

# Resource

NOVEMBER 2020 VOLUME 15

## Fact check

Assessing TV  
programme's claims

## Teaching

in coronavirus  
times

## Bumblebees

migrate too

## Record number of

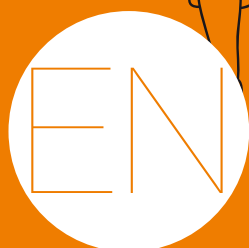
Vidis for WUR

## Coronavirus

**vaccine is ready**  
Now for the test

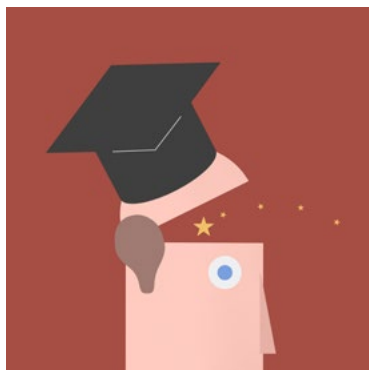
## Internships in Covid times

Stoical students look for  
other options



# Contents

NO 5 VOLUME 15



## 12

**China and WUR**  
do go together



## 22

**Plastic detectives**  
look for litter  
origins



## 26

**Krijn Poppe**  
on the new EU  
agricultural policy

4 WUR too sees student  
numbers grow

9 Sampling salt for Covid  
research

16 WUR switches to  
thermal energy storage

21 Column: science  
refresher course thanks  
to vitamin D

28 The key moment:  
'Swallow your pride'

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background stories at  
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## FOREWORD

### Freedom

The Dutch parliament wants to send a strong message condemning human rights violations in China. The parliament is keen to avoid following the example of the Greek government, which used Chinese funding to modernize the port of Piraeus and then vetoed an EU resolution on human rights abuses in China. The Netherlands, say MPs, must stay free to express criticism and must negotiate more assertively with China on trade and the economy — preferably at the EU level. If China imposes restrictions on Dutch companies in China, the Netherlands should do the same to Chinese companies here. The politicians also argue that Dutch universities are targets of infiltration and need to be more assertive in order to prevent knowledge being passed on to the Chinese army and high-tech giants affiliated with the Chinese government. But Wageningen researchers who work in China say there is no question of this in their research (see page 12). Even so, calls are now being made for the formation of a national commission to assess Dutch research projects in China for evidence of censoring and abuse. Yes, you read that correctly: a government-affiliated commission to check on Dutch research in China. We accuse China of oppression and censorship, and because of this we want to increase control over *our* universities. Whatever happened to scientists' own responsibility? Wasn't this supposed to be about freedom?

**Albert Sikkema**

*Resource science editor*







With the Dutch elections coming up next year, support for the loan system is declining. Last week, students in Wageningen protested against the system using a creative approach. They built a massive tower out of boxes in front of the Junushoff theatre; they then proceeded to carefully remove one box at a time without allowing the tower to collapse – in line with the rules of the popular game Jenga. The tower symbolized the ‘shaky future’ for the current generation of students. ‘With building blocks such as affordable rent, ability to take out a mortgage, freedom to study what you want, room for personal development and starting your adult life free of debt,’ says Bas van Weegberg, chair of trade union FNV’s youth branch. ‘All things that aren’t possible because of the loan system.’

Photo: Daphne Schoop



## Brazilian juice giant partners with Startlife

**The Brazilian company Citrusuco (which supplies the juice for one in five of the world's orange juice cartons) has become a 'strategic partner' of Startlife, which supports start-ups in WUR domains.**

The juice giant hopes this agreement will give it better access to European start-ups that can help Citrusuco become more sustainable. The company will provide advice and funding for Startlife start-ups.

Citrusuco wants to reduce its waste streams, cut water and energy consumption, and make its fruit juices even healthier with the help of new expertise and technology. It works with start-ups to achieve these aims, as 'start-ups have creative ideas and are often pioneers in cutting-edge technology'. In exchange, Citrusuco lets the start-ups use its operational expertise and testing facilities to help them achieve rapid breakthroughs. The company wants its production operations to be 100 per cent sustainable by 2030. AS

## Vidi bonanza

**Seven Wageningen researchers have been honoured with Vidi grants in the latest round. That is a record.**

The Vidi grant (800,000 euros) lets experienced researchers set up their own line of research with a dedicated group. In funding the Vidi grants, the Dutch Research Council (NWO) aims to encourage innovative, curiosity-driven research. A total of 81 researchers were selected. WUR has done particularly well this year with its seven winners.

The seven include known names such as experimental zoologist Florian Muijres, marine biologist Lisa Becking and development economist Maarten Voors, alongside the less familiar names of molecular biolo-

gists Wouter Kohlen and Wilma van Esse, biochemist Elwira Smakowska Luzan and nematologist Jose Lozano Torres.

The topics are wide-ranging. Voors studies the effect of connecting African villages to the electricity grid on poverty and the development of the local economy. Van Esse investigates the regulation of grain flowering times at the molecular-genetic level. Kohlen looks at how plants manage to get fully developed cells to divide again in order to create new tissues. Lozano Torres focuses on the early interaction between nematodes and the plants they infect.

A total of 503 researchers submitted a proposal, 81 of whom received a grant (16 per cent). RK

# 3052

Wageningen University has 3052 first-year students this academic year, five per cent more than last year. The number of first-year Bachelor's students has increased to 1750 while the number of new Master's students is about the same at 1300. Nationally, 328,000 students are enrolled at universities, eight per cent more than last year. The Association of Universities (VSNU) gives several reasons for the big increase.

Firstly, the coronavirus measures meant that more Dutch schoolchildren obtained the VWO certificate you need for university admission. And fewer have chosen to take a gap year. The intake of international students from Europe has also risen slightly. HOP/AS



# Survey on evaluation of academic staff almost ready

Wageningen scientists will soon be sent a survey by the 'Recognition and Rewards' committee. The committee is to advise WUR on how to evaluate staff in future.

The committee, which is led by education director Arnold Bregt, was formed this year to advise the Executive Board on the university's evaluations policy. One of the things the committee will look at is Tenure Track, which critics say overvalues research productivity and pays too little attention to academic services and leadership. Over recent months, the committee has

asked staff which aspects of the current evaluation system are good, and which ones could be improved on. Five main themes were distilled from the responses, which are now being used as the basis of survey questions.

