss the proposal to call a halt to the spread of English in Dutch higher education until a new government has been installed.

The Cabinet wants English-language programmes to be required to prove that their choice of language of communication has ‘added value’. These programmes should also be required to improve the students’ command of the Dutch language. The Upper House was already quite critical of the proposed legislation, as their written questions revealed. One member of the House fears it will generate a lot of red tape, while

another says the proposal is a paper tiger. The Upper House does not want to wait for outgoing Education

minister Van Engelshoven’s defence of the bill; it has been put on hold until after the election, when they will examine it again. This bill was the result of a ‘balancing act’, the minister said at the end of 2019. She had to try to do justice to ‘the quality and accessibility of higher education, the added value of internationalization and the value of our language.’ The proposed legislation, entitled ‘Language & Accessibility’, stems from the increasing criticism of the internationalization of higher education. The universities in particular are offering a growing number of courses in English, especially in their Master’s programmes. HOP



Photo Shutterstock

Students’ vote

A new election tool for students shows them what plans the various political parties have for students.

The election for the Dutch parliament is in just over a month. But what do the parties want to do with the binding study advice? How will they tackle the lack of student accommodation? Do they think the basic grant should be reintroduced? The Dutch National Students’ Association (ISO) has launched a voting advice app showing the parties’ positions on matters important to students. The app starts with ‘choosing a degree’ and ‘admission and selection’, and ends with the impact of your student debt on your ability to take out a mortgage, for example. Students who go through the steps need to keep track themselves of which party is best for them. You don’t see a recommendation or ‘best match’ on the screen at the end. All parties have an opinion on some issues such as the student loan system, but that is not the case for many other topics. The ISO scoured the draft and final party manifestos and found that not every party has something to say on compensation for the generation affected by the loan

system or on students in consultative bodies. That is shocking, says ISO chair Dahr an Çoban. She cites digitization as an example. ‘That topic is more important than ever, but most parties don’t even mention it in their programmes.’ Another example is student welfare. This is a hotly debated issue and appears in various election manifestos, says Çoban. ‘But they talk for example about having a confidential

Most parties have nothing in their programmes about digitization

counsellor or flagging up problems proactively. Those are things the universities should do, so what exactly are the parties going to do?’ LZ

studentikeus.iso.nl

LED lights can make plants more resilient

Wageningen PhD candidates Martina Lazzarin, Davy Meijer and Mara Meisenburg are playing with LED light. Their aim: to use this light to increase plants’ resistance to insects.

The three PhD students are exploring variations in the light colour, for example ultraviolet, blue, red and far-red light. The plant is influenced by the amount of light at these different frequencies. Far-red light in particular has a significant effect. Plants use

The researchers hope that by playing with light frequencies, they can make greenhouse plants resilient

far-red light to grow faster than the surrounding plants with which they compete for light. But that growth is at the expense of resilience. Red light is used by plants for photosynthesis, but it also protects them against diseases and pests. The researchers hope that by playing with the light frequencies, they can make greenhouse plants resilient. First, however, they need to understand the precise effect of the light frequencies. Meisenburg is investigating which antibodies and hormones increase a plant’s resistance to insects and what kind of lighting can boost the amounts of these substances. Lazzarin is studying the effect of far-red light on photosynthesis. Although this frequency reduces resistance to insects, it does have a positive impact on growth and resistance to light stress. And Meijer is examining the effect of LED lights on whitefly and spider mites in tomato cultivation. AS

An end to undetected felling

A new alarm system based on radar satellites, developed by WUR, shows in detail where African tropical forest is being felled.

The system is called RADD, which stands for Radar for Detecting Deforestation. RADD uses radar images from the EU’s Sentinel-1 satellite to detect disturbances to tropical forest. In this case, all of Africa’s tropical rainforest. Illegal felling is a big problem there, says RADD project leader Johannes Reiche of the Geolab at WUR.

The images are precise to the nearest 10 metres and update themselves every 6 to 12 days

Satellites have long been used to observe disturbances to forest from space, using images that work with visible light. That doesn’t work well in tropical rainforest, where clouds hide the forest from view for much of the time. Radar penetrates the clouds.

Reiche and his team developed an application that pinpoints precisely where a disturbance has taken place. The images are precise to the nearest 10 metres and update themselves every 6 to 12 days. That is still not quite ‘catching them red-handed’, but it comes close. ‘The quicker the better, of course,’ says Reiche. ‘But in the past, there were sometimes several months between consecutive images.’

Google Search In one and a half years (2019/2020), the new alarm system registered more than four million disturbances, representing a total of 1.4 million hectares of rainforest. About 80 per cent of those disturbances are small-scale selective felling. Most of this takes place in the dry season; the rainforest is barely accessible in the rainy season.

WUR developed the system together with Global Forest Watch. The app is implemented in Google Search Engine and the alerts are universally accessible. Reiche is working on rolling out RADD in other parts of the world where there is tropical rainforest. RK

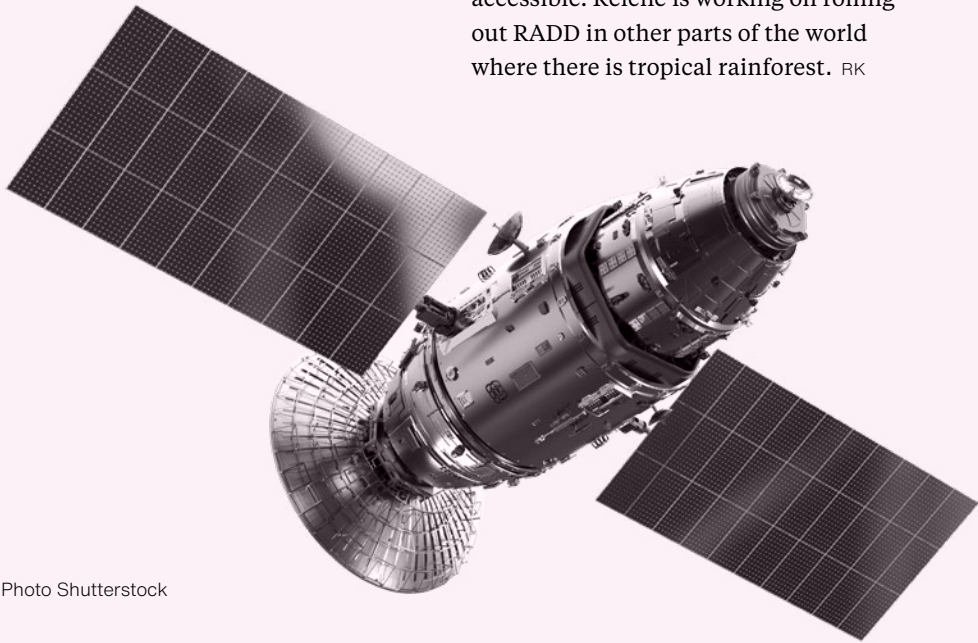
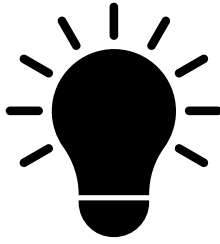


Photo Shutterstock



A Little Wiser

Why does plastic always come out of the dishwasher wet?

The great thing about a dishwasher is that you don't have to wash and dry up yourself. Except for those pesky plastic boxes or cups, for which you always have to get the tea towel out. Very irritating.

So why do drops of water always collect on plastic items? For two main reasons, says Joris Sprakel, professor of Physical Chemistry and Soft Matter. The first has to do with how well a material absorbs heat, its 'heat capacity'. Materials such as metal, glass and china are good heat conductors, so they heat up quickly. That's why they still feel warm just after the dishwasher has finished. That heat is necessary for evaporating the water. 'Plastic stays fairly cool so the remaining drops don't disappear properly. That is also the reason why oven gloves are made from material that conducts heat badly, such as silicones (which are another form of plastic), textiles or leather.'