## So how?

One question asked in the survey is which staff qualities, apart from publications, should the university evaluate and reward. The committee also wants to know whether and how scientific groups and academic leadership should be appreciated.

All Dutch universities are currently considering how they want to recog-

nize and reward their staff in future.

The Universities Association VSNU published a position paper a year ago called 'Room for everyone's talent: towards a new balance in the recog-

nition and rewards of academics.' The universities indicate in this document that they want to recognize and reward the work of their academic staff in a broader fashion. Each university will adopt its own approach to this, but in consultation with each other through the VSNU. AS

## WUR wants broader evaluation

## Typical Dutch Sideways



Illustration: Henk van Ruitenbeek

Although we are neighbours, it is surprising how many differences there are between the Netherlands and Belgium. A few that struck me:

First, the way we sit on the back of a bike. I always envy the way Dutch women take a little elegant run to then sit sideways on the luggage carrier of the bike. In Belgium, most passengers sit down while the bike is

at a standstill and sit straight behind the driver (one leg on each side).

I have to admit that the 'Dutch' way is more comfortable. I just need to practice the run-up, as last time I jumped on the bike a bit too enthusiastically and we almost crashed.

One huge difference between the two countries' education systems is the level of formality. After two

years studying at WUR, I am still surprised by how informal the communication is between students and professors. Every time I send an email using a very formal style with Dear Professor X, I get a reply from the professor with 'Hi' and only signed with their first name. In Belgium, professors are more attached to their hierarchical status and some of them would not even reply to an

informal email from a student.

Also, Dutch students are way more proactive in class. In Belgium students just take notes and try to keep a low profile, whereas in the Netherlands, students ask questions all the time.

## 'I just need to practice the run-up'

Personally, I like that interaction a lot! My Belgian friends who

study in Leuven even joke that if someone asks a question in class, the chances are that person is Dutch.

There are many more things I could talk about, like the concept of student/study associations, tikkies, WhatsApp v Facebook and so on. But there is a limited amount of space available, so maybe another time. Cheers!

Do you have a nice anecdote about your experience of going Dutch? Send it in! 300 words max. Send it to [resource@wur.nl](mailto:resource@wur.nl) and earn 25 euros and Dutch candy.



## A WEEK WITHOUT STRESS

**During *Surf Your Stress* week (16 to 20 November) students will be offered guidance on how to cope with stress. Here are three of the activities on offer.**

Anneke Valk (a teacher of Experimental Zoology) offers an indoor biking lesson combining reflection with a physical challenge. 'Just sprint as fast as you can and see what thoughts and feelings come up. During the cycling exercise,

**'By combining reflection with exercise you reinforce the positive effects'**

we will work with "the monkey in your head" – all the critical voices, doubts etc. Reflection is always a good thing and exercise reduces stress. Combining the two reinforces the positive effects.'

Johan van Houten will give a lecture on 'digital fasting'. Van Houten spent the whole of 2016 offline. 'My aim is for you to explore what a healthy balance between online and offline would look like for you.' Tip: buy an alarm clock. 'If you pick up your telephone the minute you wake up, you are immediately doing something other than living in the here and now.'

### **Walking**

Yvonne Haenen is offering a 'walking meditation podcast'. 'I give a guided meditation which you do as you walk in natural surroundings. Good for in the lunch hour, for instance. Afterwards you feel better and you've cleared your head. During a walk your blood pressure goes down, and so does your cortisol production. You make dopamine, so it helps against stress and depression and makes you happier.' LZ

See the whole programme on [www.wur.nl/surfyourstress](http://www.wur.nl/surfyourstress)

## Part-time WUR, part-time UN

WUR student Evi Vet has been chosen as UN youth representative for Biodiversity and Nutrition. The position is for two years. 'I did a Bachelor's in Plant Sciences and am now studying for a Master's in Nutrition and Health, so this is a great opportunity to put my knowledge to good use. As a youth representative you are the voice of young people in the Netherlands, in my case focusing on biodiversity and nutrition,' explains Vet. 'You give talks to schools and you represent young people at UN summits. My goal is to show as many young people as possible how important biodiversity is and what role it plays in their lives. Biodiversity is about what you eat, what the Netherlands looks like and what the future holds for us.' Being a youth representative is a part-time position. 'How busy I will be depends

in part on whether the UN summits go ahead and in what form. Also, a lot of schools are not keen on people coming to give talks in person at the moment either.' LZ



## Stones through students' windows

Several student houses have been pelted with stones and eggs in the past few weeks.

'Tonight, we were attacked again!!!' wrote one student recently in the Facebook group Wageningen Student Plaza. Eggs were thrown at her house in Hoevestein, followed a week later by stones. Another student also got a stone through the window. Witnesses saw teenagers cycling off fast after the incidents. Some students fear the vandalism is connected to their Chinese background, as they told local newspaper *De Gelderlander*.

'We are appalled that students no longer feel safe,' says WUR spokesperson Annet Blanken. 'An official

report has been made to the police, who are now handling the case. We understand they think these are the acts of bored youngsters.' Jos Smits of Wageningen police station confirms that there have been a number of incidents of vandalism recently. 'As far as we can tell, they are not deliberately targeting student houses,' says Smits. He is aware of five recent cases of vandalism. LZ





## Youngest children get more snacks

Scientific evidence has now been provided for what many have long suspected: youngest children get spoiled more with unhealthy snacks. This finding comes from doctoral research by Femke Brouwer at Food Quality and Design.

'More and more children are overweight,' says Brouwer. 'To ensure that mothers make healthy choices for their children, it's important to find out what their motives are.'

Brouwer asked 136 Dutch mothers of children between two and seven years old what they feed their children and why. 'With their first child, mothers are far more conscientious. They want to do the right thing. They follow advice meticulously and buy products designed for the appropriate age group, such as toddler-cookies.' Mothers are more relaxed with their second or third child. Brouwer:

'In the words of one mother: "The others have survived alright". Also, the youngest often eats the same snacks as the older sibling. And with older children in the home, there are more kinds of snacks than just raisins.'

### Behaviour

The mothers' different behaviour with younger and older children may explain why the youngest is more often overweight. Brouwer feels these findings may be of use to health organizations in designing campaigns. And to producers in developing healthier snacks. TL

'Mothers are more relaxed with their second or third child'

Femke Brouwer, Food Quality and Design

## CORONAVIRUS VACCINE READY FOR TESTING

**The coronavirus vaccine developed in Wageningen is now being tested on mice. It is a reserve vaccine, says Gorben Pijlman.**

Pijlman, a researcher at the Laboratory for Virology, is working on the development of a coronavirus vaccine in a European project. Two potential vaccines are being developed in the project: a Danish one and a Wageningen one. The Danish vaccine has been selected for further development: the Wageningen one is a reserve vaccine. 'We are continuing to develop it just in case the Danish vaccine doesn't work as well as expected,' says Pijlman.

### 'Most vaccines fail in the testing phase'

The Danish partner has worked fast to develop a candidate vaccine that involves producing a piece of coronavirus protein in the cells of fruit flies and then attaching it to a nanoparticle. Initial tests in mice indicate that the immune response to this vaccine is very good, says Pijlman. This vaccine has now been handed over to the EU project's industrial partner, who is going to produce it. The Danish vaccine will be tested in three phases over the coming months.

### Plan B

Although the Danish vaccine is highly promising, we should not count our chickens before they hatch, says Pijlman. 'Most vaccines fail during the testing phase because they do not provide enough protection or they have severe side effects.' For this reason, the European research group is continuing to develop the Wageningen vaccine as a Plan B.

The Wageningen vaccine is based on the spikes on the coronavirus, which are recreated by baculoviruses. This vaccine is ready too, and is now being tested on mice. WUR hopes to publish the results of the tests on mice at the end of this year. AS



# The chicken run revisited

Is organic food healthier? It might be, but researchers were not allowed to draw that conclusion from a study WUR was involved in, according to the Dutch TV programme Zembla. Is that true?

The 2007 WUR study 'Is organic healthier?' was the subject of the report 'The chicken experiment' that was broadcast on the BNN/Vara channel on 22 October. A consortium of institutes (WUR, TNO, Rikilt and the Louis Bolk Institute) sought to demonstrate the health impact of organic food. Chickens stood in for humans in the study, which tested the effects of regular and organic feed.

## The issue

*According to Zembla, the conclusions of the chicken study were changed under pressure. That is a serious allegation.*

The research leader and medical doctor Machteld Huber (then at the Louis Bolk Institute) said on Zembla that at the presentation of the final report to the then agriculture minister Gerda Verburg, she had to say that no conclusions could be drawn from the results. She was subjected to strong pressure – she even uses the word blackmail – by TNO.

## The facts

The chicken study was a double-blind one. Only when the report was nearly finished did the researchers know which chickens had been given which feed. It turned out the chickens fed on regular feed grew a bit better. After an attack on their immune system,

however, the 'organic chickens' recovered a bit faster. Their growth also accelerated slightly faster. The report concludes that no health effects can be linked to these findings, as the scientific evidence is too flimsy. Asked if she agrees with that, Huber says she does. The disagreement stemmed from the different interpretations of the

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**'In my opinion, the study shows there is evidence that organic food is healthier and follow-up research is therefore desirable.'**

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differences that were found. 'The question is whether the accelerated growth counts as a health phenomenon,' explains Huber. 'In the medical world, it does. The study did not aim at developing better chicken feed, we were looking for evidence of possible effects of organic food on humans. In my opinion, the study shows that there is evidence that

organic food is healthier. I would have liked to say that at the presentation. And that we would like to do further research. But TNO thought it was too soon to conclude that. I wasn't allowed to draw any conclusions in which the word health was used.' According to Huber, that conclusion meant no follow-up research. But that is an oversimplification, suggests a response to the Zembla programme from the ministry of Agriculture, Nature and Food Quality. Because of the disagreement about how to interpret the study, the then minister Verburg sought the advice of the Health Council. The Council advised her that the follow-up research the researchers were proposing was 'not so desirable'. Zembla doesn't mention this fact. The minister then pulled the plug on the research. 'Painful, and actually scandalous that it was done like that,' says Huber. 'We are now 13 years down the line. We would have got so much further if there had been follow-up research.'

## The verdict

The conclusions of the chicken study were not changed, as Zembla claimed. The results do provide the basis for further research. That did not happen, on the advice of the Health Council. But it is still possible that follow-up research will be done, says the ministry of Agriculture in response to the Zembla report. <sup>RK</sup>



# Fungus misleads roots

Plant roots don't simply grow in random directions; they respond to stimuli in the soil. Kay Moisan recently received a PhD for her work on this.

To demonstrate this effect, Moisan designed a tube shaped like an upside-down Y where the plant has to choose: which arm of the Y should the root grow down? In one of the two arms she placed a fungal culture that produces volatile substances. Moisan tested the response of rapeseed to four different fungi, one of which was pathogenic. The results were surprising: the young plant was significantly more likely to grow towards the pathogenic fungus. Why? Moisan suspects that the plant is being tricked. The fungus misleads the plant, as it were, by releasing a pleasing aroma. Moisan calls this 'fatal attraction'. But this is a lab experiment where the plant only has the one choice. In real soil, there are lots of stimuli and the plant may then make different choices. <sup>RK</sup>



## Pork, beef or spring hare?

The spring hare (a species of rodent) is a pest animal in South Africa. The 'hares' are shot by farmers because they do a lot of damage to crops. Most of the meat is thrown away. A pity, says Sara Erasmus, a researcher at Food Quality and Design, because it is a healthy, affordable and sustainable source of protein. Erasmus studied the composition of the carcasses of spring hares, and found that they are very similar to those of commercially farmed rabbits. 'The meat is low-fat and rich in protein and essential amino acids. We need to look for alternative sources of protein for feeding the world population, and there is enough available. It's just that we don't always look in the right places.' <sup>TL</sup>

## A mouthful of salt for Covid-19 research

**A key symptom for the coronavirus is a sudden loss of taste and smell. Researchers at Human Nutrition and Health have been working on developing a home test for quantifying that loss.**

The research started with an online questionnaire that was filled in nearly 50,000 times. The results raised more questions: how long do people suffer from these symptoms? And how reliable are the results? Boesveldt: 'People give their own estimates of how much they can taste and smell, but we know from research that self-reporting

is not always very reliable. So we have developed a home test that is more objective.' This was not easy. The test had to be doable anywhere

**'We had to look for products that everyone has in the house, such as shampoo and salt'**

in the world, and by people themselves. 'We had to look for products that are available everywhere, and that everyone has at home.' For example, shampoo, salt, herbs and coffee. People have to sniff and taste the products and assess the intensity of the smell or taste. If they do the test several times, it is possible to see how the sense of smell and taste improve after a case of Covid-19. The symptoms are different to those of a common cold or the flu. These often cause a blocked nose, which is why you can't smell much. 'In the

case of the coronavirus, we are seeing that the loss of smell has nothing to do with a blocked nose. That suggests that a different mechanism is at work. We think it has something to do with the ACE2 receptors, which the virus latches onto, and which are found in the nose.' <sup>CJ</sup>

*Read about Resource editor Coretta Jongeling's experience with this test on [resouce-online.nl](https://resouce-online.nl)*

# Bumblebees migrate too

Bumblebees display migratory behaviour. Queens cover great distances, possibly seeking new habitats.