Another thing that doesn't help is that plastic is hydrophobic, which means it rejects water. As a consequence, large drops of water stay on it, just as they do on a newly waxed car. 'Your glasses,

plates and cutlery, by contrast, are made of hydrophilic material. Water therefore spreads much more evenly over the surface, and therefore dries out more easily than it does when it forms large drops. If you put a Teflon pan in the dishwasher, you will see that the bottom of the pan, which is made of metal, dries out well while the inside, made of Teflon (plastic), stays wet.'

All this means that plastic takes on average five times longer to dry than the rest of the dishes. 'Unfortunately, the dishwasher doesn't have a separate drying cycle that you can lengthen, and even if it did, I doubt whether you'd want to wait four and a half hours for it.'

Conclusion: if you want to keep your tea towel dry you can choose between a long wait — the water will eventually evaporate — and getting rid of your plastic boxes. TL



And it doesn't help that plastic is hydrophobic: it rejects water

Joris Sprakel,
Professor of Physical
Chemistry and Soft
Matter

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



Government lax in combatting obesity

The Dutch government does not do enough to tackle the rise in obesity in the population, conclude researchers at WUR and Utrecht University.

The researchers say that the government is failing to develop policies to ensure a healthy living environment. The government should encourage healthy food choices by reducing the VAT on fruit and vegetables and raising taxes on food containing a lot of fat, salt or sugar. The government could also ban advertising for unhealthy food aimed at children and

forbid fast-food restaurants near schools.

The researchers argue that new measures are needed as

the proportion of overweight people in the Netherlands grew from 6 per cent in 1990 to 15 per cent in 2018, according to official figures. Obese people run a higher risk of cardiovascular diseases and diabetes, and of getting severe Covid if they become infected.

Maartje Poelman of the Consumption and Healthy Lifestyles group: 'A sugar tax has been proven to be effective and relatively simple to implement, as various countries, such as the UK, have already shown. Yet the Dutch government keeps putting it off.' The government has plenty of good intentions and guidelines, say the researchers, but it isn't following through. As

'A sugar tax has been proven to be effective'



Photo Preeti Sharma/Biointerphases

Sticking to mushrooms

Wageningen scientists have developed a material that sticks better than Velcro and leaves no trace.

Everyone is familiar with Velcro and the way its two strips of fabric stick to each other mechanically. A major drawback of the material is that one of the surfaces can get damaged when they are pulled apart. Researchers from Wageningen (Physical Chemistry and Soft Matter and BioNanoTechnology) and Groningen have found a solution to this.

The researchers designed a surface made of silicone rubber that is densely covered in tiny mushroom-shaped pillars. The substance adheres perfectly to rough surfaces such as textiles. Adhesion occurs because the tiny mushrooms hook onto the mesh of the textile. The material is flexible, which prevents damage when it is removed. The production method is new as well. The mould used to produce the mushrooms was 3D-printed, creating a negative as the basis for a positive. A patent for this method is pending.

The closer the mushrooms are packed together, the stronger the adhesive effect, researcher Joshua Dijkman explains. The adhesive strength of each individual mushroom goes down, however. 'This is due to the fact that mushrooms communicate through the surface they are sticking to.' When you pull one mushroom out, you tug at the next one too through the flexible surface.

The flexibility of the material prevents damage when removing it

The forces involved can be measured using a newly developed measuring method. The phenomenon of 'communication' creates scope for experimentation, says Dijkman: 'To change the degree of adhesion, you can alter the number of mushrooms or the hardness of the material.' The material works well on rough surfaces. For smoother surfaces, experiments are being conducted with tiny suction cups instead of mushrooms. RK

Not all circular farmers are the same

Most farmers try to incorporate circular agriculture into the existing agricultural model, but there are also farmers who create alternative business practices and sales markets.

This finding came out of a study conducted by Wageningen researchers Hans Dagevos and Caroline de Lauwere, who interviewed 13 Dutch farmers who are committed to circular agriculture. The standard approach to circular farming targets efficient use of resources, healthy soils, minimizing losses and recycling waste streams. This approach fits in with the linear take-make-waste

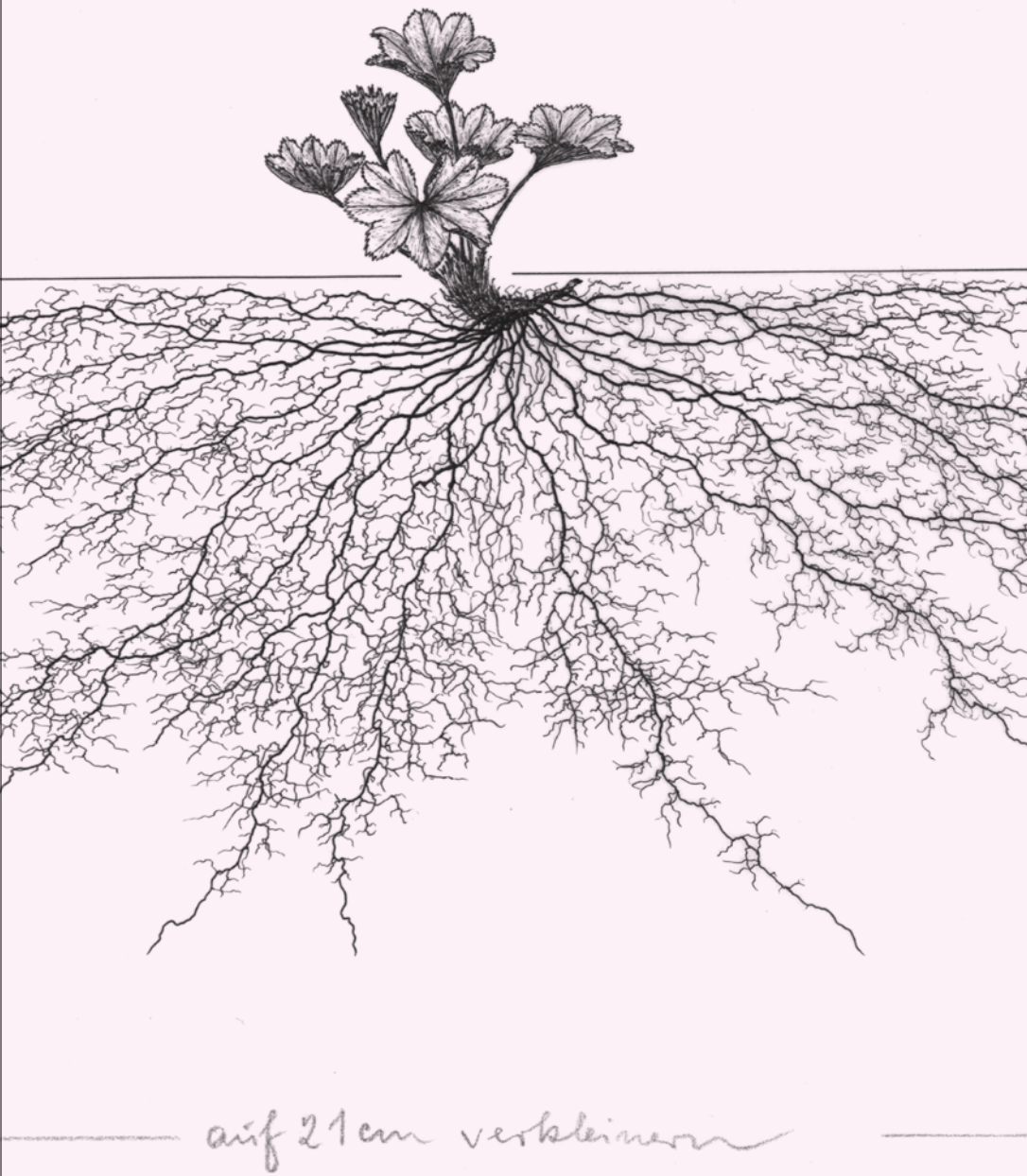
One group of farmers are working on an agricultural model based on ‘an economy of enough’

economy, say the researchers, and relies on technological solutions to close the cycle. This approach enables farmers to cut costs and continue to produce for a global market. On the other hand, there are farmers who choose an alternative strategy. They adjust their business plan by focusing on the quality of products and the environment instead of on maximizing production. They also seek new sales markets and conscientious consumers for their products, thus contributing to a new agricultural model based on the idea of ‘an economy of enough’.

In their article in the journal *Sustainability*, Dagevos and De Lauwere state that the first, adaptive approach dominates the view of circular agriculture held by the Dutch Ministry of Agriculture, Nature and Food Quality. As

Roots draw a lot of attention

The Forum Library’s digital image collection was the second-most visited Wageningen website in January. The big attraction was the drawings from the Root Atlas by Austrian scientist Lore Kutschera. WUR digitized the 1002 drawings in 2006 and made them available online. An article in the *Washington Post* at the end of January caused a sudden spike in interest: 50,000 visitors in two days. That is the third time this has happened after a mention in the press or social media. Read the story on resource-online.nl nl_RK



Hairy lady’s mantle (*Alchemilla monticola*). Drawing by Erwin Lichtenegger

Most plastic bottles are not recycled

The food industry could recycle far more plastic, according to research by WUR.

The Dutch are very good at separating out plastic waste. Most plastic packaging, such as bottles for milk, soft drinks and shampoo, is made of polyethylene (PE). To date, this plastic is not used much in new plastic bottles; it mostly ends up in products such as sewer pipes. ‘It means the packaging industry is a long way off having a circular economy,’ says Wageningen researcher Ulphard Thoden van Velzen.

His research group at Wageningen Food and Biobased Research took a bale of plastic bottles that had been collected as waste and determined the quality and strength of the plastic. They did that in five stages. First organic remains were removed from the plastic, then other kinds of plastic such as polystyrene were taken out. In the third stage, the bottles were separated from other types of PE packaging and in the fourth stage they removed ‘contamination’, such as the lids and labels. That left them with pure PE bottles. After each stage, the researchers determined the quality. ‘The purer the PE, the better the quality and mechanical strength,’ says the research group in an article in *Packaging Technology and Science*. ‘The better we are able to separate plastic PE, the more chance of reusing it.’

Cables

The problem is, continues Thoden van Velzen, that the recycling companies are barely able to sell their recycled plastic. ‘Their warehouses are full of huge bales



Photo Shutterstock

of plastic recyclate. That is because food companies are only allowed to use new PE plastic and many non-food

‘I’d be pleased if the plastic was recycled even once’

new PE too. That is cheaper and of better quality. The odour and colour of the packaging can be different if recycled PE is used, and it may contain a wide range of chemicals. The sorting and recycling companies can’t remove the chemicals in a cost-effective manner.’ But if PE is separated properly, you can easily reuse it, says Thoden van Velzen. How often could this PE waste be recycled? ‘Several times, but I’d be pleased

companies, such as those manufacturing cleaning agents and shampoo, prefer to use

if it was recycled just once in the packaging industry.’ Instead the PE plastic is used in cables, plastic barrels and sewer pipes, but that market is not so big. The waste collection firms, sorting companies, supermarkets and food companies all point the finger at one another, says the researcher. ‘I think all the stakeholders need to make a move. The supermarkets need to set objectives saying they want to reuse more plastic. The sorting companies need incentives that encourage them to sort properly rather than maximizing the number of kilos processed. And the government needs to draw up rules that stimulate plastic recycling.’ AS

CULTURE PROTECTS NATURE

We need a new approach to nature conservation that is based on the cultural and spiritual significance we ascribe to nature. Bas Verschuuren has drawn up guidelines for this.



Text Roelof Kleis

The guidelines were published recently. For Verschuuren (Forest and Nature Policy) and the working group he leads, this is nothing less than a milestone. The group's work was commissioned by the International Union for the Conservation of Nature (IUCN) – a sign that the largest nature conservation organization in the world recognizes the importance of taking a broader view of nature and nature conservation. At the core of the new vision is the conviction that nature conservationists need to make much better use of the relationships people already have with nature. That applies not just to the general public, but also to religious groups and indigenous communities. ‘The practice of nature conservation is embedded in many cultures and their worldviews. It’s just that their practices look different to our Western model of nature conservation.’

Isn't that an extreme standpoint?

‘By giving importance to the cultural value of nature, you acknowledge the relationship that existing cultures already have with the nature around them. That relationship leads to a lot of biodiversity being protected. Indigenous communities, a small proportion of the total world population, manage 30 per cent of the

Earth’s surface. And 80 per cent of the biodiversity on the Earth is found in those areas. Those communities do that because their culture tells them to, and not because they're living in a national park. Nature is a cultural construct. Most of the 7000 languages in the world do not have a word for nature. But we nevertheless have the IUCN, an organization that works for nature conservation all around the world. There's a clash there. Only since 2008 has the IUCN acknowledged that there are different concepts of nature and that different worldviews exist. In short, that there's more to knowledge of nature than scientific knowledge.’

Do you have an example of nature and culture clashing around here?

‘Around here? Well, take the Veluwe, which is a hotspot for both cultural heritage and nature. We all

‘THERE’S MORE TO KNOWLEDGE OF NATURE THAN SCIENTIFIC KNOWLEDGE’



‘Wouldn't it be lovely if artists were to paint these Odin's Oaks again so that the trees’ cultural value once more involves people in the area?’ Photo Guy Ackermans



Forest landscape, Barend Cornelis Koekkoek, 1848. A gift from C.C.A. Baron du Bois de Ferrières, Cheltenham. Rijksmuseum

love running, walking or mountain biking there. The tourist industry wants to go on developing there and there are lots of conflicting interests. The question now is whether paying more attention to the cultural significance of the landscape, and people’s relationship with it, can have an impact on the way it is managed. That calls for a different attitude. An attitude which includes an awareness that what people care about is not a *peripheral* issue but a key issue.’

Do spiritual values attached to nature play a role in the Netherlands too?

‘They certainly do! More and more people seek relaxation and inspiration in the forests. A nice example is “forest bathing”, a phenomenon that came over from Japan. It means just sitting in the forest leaning against a tree and savouring the moment, or meditating. Just as you might in a hot bath. Yoga schools are going into nature. There are professional shamans who take their clients into the forest for a healing session. One of my colleagues and I are doing research on how forest managers are taking such spiritual experiences of the forest into account.’

You and your colleagues are introducing ‘significance-led conservation’: nature governance guided by meaning. What is that?

‘The idea is that you take different values into account, as well as different kinds of knowledge and experiences of nature. And that you don’t just look at biodiversity, but also at the relationships people have with the area and what it means to the society.’

Does that lead to a different governance approach?

‘We think so. You give spatial expression to the various interests represented in an area. A very practical example is zoning. You designate areas which are perfect for running shamanistic workshops or doing yoga, as well as areas that you want to leave in peace because endangered species live there.’

Is ‘engagement’ a keyword in this approach?