This conclusion was reached by pollination researcher Thijs Fijen (Plant Ecology and Nature Management) in a publication in the *Journal of Applied Ecology*. It is generally assumed that bumblebees stick to their local habitat. Yet ornithologists regularly spot bumblebees passing bird counting stations along the coast in large numbers. Fijen, a keen ornithologist himself, learned about the passing bumblebees during a migration count. He thought it was odd, but he became seriously interested when he heard about what happened on 9 April 2016. At Noordkaap counting station (Groningen) ornithologists counted no fewer than 3387 bumblebees over a 10-hour period. 'That was when I realized I had to go into action. We know nothing about bumblebee migration, really.'

## Great distances

Fijen delved into the archives of the *trektellen.org* database on migration and ordered all the counting data. On peak days such as the one in April 2016, over a thousand

## Bumblebees are not doing well in Europe

bumblebee queens pass through the area. He also gathered the few records that were available from counts in Sweden, Finland, England and France in the last century. The overview he obtained provided the proof: bumblebees migrate.

And very probably, over great distances. On a single day in April 2009, large numbers of bumblebees were sighted in both Breskens and Kampershoek, some 200 kilometres away. Fijen concludes that migration over long distances is likely. 'Although I doubt they cover this distance in a day.' In fact, it is not even certain the sightings occurred along the same migration route.



Photo Shutterstock

Data is scarce and much is still uncertain. Why do bumblebees migrate, for instance? Fijen suspects they do so in search of a better habitat. What species migrate, and do they do so every year? Most counts were done in the spring. Is there an autumn migration too?

## Isotopes

Research with stable isotopes would be an option, Fijen says. 'Based on the composition of stable isotopes in a bumblebee, you can tell where it grew up. However, this method has a resolution of several hundred

kilometres, which is very rough.' Nonetheless, Fijen would like to conduct this study because he believes the fact that bumblebees migrate is very significant. Bumblebees are not doing well in Europe as a result of changed land use and intensive agriculture. However, if there is a suitable habitat, apparently they can reach it, even over a considerable distance. 'It would be better to protect many more areas than we do,' Fijen states. 'Pollination strategies are effective, but without conservation measures, we are fighting a losing battle.' RK

# Drought-resistant coffee plants found

PhD candidate Catherine Kiwuka discovered wild coffee plants that are better able to cope with drought in a forest that has almost disappeared. These wild robusta varieties could potentially be used to develop new drought-resistant coffee plants.

Uganda is the second biggest coffee producer in Africa after Ethiopia, but the mainly small-scale coffee farmers are struggling with the effects of climate change, rising temperatures and dry spells. That makes the Ugandan coffee sector vulnerable. So WUR scientists joined colleagues from Uganda and France in a search for wild coffee plants in Uganda. The Zoka forest in north-west Uganda in particular turned out to be a reservoir of genetic variations in wild robusta plants.

Kiwuka investigated the effect of drought stress on these populations in a screening test in which she exposed 148 wild and cultivated varieties to wet and dry conditions. There were big differences between the genetic groups in the effect of a lack of water on leaf growth. The plants that showed the least

response to large or small amounts of water were best able to cope with drought. Those wild varieties could be used to breed drought-resistant coffee plants.

## Deforestation

The research group also found that the quality of the wild robusta varieties in Uganda was on a par with that of arabica, the species most commonly used for coffee beverages. However, the severe threat to the wild coffee plants from deforestation is a cause for concern. Only 10 square kilometres are left of the Zoka forest in northern Uganda where the most valuable wild coffee plants were found. That is why it is very important to arrange better protection for the forests with wild coffee species, say the researchers. AS



Catherine Kiwuka at work on her research. Photo: Catherine Kiwuka



## TWO PIECES OF PLASTIC PER METRE OF RIVER

**The banks of the Meuse and Waal have two pieces of plastic per metre, according to an analysis in the citizen science project 'Clean Rivers'.**

The project, commissioned by the Directorate-General for Public Works, was set up three years ago by the North Sea Foundation. Each spring and autumn since then, volunteers have examined the banks of the Waal and Meuse and part of the Lower Rhine at 212 different spots. Plastics researcher Tim van Emmerik (Hydrology and Quantitative Water Management) processed the data from four such measurements for WUR.

**'We hope this study will alert policy-makers to the issue'**

90 per cent of the litter turned out to be plastic, with an average of two items of plastic for every metre of river bank. There were plastic objects but also fragments. Six out of ten items were fragments from undefined objects. Soft plastics (film, plastic bags) were most common. Of the recognizable objects, food packaging, caps, lids and rope were the main categories.

## No norm

How bad is it? According to Van Emmerik, it's impossible to say. 'Norms and upper limits have been established for a wide range of substances that can end up in the environment, but strangely enough not for plastic waste. We hope this study will alert policy-makers to the issue.' RK



Wageningen scientists don't notice any Chinese influence on research

# China and Wageningen are getting on fine

The long arm of China is reaching Dutch research both in and about China, the Clingendael Institute and the Rathenau Institute recently stated. *Resource* asked Wageningen researchers how they experience this. The findings do not resonate with them: 'I've never had the feeling that I'm being influenced or deceived'. China does keep an eye on its students, though, even in Wageningen.



Text Albert Sikkema

The Wageningen economist Nico Heerink is keen to stamp out the idea that the Chinese government seeks to influence research in and about China, and that it discourages criticism. He emails us six recent publications on: the high rate of pesticide use in China, water scarcity and land degradation, the excessive confiscation of agricultural land for urban development, land conflicts, and the development of transgene Bt rice in China. These are all politically sensitive issues that Heerink has written about, often with a Chinese researcher as the lead author. Heerink is responding to reports by

of the Uighurs, but also research on labour conditions in factories. The Rathenau Institute reached a similar conclusion, but could not give any examples. The critical reports are part of a series of publications in the Dutch press about 'the Chinese threat'. China has put a million Uighurs in internment camps, seeks to silence opposition in Hong Kong, is accused of phone-tapping key Dutch politicians and of industrial espionage, and is thought to be gathering personal data through the 5G mobile network. What is more, China is said to be influencing research and students. Several members of the Dutch parliament have questioned whether we should continue to collaborate with China.