‘A support base is becoming more and more important in nature governance. I live in Doorwerth, where there are trees in the woods known as “Odin’s Oaks”. Those trees inspired the landscape artists of the Oosterbeek School in this area in the 19th century and have become iconic. But they are almost dead. There’s nothing wrong with that; that’s nature. But wouldn’t it be lovely if artists were to paint these Odin’s Oaks again now, so the trees’ cultural value once more involves people in the area?’

Is that new approach reflected in Wageningen courses?

‘Increasingly. I cover it extensively in my lectures. Our chair group has courses that place the relationship between people and nature central with regard to nature policy. I dream of creating a dedicated course or “capita selecta” on this theme. Talks have started on this, but I can’t say too much about it yet.’ ■



Vincent Oostvogels

Attrition

Another little bit of the Dassenbosje – the three-hectare wood in the south-west corner of the campus – has been nibbled away. In January, WUR felled 14 trees to create a cycle path to the new education building Aurora. Felling 14 trees is no big deal in itself, of course, but it's part of a destructive pattern. A part of the Dassenbosje was already felled in 2014 for the sake of the bus lane, and more and more bits of the old hedgerow lining the

‘It would be very sad if we only tolerate nature in places that we happen to have left over’

Bornsesteeg have also disappeared over the years. Worse still, WUR has been arguing for years in favour of a ring road that would cut through the Dassenbosje. That plan has been taken off the drawing board, but now Idealis wants to build student housing opposite Campus Plaza, exactly where that hedgerow runs. This is just how landscape elements disappear in rural areas: little bits are sacrificed time and again, until there is nothing left.

Some people say the Dassenbosje is over 300 years old. Aerial photos from World War II show that these woods used to be a source of firewood, and you can still see signs of that on some of the older trees.

You can also see the traces of a system of ditches that was used historically to make forestry possible in swampy areas. The hedgerow along the Bornsesteeg is another remnant of an older forest system. This kind of history is valuable, and especially on a campus where most of the buildings date back no further than 2000. It would be a poor show if we couldn't conserve such features.

Of course, a lot of new nature has been created on the campus in recent years. Ponds have been dug, bluegrass vegetation with orchids has been planted, and a bat cellar has even been built. For every tree that's been felled several new trees have been planted. All this is laudable. But it does not entirely compensate for landscape elements that have been there since before the war, neither in terms of nature value nor of cultural history. It would be very sad if we only tolerate nature that we ourselves have planned, in places that we happen to have left over. So let's make a point of looking after the nature which is already there better. Even in places where that nature is not particularly convenient for us.

Vincent Oostvogels (25) is in the first year of a PhD on biodiversity recovery in dairy farming. His dream is to be able to keep a few cows of his own one day.

IN IMAGE



Wageningen, you are so beautiful! This photo of flooded river banks and snow was taken by [dronewageningen](#) early on the morning of Tuesday 9 February, just a few hours before *Resource* went to the printer's.

See also www.instagram.com/drone_wageningen/

An economic crisis in spite of little Covid

COVID - 19 IN AFRICA

Half of all households in Sierra Leone have lost income due to the coronavirus crisis, and 87 per cent have less to eat. And yet there have only been 3500 Covid-19 cases in Sierra Leone, and only 79 deaths. So what's going on? Researcher Maarten Voors studied the effect of the coronavirus on developing countries.



Text Albert Sikkema

Just like the Netherlands, the African country of Sierra Leone had to come up with a coronavirus policy in March last year. Should schools and shops close? And what did that mean for the economy and the food supply? The government posed these questions to experts like the Wageningen development economist Maarten Voors, who has been doing research in Sierra Leone for 10 years and was at that time implementing a large research project aiming at supplying schools and clinics with solar powered

electricity. Voors: ‘I said straightaway: be careful with a lockdown because that will affect incomes and food supplies.’ Sierra Leone took a lot of measures. People were asked to work at home, planes were grounded, a curfew was introduced, travel between districts was banned, all schools were closed, large gatherings were banned, and face masks were made compulsory.

Aid funding

The government and Western NGOs in the country wanted to know what the impact of these measures on the population was. Since Voors had built up a network of 7000 people in 200 villages for the electricity project, which was at a standstill due to the coronavirus crisis, he was well placed to conduct the study.

Thirty project workers in Sierra Leone phoned households every day asking things like: are the markets open, do you have enough to eat, what are the prices? A unique study because it was the first to systematically reveal the effect of the coronavirus crisis at household level. The results were sobering. Nearly half of the households had less to spend because of the coronavirus measures, and nearly 90 per cent had less to eat. What was going on? Voors: ‘For a start, it’s obvious the economy had shrunk; fewer goods were being produced, and less food. Internal trade became more expensive because of the travel restrictions. And the government

‘SIERRA LEONE HAS NEVER HAD MUCH MONEY TO SUPPORT THE POOR WITH, BUT IT HAS EVEN LESS NOW’



Photo: Alpha Daramy, NaOOVERC (The National Covid-19 Emergency Response Centre - the branch of the government that coordinates Covid-19 activities in Sierra Leone)

had less to spend too. Half of the government’s budget is aid funding. Sierra Leone has never had much money to support the poor with, but it has even less now.’ Secondly, adds Voors, something was happening in global trade. ‘Prices went up on the world market and the food that Sierra Leone imported got more expensive. Exports went down too, due to less demand from abroad. So the world economy is shrinking and so is aid funding to Sierra Leone. This country doesn’t have an immediate health crisis, because the number of coronavirus cases and deaths is low. No, here this is mainly an economic crisis.’

Poor

Looking at other developing countries, there are big differences but also similar patterns, says Voors. The impact of Covid-19 on the healthcare sector was bigger in Kenya than in Sierra Leone: in Kenya there have been 100,000 infections and 1800 deaths. The loss

of income in Kenya was much smaller, however, because far more Kenyans have permanent jobs. Voors: ‘You notice the biggest effect among the poorer sections of the population with no regular employment.’ So Voors thinks developing countries and donors need to work together to set up support

programmes for the poor. Their populations should be vaccinated too, states Voors. ‘There are still no coronavirus vaccines in Sierra Leone. The health crisis there is not too serious, but you don’t want a mutated Covid-19 virus to develop there which the vaccines don’t work against.’ ■

The study

In the article in *Science Advances*, 26 researchers, among them the Wageningen development economist Maarten Voors, describe the impact of the coronavirus crisis on the welfare of 30,000 households in Bangladesh, Burkina Faso, Colombia, Ghana, Kenya, Nepal, the Philippines, Rwanda and Sierra Leone between April and June 2020.

The main conclusions:

- People have lost work, income and market access, leading to reduced food security.
- An average of 29 per cent of the households have less work.
- 50 to 80 per cent of the households suffered loss of income (on average, 70 per cent less income).
- Half of the rural Kenyans reached in the survey were having to skip meals or eat smaller portions. In Bangladesh, this figure was 69 per cent, and in Sierra Leone, 87 per cent.
- Residents in all the countries reported limited access to markets and a loss of income. Most residents worked in the informal sector and had no social security.

GLOBAL LOVE IN WAGENINGEN

If you come to Wageningen to study or to work, you get to know people from all around the world. There are people of 108 nationalities living here, according to the university’s figures. If you do manage to get a Valentine's date in this bizarre year, there's a good chance they come from a different country to you. Which is all great until your sweetheart has finished their Master’s or PhD. Do you then stay in the Netherlands, move to another country, or conduct your relationship via Skype? *Resource* talked to three international WUR couples. Text Coretta Jongeling

‘Wow, I thought, pretty girls here in the Netherlands’

Annemiek Pas Schrijver, a researcher at Farming Systems Ecology, Dutch; and Jean-Yves Duriaux Chavarria, a freelance consultant for ‘More People More Trees’, Nicaraguan/Swiss

Jean-Yves: ‘I got to know Annemiek when I started on my Master’s. I had arranged a room through Skype, and she was the first person I met. I thought, wow, pretty girls here in the Netherlands! Unfortunately, Annemiek went abroad almost immediately, but I managed to ask her for a date when she was back for a short while.’
Annemiek: ‘From the start we've been used to a lot of Skyping. I did voluntary work in Greece, I started a PhD in Sweden, and I did most of my research in Kenya.’
Jean-Yves: ‘Meanwhile I had found a

job for which I had to do fieldwork in Ethiopia. We tried to see each other there and in between times in Sweden and Wageningen. For my job it didn't matter where I was, except for the fieldwork of course. These days I do fieldwork in Nicaragua, which means I can see my family while I'm at it.’
Annemiek: ‘We thought about moving there to live, but when the political situation changed rather drastically, we decided against it. Soon after that I got a job at WUR and we moved to Wageningen.’

Jean-Yves: ‘I really feel at home here now. There were things I had to get used to at first, like addressing Annemiek’s parents by their first names. To me that's really impolite. And I've never managed to get Annemiek enthusiastic about a Michelada, which is beer with lemon juice, salt, pepper, Tabasco and Worcester sauce.

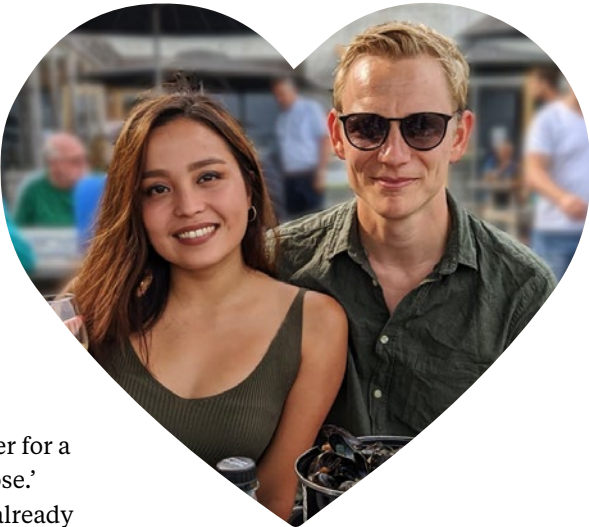


‘He is more individualistic, but I appreciate that too’

Rachelle de Vries, PhD student at Human Nutrition and Health, Filipina/Dutch, grew up in Indonesia; and Pol Grootswagers, postdoc in Human Nutrition and Health, Dutch.

Rachelle: ‘Has our relationship affected our careers? It’s more the other way round! We got to know each other during the introductory week for PhD students, and we work in the same department.’
Pol: ‘To start with we only saw each other during breaks, which was nice, but romance only really blossomed when we went to Lowlands together. Rachelle went there to do research on food choices and she asked if I'd like to help her. Then

when we went to Canada together for a project too, we became really close.’
Rachelle: ‘Through my family I already knew something about Dutch norms, values and of course the typical bluntness. We haven't had any major culture clashes. The one thing I notice is that Pol is a bit more individualistic, while I'm used to considering other people more. But I do also appreciate that quality in him, because I would like to be a bit less concerned about what other people think of me. We both enjoy good food and we like cooking typical Dutch and Indonesian dishes. When we cook, it brings back memories.’



Pol: ‘I think it's amazing that we grew up in totally different worlds, with different cultures and languages, and yet we find the same things important in life. I have more in common with Rachelle, for instance, than I do with my former classmates.’

‘We went on bumping into each other until we fell in love’

Vivian Valencia, associate professor at Farming Systems Ecology, Mexican/Cuban, grew up in the United States; and Diego Osorio, Senior Advisor on Climate Security at CGIAR, Colombian/ Venezuelan, grew up in Canada.

Vivian: ‘We come from different countries, but we have a lot in common. We are both quite rooted in Latin American culture, and we both emigrated around the age of 12, Diego to Canada and me to the United States. We actually met somewhere entirely different: at a conference in Istanbul. It didn't click at all between us at first but we kept on bumping into each other at conferences, in Berlin, Montreal and Buenos Aires, until we finally fell in love.

‘We're both pretty ambitious and very driven to achieve positive changes through our work. That makes it difficult for us to find work in the same region. When I was offered a job at WUR in 2018, Diego moved here with me. Now he's found a job with an international company and he can work from any location.’
‘The biggest disadvantage of this kind of international family is that you don't see much of each other, especially this year



with all those travel restrictions. I had a baby in September, with a proper Dutch home birth, and we've been in Canada since December. So the Canadian side of the family can get to know our baby girl now, but my parents haven't seen her yet.’ ♥

GIVE FARMERS OPTIONS AND TIME

The Wageningen proposal to spend some of the EU agriculture funding on landscape and biodiversity in the Netherlands fell on fertile soil with dairy farmer Alex Datema and biodiversity pioneer Louise Vet. But they have some reservations about it too. ‘It feels like money from our own pockets.’

Text Albert Sikkema

Alex Datema, chair of the farmers collective BoerenNatuur, subscribes to the principles underpinning the Wageningen report, especially the suggestion that the Common Agricultural Policy (CAP) funding is needed to create a new model of agriculture that pays more attention to the environment, nature and climate change. ‘That CAP money currently goes into income support for farmers, but I don’t believe in that in the long term. I think we should stop paying farmers fixed subsidies, linked to a lot of demands. I’m in favour of the government targeting landscape restoration and meadow bird conservation with that money. And I’m in favour of having a choice as a farmer: is this right for my farm? If it is, then I will be rewarded for maintaining landscape features.’ Datema is a dairy farmer in Briltil, in the province of Groningen. He farms 70 hectares in a wet area, so he has a large number of ditches to maintain, and he doesn’t get any money for that at present. Datema is already involved

in meadow bird conservation together with neighbouring farmers. He makes use of a subsidy for agricultural nature management, which he also uses to fund the creation of several hectares of herb-rich grassland and a marshland with groundwater levels almost at field level, and to delay mowing to protect meadow birds. He is also quite willing to line all his ditches with strips of herb-rich grassland. Such strips are good for insects, clean surface water and birds. ‘In my situation it is better to farm a bit more extensively on all my land, creating more biodiversity with slightly lower production levels, than to plough over a couple of hectares of grass and replace it entirely with herbal plants. Being able to tailor your approach like that is the nice thing about this arrangement.’

Pooling
But Datema has some reservations too. ‘To the farmers, CAP funding feels like a bit like money from their own pockets. We’ve always received that money. What is more, it is only a few hundred million euros per year, and I’ve been reading that all sorts of new goals have been added, like climate targets, the

nitrogen problem and environmental issues. It’s a limited budget, so I think the government will have to make some choices. I’d say, finance landscape and nature with this money and climate targets in some other way.’

Louise Vet agrees entirely. A former director of the Netherlands Institute of Ecology (NIOO-KNAW) and an emeritus professor of Ecology at WUR, Vet is chair of the Delta Plan Biodiversity Recovery Foundation. This coalition of nature organizations, farmers, scientists, banks and other companies aims at restoring biodiversity. Vet: ‘These Wageningen recommendations are entirely in line with the Delta Plan. Bravo.’ Vet strongly supports pooling subsidies. ‘You can use this CAP money to bolster landscape and biodiversity, but there is also going to be a climate fund with which you can compensate farmers for raising the water level in peatland areas. The Rabobank and FrieslandCampina are making use of the Biodiversity Monitor for Dairy Farming so they can charge a slightly lower interest on loans and pay a slightly higher price for milk produced by nature-inclusive methods. And hopefully waterboards are going to reward farmers for steering clear of chemical pesticides and producing clean surface water, which reduces purification costs. Such approaches will generate a business model for nature-inclusive agriculture.’