## 'YOU HAVE TO REALIZE HOW DEEPLY CAPITALIST CHINA IS'

the Clingendael Institute and the Rathenau Institute that came out last summer, both claiming that China exerts an influence on Dutch research in and about China. 'Everything is political,' stated Clingendael researcher Ingrid d'Hooghe. 'Some subjects have to be avoided, the story has to be positive, and criticism is not welcome.' She cited not just studies of the oppression

### 'Not right at all'

But Heerink, who has been visiting China for a long time and even lived there for a few years, is adamant that he has not encountered any influencing of research on China's part. 'As far as my subject area is concerned, Clingendael's and Rathenau's findings are not right at all.' The economist sees more of a cultural problem. 'I work very closely with Chinese researchers, many of them Wageningen PhD graduates. They know the local policy and have access to the research data. And they evaluate that local policy in terms of "this is going well,



Illustration Studio Geniek

that's not going so well, and here's what you could do to improve the situation." That works fine: you should let your Chinese partner convey the message.'

What doesn't go down well, says Heerink, is offering your own opinion on a political issue from your own Dutch or western perspective. Suggesting that China is destroying democracy in Hong Kong, for example, closes doors in China. 'I assume that Clingendael talked mainly to Dutch political scientists for their report. Human rights are a very sensitive topic in China.' Other Wageningen scientists with long experience of working in China also say no one has tried to influence or obstruct their research there. 'I've never had the feeling that I'm being influenced or deceived,' says Evert Jacobsen, emeritus professor of Plant Breeding. 'The Chinese have their own agenda. What is it? Developing their country.'

### High tech

Research in the Wageningen domain – agriculture, food safety and quality, nature and the environment, rural development – takes place with full transparency, and the results are published in scientific journals. That is not necessarily the case with high-tech subjects such as chip technology and artificial intelligence. Is

there any question of influence or espionage in this research field – for example, in relation to WUR's Autonomous Greenhouse Challenge? This competition, in which several international teams design autonomous greenhouses using sensors and artificial intelligence, is sponsored by Tencent, the Chinese Google. So it brings together WUR, sensitive technology and Chinese capital. How is that going? 'The Autonomous Greenhouse Challenge is an open innovation project,' says WUR organizer Silke Hemming. 'We stimulate the sharing of knowledge among the participants. The teams develop algorithms,

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‘THERE IS NEVER ANY INTERFERENCE OR DISCUSSION OF DATA’

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‘I’VE NEVER HAD THE FEELING I’M BEING INFLUENCED OR DECEIVED’

which are their property and they decide whether they want to share them with other participants and the public. You notice that some do so and others don’t. WUR collects data from our greenhouses during the competition, and we make it available to anyone after the competition is over. Tencent is the sponsor, and has the same access to the data as anyone else. There is never any interference or discussion about data.’ Tiny van Boekel, acting professor by special appointment of Dairy Science, has not encountered any political influencing or knowledge theft in China. Van Boekel is involved in the Sino-Dutch

Dairy Development Centre (SDDDC), a collaboration between WUR and Chinese universities and dairy companies aiming to improve the Chinese dairy chain. This initiative was launched after China’s 2008 melamine crisis, when dairy companies contaminated baby formula with melamine.

Van Boekel: ‘The dairy crisis was very openly discussed in China. The policymakers wanted to solve it. You have to realize how deeply capitalist China is: businesspeople could do what they like in those days, in a kind of wild west economy. Central government only started to impose rules later, to make companies take public health and the environment into consideration. The business world is not organized, it’s every man for himself. In the SDDDC we propose: collaborate within the dairy supply chain to make it productive, safe and climate-neutral. That doesn’t happen because the companies see each other as competitors. We have very open discussions about that.’

### Fast development

Collaboration between WUR and China started about 40 years ago. One of the pioneers was Wageningen emeritus professor of Plant Breeding Evert Jacobsen, who still distinctly remembers his first Chinese PhD student: Qu Dongyu. ‘I was his supervisor, but we didn’t make very good progress with the research. As the only Chinese person who spoke good English, Qu was sent all over the place by his boss, the vice president of the Chinese Academy of Agricultural Sciences.’ In the end, Qu graduated within four years and went on to a brilliant career: he is now director general of the UN’s



‘We do want to be able to choose the Chinese partners we work with ourselves. You have to be aware of the business, cultural and political interests at stake – but that is equally true of the US.’



Food and Agriculture Organization (FAO).

We often fail to realize how fast China has evolved from a developing country into a global power, says Tiny van Boekel. He went to Beijing for the first time over 20 years ago. At that time, he saw vast numbers of cyclists in the Chinese capital and was a curiosity himself. When he visited again 10 years later, Beijing was congested with cars. All the Wageningen researchers who went to China were amazed by the fast development.

By now, travellers to China also note developments they don't feel so positive about. Chinese government policy on ethnic minorities has changed. These minorities used to have autonomous status within China, and could maintain their own culture. Now they are required to fall in line with central government. At the same time, the anti-corruption policy has been sharpened up. As a result, more corrupt directors have gone to prison, but sometimes 'corruption' appears to be an excuse to lock up political rivals or dissidents. Thirdly, the Chinese press has become less diverse and

informative. English-language newspapers in China used to publish news about the country; now they mostly publish articles in praise of the Chinese leader Xi Jinping.

These developments do not affect Wageningen's projects in China, however, which are about public goods such as food and infrastructure. Public debate and protests do sometimes occur in China, for example if the central government wants to build a high-speed railway line, or the local government wants to confiscate land to create new suburbs. Sometimes citizens whose land has been confiscated are obstructed by local government and supported by central government, say Wageningen's China researchers. The Beijing central government often wants to hear the different perspectives on regional policy issues.

### Loss of face

But the Wageningen researchers also say that certain things are extremely sensitive. No open discussion is possible on any matter that gets too close to the central government – like the position of Taiwan and Hong Kong, for example. And calling China to account publicly is out of the question. National policy is sacred in China, says one regular visitor, and Chinese policy is based on non-interference. 'So you mustn't embarrass them with criticism, especially not in public. That means loss of face, which is a terrible thing in China.' It is difficult to separate the current criticism of China from the technological war between the US and China, in which the US constantly seeks to reign in Chinese high-tech companies. In that setting, China is being portrayed in horrifying terms, says one experienced China researcher. 'I have noticed that there is very little specific evidence about Chinese influence on research in the Clingendael study. We shouldn't blow things out of proportion.'