Long-term rewards
Vet suggests simplifying matters by basing all the financial compensation on the same set of key performance indicators (KPIs). ‘And preferably indicators which land users can have a say in. Not the number of meadow birds on the land, for instance, but landscape



Alex Datema: ‘I’m in favour of the government targeting landscape restoration and meadow bird conservation with this money. And of having a choice as a farmer: is this right for my farm?’ Photo Shutterstock

diversity such as the percentage of rich grassland, hedges, hedgerows, ditch banks, field edges, thickets, and the water level – or emissions of ammonia and greenhouse gases.’ Another crucial point, Vet adds, is that the compensation should be long term. ‘Here and there, for example in the Ooijpolder near Nijmegen, farmers are already compensated for maintaining hedges and thickets from a government fund for landscape elements. They don’t get much, but the compensation

is guaranteed for 30 years. That gives a farmer security. Which is necessary, especially now farmers have the option of planting hedges and hedgerows again. It will take decades for a hedgerow like that to mature, so you must finance it long-term too.’ The question is whether this pays off for farmers now. Datema, who receives a subsidy of 5000 to 6000 euros a year for meadow bird conservation: ‘For our farm, that funding is just one or two per cent of the turnover, but it is enough; we don’t make a profit on it but we can break even. But you should bear in mind that I’m not an average farmer. The farmers who have joined BoerenNatuur are already working with a different model of agriculture, which makes us the “easy” farmers. The question is how you convince the other farmers. I think you need to give them a higher subsidy or pool the various subsidies, and make the system more attractive on other points as well. And watch out for extra administration, inspections and fines, because that’s a very sore point for many farmers.’ ■

‘IT TAKES DECADES FOR A HEDGEROW TO MATURE, SO YOU MUST FINANCE IT LONG-TERM’

ALMOST A YEAR OF ONLINE INTERNSHIPS: FOUR LESSONS

Online internships are different, but not necessarily worse, says Jenneke Heising, university teacher and internship coordinator at Food Sciences. Four lessons learned from almost a year of online internships.

When the Netherlands went into the first coronavirus lockdown in March 2020, a lot of students were just about to start internships. Heising: ‘About 150 students suddenly needed a new placement. Food Sciences students often do internships at food companies, factories or laboratories. And it became very difficult to do an internship at precisely those kinds of locations. We considered alternatives, such as a second thesis, but for several reasons that was not our favourite option: there is quite a bit more pressure on lab space on campus because of the coronavirus measures; the teachers were too busy to supervise even more theses; and the learning goals are different for a thesis. So we thought: if teaching can continue online, internships can too. We looked into what students could do from home: simulations, calculations, extracting data from literature, consumer research using surveys, and so on. There are countless ways of doing a worthwhile internship from home.’

Good supervision by the company is essential

It is crucial that the company provides good supervision, says Heising. ‘The assignment itself is just part of what an internship is all about. It’s also about



illustration Shutterstock

the social side of things and learning to understand the organization. As an intern, you learn to work in a professional environment with people from different backgrounds. For instance, you might need to work with somebody from marketing, or to be able to talk to a supplier. Companies have to actively involve interns, by doing things like having them join the team’s morning meeting.’

Blended internships

When the coronavirus measures were relaxed last summer, a lot of online internships were turned into blended internships. Heising: ‘In that case you might work from home one week and the next week on location. At the moment

we are back in lockdown and that is difficult, but if it’s possible to do it safely again soon, we encourage this approach. Getting to know your colleagues offline and being around in the office often has a positive impact on your affinity with that company.”

Don't be scared of the term ‘Covid generation’

Some students are worried about being part of the Covid generation: the generation of students that has studied largely at home and does not have much hands-on experience. Heising: ‘We’ve asked leaders from the food industry whether they consider online internships and education to be of less value. They said, absolutely not. In their view, the quality of education is still very high and the current generation of students is much more used to working online. They do think it’s important that practicals are still taught on campus. These students are in many ways better prepared for the future than the workers already at these companies. So there are things that are different, but not necessarily worse.’ LZ

‘THERE ARE COUNTLESS WAYS OF DOING A WORTHWHILE INTERNSHIP FROM HOME’

THE KEY MOMENT

All or nothing

‘Both in my career and in my personal life, I wanted to do everything well. My guiding principle was: give it everything you’ve got or don’t do it at all. So that was my approach when I was combining my job as a lab technician at Food Microbiology with a busy family life. My youngest child was born in 2017. I was looking after my two children, breastfeeding them, and working hard. I was proud of having everything so well under control. But my youngest was a poor sleeper, which meant that my husband and I didn’t sleep well either. That took its toll. I was tired and I kept forgetting things. I tend to be forgetful anyway, but lack of sleep and the pregnancy hormones made that worse. After struggling on for a while, I had no resilience left and I was finding it harder and harder to keep to my own standards at work. Something had to give. Because of my all-or-nothing mentality, I considered stopping work altogether.

Turning points: sometimes you spot them immediately and sometimes only in retrospect. In this series, members of the WUR community describe a decisive moment they will never forget. This time, Gerrieke Middendorp talks about how family life forced her to concentrate on doing what she loved best.

I gave some thought to what gave me the most satisfaction at work, and that was teaching on courses. I enjoyed leading practicals and transferring knowledge to students – which was actually what attracted me to this job in the first place. I discussed this with my husband and as we talked, I realized that I wouldn’t mind dropping certain tasks. I let go of my perfectionist principle and started concentrating on education. In our department there are peak times in the teaching periods. Now that I take over some of my colleagues’ work, we’ve created a nice win-win situation. I now coordinate practicals (currently online), I

Because of my all-or-nothing mentality, I considered stopping work altogether

give introductory lectures and I supervise students. In some periods with a lot of courses, I have to work five days a week, and in other

periods just one day a week. That lack of regularity might seem complicated, but I don’t experience it that way. I find more peace and quiet now that I’ve stopped doing my own research, and my work is more streamlined. I’m still getting used to having taken this step, but I don’t regret it. In a little while I’d like to start doing a bit more, but I will keep the focus on education.’ NVTWH



Photo Guy Ackermans



FIVE TIPS FOR A GAME NIGHT

Board games seem to have become more popular than ever during the lockdown. Resource editor Tessa Louwerens shares a few of her favourites, that, with a few adjustments, let you socialize in a reasonably Covid-proof fashion.

1

Wingspan

What is better than a bird in the hand? Ten birds in your nature reserve! When you play Wingspan you are a fanatical bird watcher, ornithologist or nature conservationist and your aim is to get as many different birds as possible into the nature reserve. Every player has their own bird sanctuary with different habitats in it. You have to gather food, attract new birds and, of course, make sure they lay eggs. By combining cards smartly, you will make your actions more effective. The rules are not complicated and the game is easy to play. It's a strategic game, but there's an element of luck as well. The idea is to adapt fast to upcoming opportunities and difficulties. Just wing it!