WUR is working on guidelines for research in and with China, says rector Arthur Mol. 'We've got to be realistic. We are doing research on nutrition, agriculture, nature and the environment – all public goods which you can discuss and publish about freely in China. But we mustn't be naïve. We do want to be able to choose the Chinese partners we work with ourselves. If we embark on a project in the field of genome editing, for example, we should think carefully about ownership rights and which partners we choose. You have to be aware of the business, cultural and political interests at stake – but that is equally true of the US.' ■

### Chinese surveillance in Wageningen

The Chinese government keeps an eye on its citizens, even outside China. So the Chinese embassy in The Hague has a list of all the Chinese students doing degrees or PhDs in Wageningen. Years ago, a Chinese PhD student who hadn't registered with the embassy had great difficulty later in getting her PhD recognized in China. So everyone registers.

The Chinese embassy keeps in close contact with the Chinese Students' Associations at Dutch university towns. It monitors, for example, whether Wageningen students on a Chinese grant make good use of their funding. The embassy also gives students money to organize cultural events, arranges flights for them, and provides support during the coronavirus crisis.

When China is criticized on politically sensitive subjects – an example was an opinion about Hong Kong expressed in *Resource* – the Chinese community goes into action. Chinese students email the editors to complain and the embassy is informed. As a result, Chinese students in Wageningen do not feel free to speak up on sensitive political issues. That at least is how Westerners see the one-sided debate on these matters. 'Most Chinese students are on a grant, and that comes with obligations.'

# HEATING AND COOLING FROM THE GROUND

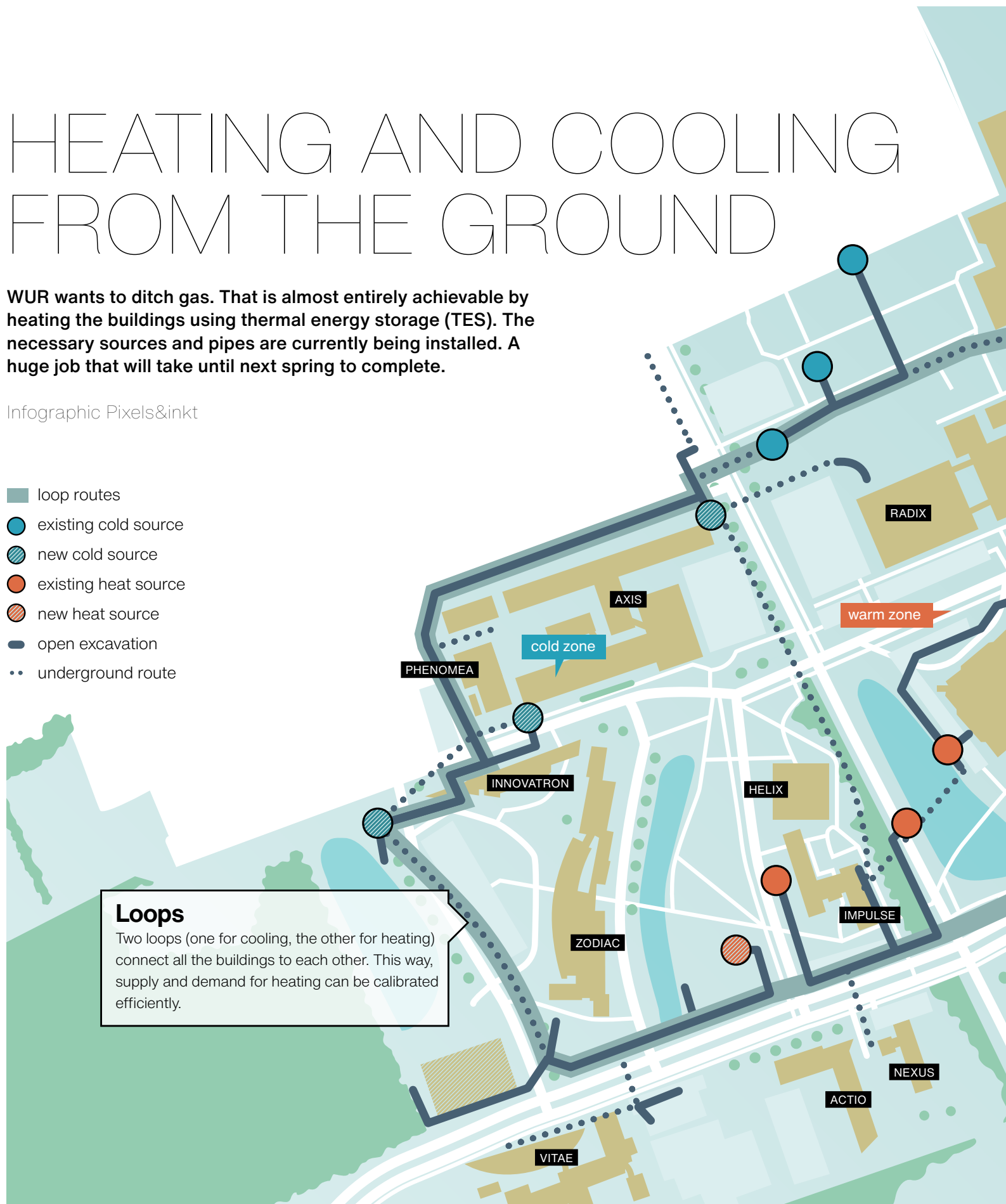
**WUR wants to ditch gas. That is almost entirely achievable by heating the buildings using thermal energy storage (TES). The necessary sources and pipes are currently being installed. A huge job that will take until next spring to complete.**