👤👤👤👤 1-5 players ⌚ 45-50 minutes



2

Codenames

In Codenames, two teams are pitted against each other. The heads of rival secret services need to get their spies out of danger as quickly as possible. Only they know the locations of their agents. As team leaders, they drop hints to the rest of the team to tell them where to go for a secret meeting, all in code of course, so they don't get discovered by the opponents. So players must find the links between pictures or words, and that takes quite a bit of creativity. Then the discussion starts within your team. Because the wrong conclusion could lead to you accidentally making contact with an enemy spy or, worse still, with a hired assassin. The winner is the team that gets all its spies out first and survives. Codenames is a funny game with a lot of interaction. There is also a pair variant, Codenames Duet, which involves cooperation. It's a good game for boardgame beginners, because it's easy to learn and doesn't take very long.

👤👤👤👤👤👤 2-8 players ⌚ 20 minutes

3

Pandemic

Couldn't leave this one out at this time, of course. What's more, it's a fantastic game. Various diseases have broken out around the world. The players must work together to roll out medicines and vaccines before things get completely out of hand. Everyone has a role, and there are doctors, scientists, logistical experts, etc. You win if you find a vaccine or a treatment in time, before the outbreak has spread around the world. There are now a number of variations on this game, including Pandemic Rising Tide, in which between you, you must save the Netherlands from being flooded.

👤👤👤👤 1-4 players ⌚ +/- 45 minutes

4

Sherlock Holmes Consulting Detective

The game is afoot! Always wanted to play the role of a private detective? This is your chance. Sherlock is not a board game, there are no dice and luck has nothing to do with it. This is all about your sleuthing skills. You solve a variety of mysteries together with your team. You walk through the streets of Victorian London, following the signs, talking to suspects, and scanning the papers for hints. To win you take up the cudgels against the famous Sherlock Holmes: who will solve this case first? You can easily play this game online too, with someone who owns the game in the lead.

👤👤👤👤👤👤 1-8 players ⌚ 60+ minutes

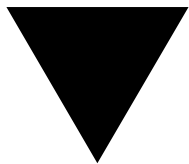
5

Spirit Island

There are numerous board games in which you have to colonize a country: most of us are probably familiar with The Settlers of Catan. Spirit Island turns things around. You and your fellow players take on the role of powerful nature spirits and fight back against the colonists who are swarming over the island, destroying its nature and wiping out the indigenous population who have lived in harmony with nature there for years. Spirit Island is a cooperative game in which players collaborate against the colonists to protect the land and reclaim it for nature. You are not in a strong position to start with, but in the course of the game you get stronger, so that eventually, if all goes well, you sweep the colonist off the board with tsunamis. This is a tactical and challenging game, which can be played at different levels of difficulty. If you don't play board games very often, it might not be the best one to start with. ■

👤👤👤👤 1-5 players ⌚ 90-120 minutes

Tip: Board games can also be played online, via sites like boardgamearena.com, or using the programme Table Top Simulator. There are a lot of options.



Key people: Margret Munster

They are indispensable on campus: cleaners, caretakers, gardeners, receptionists – the list is long. *Resource* seeks these key people out. This time, meet Margret Munster (65), who works on the field trial site at WUR Lelystad. Text Milou van der Horst Photo Guy Ackermans

‘I have been a seasonal worker here for 23 years, every year from April to November. I always dreamt of having a farm of my own, because I helped my father on his arable farm and I loved flowers and plants. But things turned out differently, and my brother took over the farm. WUR asks me back every year; I think that’s because I’m quite precise and I fit into the group well, even though the rest are all men. I know the tasks and what the consequences are. I speak to inexperienced colleagues if they are doing something the wrong way, because I feel responsible for the results.

‘I like harvest time best because it's nice weather then’



At the start of the season, I stake out the experimental fields and I plant and transplant various crops, although a lot of things are done by machines these days. That’s fine because it used to be quite hard work doing everything by hand. After planting, we label the fields and start taking care of each section. Samples are regularly harvested by hand to assess growth. I also assess *Phytophthora* trial plots, counting how many spots the fungus has made on the plant. When the time comes for harvesting, we check each crop for different things. We might measure moisture levels in grain by hand, for example, or we examine potatoes for outbreaks of *Phytophthora*.

I like harvest time best because it’s nice weather then. And it’s satisfying when you get a good result together and have figures for the researchers. For me the worst thing in my work is a failed harvest. Just last summer a lot of potatoes rotted because of the rain. I’ll be retiring soon and I’m happy about that, but I don’t dislike working. This sort of work keeps you fit too, although I do notice that I’m getting older. Sometimes I nod off on the sofa at eight o’clock in the evening. I’ll miss working out in the fresh air, which I love. Even when it’s wet – sloshing around in the mud in your rubber boots occasionally is quite fun.’



Campus ♦ residents

CleverMove

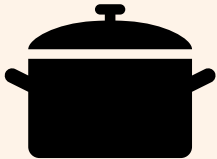
Nick Wezenbeek has been giving exercise classes and nutrition workshops to the over-50s since early 2019. His goal: to keep their muscles, resistance and fitness up to scratch. His company CleverMove, based in the Starthub, used to provide fitness classes in the Thuis Wageningen building and in a park in the Noordwest neighbourhood. But in response to the lockdown, Wezenbeek switched to online exercise classes and workshops, which he records in the Starthub studio in Plus Ultra II. Wezenbeek studied Nutrition and Health in Wageningen and then did research for the

‘I focus specifically on the over-50s so they can exercise with others their age at their own level’

department of Human Nutrition on strength training and nutrition for the elderly. He used the knowledge he gained to put together a tailored fitness and nutrition programme. Next year, he and a postdoc from Human Nutrition will supervise two nutrition students who will study the effectiveness of his online programme. In the past year, CleverMove has provided guidance for about 60 older adults. Wezenbeek thinks CleverMove has added value compared to a standard gym. ‘I have used scientific knowledge about exercise and nutrition for seniors as the basis for the structure and intensity of the programmes. Also, I focus specifically on the 50-plus demographic so they can exercise with others their age at their own level in a home environment, with a lot of personal attention. As

About 100 companies are housed on the campus. *Resource* introduces them to you. This time: CleverMove in the Starthub.

All the flavours of the world can be found in our WUR community. Isabela Cravo (28), Master’s student of Nutrition and Health, takes us to Brazil to share her recipe for brigadeiros.



Flavours of WUR

Brigadeiro

Brazilians love brigadeiros! You can find this sweet Brazilian treat at literally every birthday party or wedding. Brigadeiros are commonly made at home and eaten straight from the pan or shaped into small balls covered in chocolate sprinkles. Legend has it that this traditional sweet was invented in 1946 when Brigadeiro (Brigadier) Eduardo Gomes was running for president in Brazil. His supporters made these brigadeiros to raise funds for the campaign. It was a huge success, not least because women were being allowed to vote for the first time. The original version is made with cocoa, but nowadays you can find dozens of different flavours, ranging from coconut to champagne and even churros. You can also use the brigadeiro mixture to ice and fill cakes.

1 Melt the butter in a pan at low heat and add the condensed milk and cocoa powder, stirring continuously until you can see the bottom of the pan for 2-3 seconds when dragging a spatula through the mixture (this usually takes 10 – 15 minutes);

Ingredients (for 2 people)

- 1 tbsp butter (unsalted)
- 1 can of sweetened condensed milk (395 g)
- 2 tbsp of cocoa powder (30 g)
- chocolate sprinkles as needed

- 2** Grease a shallow bowl with butter, pour in the brigadeiro mixture and cool for 1 hour at room temperature;
- 3** Shape the mixture into balls;
- 4** Roll the balls in chocolate sprinkles!
- 5** Enjoy!



Isabela Cravo (28)
Master’s student of Nutrition and Health

In other news science with a wink

◆ JET FIGHTERS

Butterflies appear to have unnecessarily large wings. But nothing is further from the truth, show scientists from Lund University in Sweden. On their upward stroke, the wings form a kind of bowl and the front ends of the wings come together before the back ends. This is how the butterfly propels itself forward, a bit like a jet fighter. The downward stroke keeps the little creature in the air. Smart, isn't it?

◆ WINGS

Transatlantic flights can be made a lot more sustainable by looking for tailwinds and avoiding headwinds. The calculations on

this have been done by British scientists at the University of Reading. For every flight between London and New York, this makes a difference of 200 kilometres' worth of fuel. In the interests of safety, flight paths are more or less fixed. But more precise satellites will make flexible routes possible in the near future. Gone with the wind.

◆ FULL MOON

As a full moon draws near, we go to bed later and sleep less, shows extensive research at Washington University. The difference is considerable; between 45 minutes and an hour less sleep, and half an hour later to bed.

The effect is universal. According to researchers, we have adapted to the moon for evolutionary reasons: moonlight extends the time in which we can be active.

◆ MONTHLY

The moon also governs menstruation, shows German research by the University of Würzburg. The average menstrual cycle (29.5 days) is exactly as long as the time between two full moons. Young women (under 35 years old) keep pace with the moon the most. Remarkably, it is not light but gravity which is the key factor. So the Earth has as much to do with it as the moon. ^{PK}



Diary of a caretaker

Heart-breaking

One day, towards the end of the afternoon, I got a phone call from a woman who told me in a businesslike tone that her son had died unexpectedly. He had been an Idealis tenant in Wageningen. She didn't have the keys to his room so she asked me if we could arrange a time to go there together. We made an appointment for the next day. After this call, I felt upset and stared into space for a while. I needed some time to take this in: something terrible had happened and we were talking about it as if it were an everyday event. The conversation kept coming back to me throughout the day and I rather dreaded the appointment. I met the mother the next day, and she had brought her daughter, the deceased boy's sister, with her. The mother smiled warmly and suggested that we went to the room. With a heavy heart I went ahead of them to the lift and when we stood in front of the door I took out the keys and opened it with trembling hands. Inside the room, there were several family photos on the desk; there was some clothing scat-

tered on the floor and the duvet was pulled back a bit. The room looked lived in, for all the world as if the boy might walk in at any moment. I look at the mother and daughter and saw how the sight of the room affected them. They began to cry. I cried with them, inside. This was heart-breaking but I felt I must remain professional. I asked them if they'd like to spend some time in the room together without me.

The room looked as if the boy might walk in at any moment

Sobbing, the mother said she would like it if I stayed, so I did. A bit later, we had a nice chat about the boy. And I expressed my sympathies and wished her the strength to face the difficult time ahead of her.

Eugene van Meteren works for student housing provider Idealis as a caretaker. He writes about his experiences for Resource. Read all his columns on resource-online.nl



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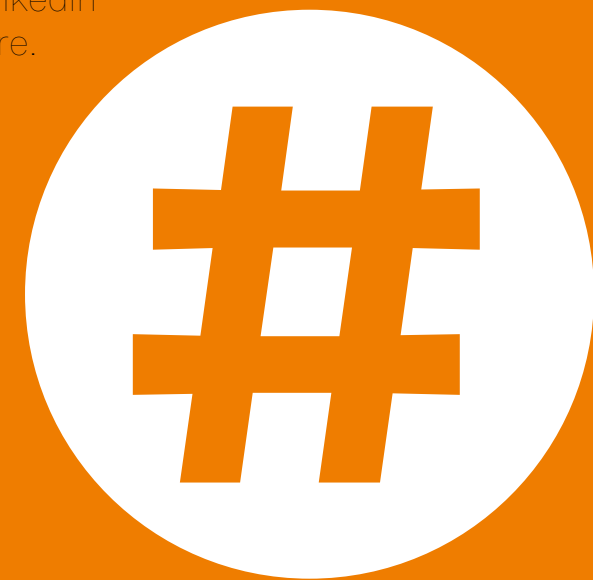
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Resource

WUR from within: straight, sharp, transparent



IN MEMORIAM

JAN BOKDAM

Dr Jan Bokdam, associate professor in the Plant Ecology and Nature Conservation chair group, passed away on 22 January. He was a specialist in the ecology of grazed ecosystems, and he did research in the Junner Koeland and the Wolfheze Heide nature areas in the Netherlands.

The latter was also the subject of his PhD thesis on cyclical vegetation succession in heathland areas under the influence of grazing and the redistribution of nutrients by the grazers. Jan's interests were broad and he had a holistic take on

landscape processes. He brought an original perspective to the interactions between the large grazing animals and landscape-forming processes, which lives on in the thinking behind initiatives towards rewilding. On excursions and field trips, Jan inspired students with the stories he told with humour and a twinkle in his eye. That inspiration will stay with his students for a long time

We will always remember Jan for his extensive knowledge and drive, his love of nature, his subtle humour, and his tremendous dedication to his teaching.

Colophon

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

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'My housemate bought a hamster because life under lockdown is so boring, but he soon lost interest in the animal. Now he has graduated he's got a busy job and he hardly takes any notice of the little creature, which we think is very sad. We'd like to help him look after it, but he doesn't think that's necessary. What should we do?'

C's housemates
(names known to the editors)



Puzzle

'Hamsters are happiest in their natural environment. They are little predators who are not used to being picked up and cuddled, and do not have an automatic need for that. The most important thing is for the hamster to have a habitat that meets its natural needs: running, hiding, foraging and digging. So if the hamster has a treadmill, somewhere to dig, somewhere to hide and good feed, it won't lack for anything. But if you would like to do a bit more for it, give it a challenging puzzle or a climbing frame. Then it will entertain itself perfectly well.'

Bonne Beerder, teacher of Behavioural Ecology

Information

'Start by looking up what a hamster needs in terms of habitat, care and company. If you find that the pet isn't getting what it needs, bring the information you found to your housemate. If you can show him with detailed information what his pet is missing, you can then say that you would like to help him with the task of looking after it.'

Jesse Allaart, BSc student of Molecular Life Science

Feelings

'Ask your housemate why he does not pay that much attention to his pet anymore, and whether he still wants to take care of it. You could say: "I see you are busy these days, but pets have feelings too and should be taken care of. Are you still willing to do that?" In Thailand there are foundations that will find a new owner for a pet. Perhaps there's an organization in the Netherlands that can help your housemate's hamster.'

Chaya Chutinara, MSc student of Food Technology

Do not disturb

'It depends what you mean by "hardly pays any attention". Does the hamster not get food and clean water at the right time, or is it living in a dirty or tiny cage without a big, closed treadmill? In that case your housemate is not meeting the animal's needs. But if all that is in order and it's just that the hamster is no longer regularly picked up or stroked, then the hamster is lucky to have an owner who works during the day. A hamster is a nocturnal animal, and a territorial loner who likes to cover a few kilometres at night. You shouldn't disturb it during the day.'

Hans Hopster, Animal Welfare researcher

Accept

'It's sweet that you'll want to help your housemate take care of his hamster. But if he doesn't want any help, you'd better leave it at that. Luckily, hamsters are nocturnal animals and they only need a little bit of attention.'

Sophieke Lems, MSc student of Biotechnology

NEXT WURRY

'I meet my mother once a month, but she doesn't take the coronavirus measures very seriously. She doesn't think it's necessary to socially distance, and she doesn't get herself tested if she has cold symptoms. I worry about her health and I don't want to get infected myself, but she dismisses my concerns. How should I deal with this?'

M. (student, name known to the editors)

If you have advice or tips for this WURries, or if you need some help yourself, email your tips or question (max. 100 words) by 22 February to resource@wur.nl with subject 'noWURries'.