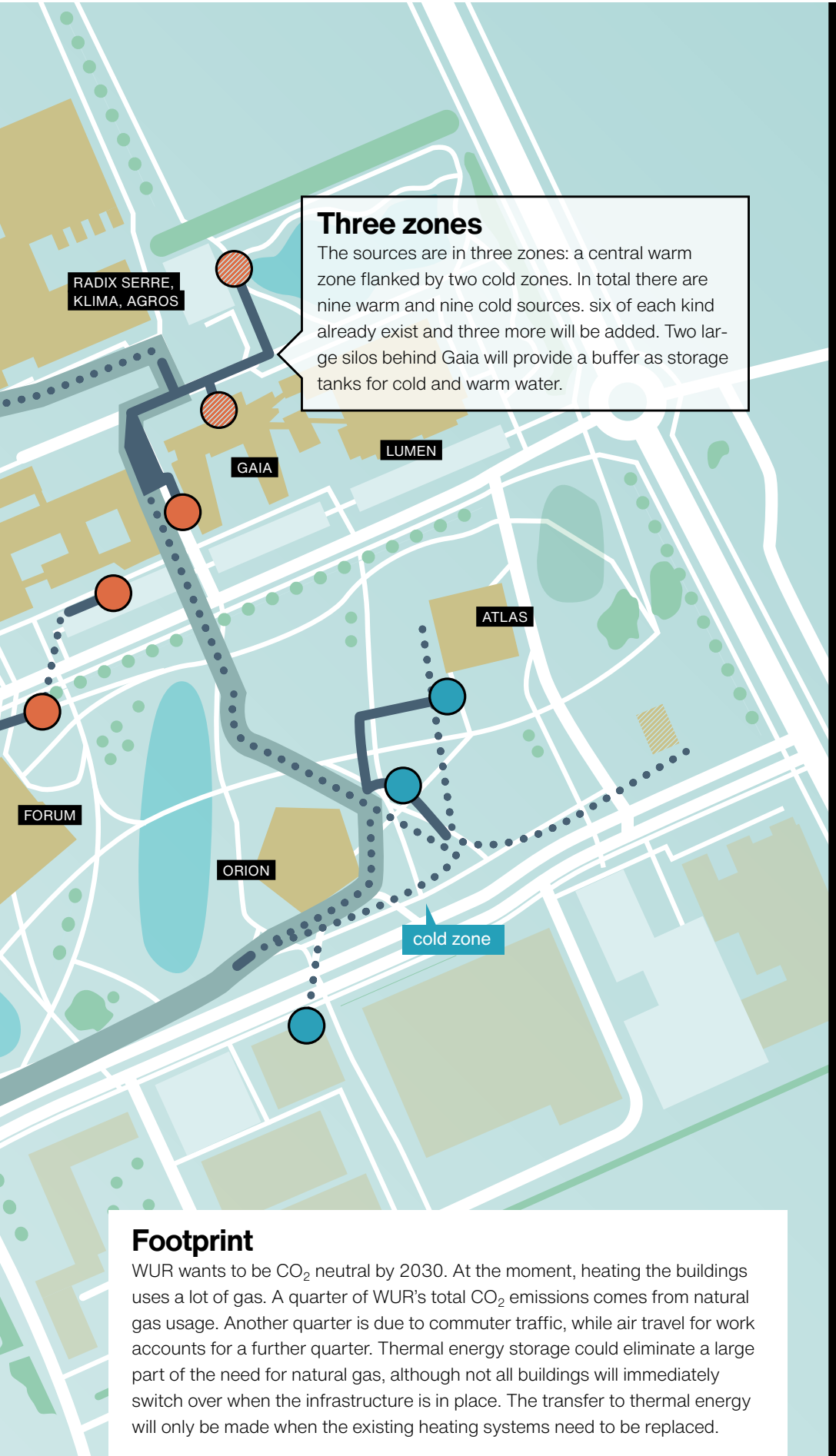
Infographic Pixels&inkt

- loop routes
- existing cold source
- new cold source
- existing heat source
- new heat source
- open excavation
- underground route

## Loops

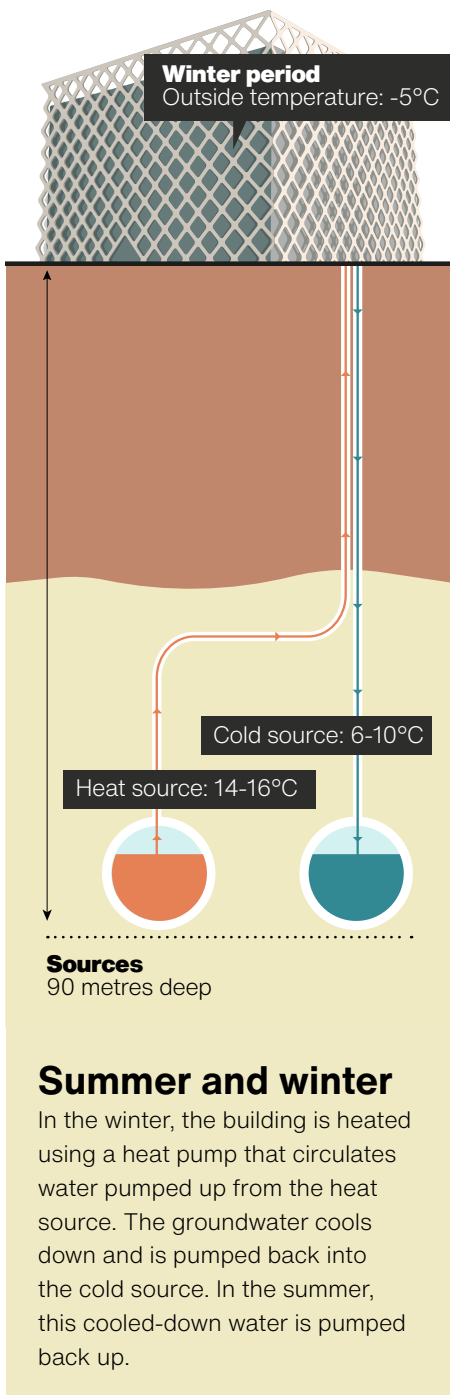
Two loops (one for cooling, the other for heating) connect all the buildings to each other. This way, supply and demand for heating can be calibrated efficiently.





# How does thermal energy storage Work?

TES makes use of aquifers to cool or heat buildings. The water serves as a storage device for energy and thus forms a kind of heat battery. Via the buildings, the water is pumped between the cold and warm sources. The sources are at a depth of 90 metres where the horizontal flow rate is at its slowest, meaning a minimal amount of energy leaks away.





Internships are scarce in Covid times

# STOICAL STUDENTS LOOK FOR OTHER OPTIONS

Your internship is supposed to be the highpoint of your degree programme. Your chance to sample the work culture in a company, to acquire specific skills, to experience what a real job is like... But because of the coronavirus crisis, there are far fewer internships available. 'My dream was shattered.' Text Milou van der Horst

Illustration Larissa Mulder/shutterstock

**W**orking from home, uncertainty, the economic crisis, negative travel advice – these

are just a few of the consequences of the coronavirus pandemic that affect internships. It is harder for many students to find an internship, confirms Astrid van Noordenburg, the Student Career Services coordinator. 'The demand is the same but because of Covid-19, there are fewer internship places and vacancies.' Education director Arnold Bregt has watched it happen: 'People at companies that take interns are working from home too, which makes it difficult to provide a good induction period for students.' And not all internships can be done online – those involving lab work, for instance. Noordenburg has noticed that it is especially difficult for international students to find an internship: 'Some

companies are looking for students who speak Dutch.' Also, students from WUR are not allowed to do internships in countries classified code orange or code red, unless it is their home country. That makes international internships even more difficult.

## Damage

A working party will be studying the scale of the problem at Wageningen in the coming weeks. Bregt: 'Many students postpone their internship. Because of Covid, the non-course degree components – the internships and theses – are going to pose big problems the next education period.' The big issue is the learning goals at the programme level. 'After period 6 we analysed whether the learning outcomes at the programme level were at risk,' explains Bregt. 'Course teaching went almost entirely online in periods 5 and 6, and that went well, but

## 'INTERNSHIPS AND THESES ARE GOING TO BE THE BIG PROBLEM IN THE NEXT PERIOD'

we saw that internships and theses were being postponed. We hoped that people could catch up after the summer holiday and in the autumn. Not much damage had been done to the learning outcomes at programme level by the end of period 6.' That damage could occur now, due to the second wave of coronavirus infections, if students are unable to acquire important skills on alternative internships.

### Solutions

Each chair group is dealing with the problem in its own way. Bregt: 'We are now exploring whether the university should take measures across the board, and what they might be.' Meanwhile,

students have a couple of options, one of them being to drop out of the programme at WUR temporarily. WUR established this option during the first coronavirus wave, and it is particularly relevant to international students, for whom a few months' delay can cost thousands of euros. 'Students can make use of this arrangement,' concludes Bregt. Noordenburg: 'Within the programme, we look for appropriate solutions individually with students. It could be writing a second thesis instead of doing an internship, or switching around the thesis and the internship. And there



## 'INSTEAD OF TRAVELLING AND A DREAM INTERNSHIP, I WAS SITTING AT THE COMPUTER AT HOME WITH MY PARENTS'



are more internships available within WUR.' Bregt offers one last tip: 'Go and talk to the people who are there for that: the internships coordinator and the graduation coordinator for the chair groups. Creative solutions are sometimes found.'



**Chantal van Drimmelen,**  
MSc Biology

### Fed up

'I was looking forward to my internship in America for months, and then suddenly it was gone. Two days before my flight, my mother woke me up to tell me that Trump had closed the borders. I couldn't believe it at first, until I googled it. Then I panicked: I didn't know what I should do. After a period of uncertainty and frustration, I agreed with my supervisors that I would use existing data to build a model at home. Four weeks later I could start a completely new internship. I am very grateful to my supervisors for helping me to graduate on time. My internship was

the last component, money was a factor and I was due to start a PhD straight after my internship. I was extremely fed up, though. Instead of a dream internship and trip, I was sitting at a computer at home with my parents and my younger sister, because I had given up my room in Wageningen. But I tried to make the best of it; and it was nice to learn new skills and I got to know some nice people.'



**Talis Bosma,**  
MSc Organic Agriculture

### No Egypt

'I'm now working on plan C for my internship. First I was going to Egypt with a Dutch company, but that dream – which I had worked on for six months – was shattered two weeks before my departure date. After that I was going to

work for the same project on location in the Netherlands, but that fell apart too because of the lockdown and working at home. And now I'm working at my computer in my student room on lots of different projects in North-West Africa, even though I really didn't want an office-based internship. When my first plan collapsed, it was very disappointing and frustrating, partly because WUR took a long time to provide clarity on whether I was allowed to go, whereas the company was really keen for me to come. I considered going to Egypt anyway, but I wouldn't have been free to travel around there and the healthcare isn't great. And I didn't want to wait. So I accepted it: I am trying to be flexible and make the best of it. And I'm grateful, because it is much harder to find an internship now, I won't have to extend, and I'm working on nice projects. I am developing new ideas about what I find interesting and what I can do. My aim with every assignment is to expand my horizons, and that has already happened.' ■



# Refresher course



**Guido Camps**

**Nearly everyone** I speak to is nostalgic for the days before the coronavirus and longing to do the things they used to do again. Given the media's insatiable hunger for glimmers of hope, it was only a matter of time before vitamin D came in for some mainstream attention.

Those who follow the scientific literature saw articles before the summer suggesting a possible link between vitamin D and a

Covid-19 infection.

**People are all rushing to the chemist to get vitamin D pills**

Since then, several more studies have been done, throwing up more 'evidence' for

a relation between vitamin D and better protection against Covid-19, or a milder bout of the disease. So the claim flooded the media this week because everyone is desperate for a cheap, practical and above all, fast solution to the current situation.

Any scientific nuance is the first victim in the media, and now people are all rushing to the chemist to get vitamin D pills.

Anyone with a university education or, better still, a PhD, can feel in their bones that certainty about this is still far off. All the 'evidence' that has been found so far is only evidence for a hypothesis – the product of what we call hypothesis-generating research. The real proof from controlled trials in large groups has still

to be delivered (although such trials are already under preparation). What anyone with an MSc or a PhD knows is this: You might expect a great deal from your trial, but the outcome is rarely exactly what you expected, and sometimes nothing like it at all. The strange feeling when you look at your dataset after a complex experiment, and the data is nothing like what you thought it would be. That feeling lies ahead for the whole of the Netherlands.

**Covid-19 has a lot of bad consequences,**

but one positive bonus is the refresher course in science that everyone in the Netherlands is getting. False positives, false negatives, the difference between PCR and antibody tests... we are all suddenly getting up to speed in scientific methods. Lesson two will be: however elegant and well-supported a hypothesis may be, it is no guarantee for the outcome of your data.

**PS:** I've never had so many phone calls from friends and family to ask about the difference between mg, mcg and IU in relation to vitamin D as I have just recently. Luckily the Nutrition Centre has an excellent explanation and a table that explains (in Dutch) all about the benefits and necessity of vitamin D: [voedingscentrum.nl/encyclopedie/vitamine-d](https://voedingscentrum.nl/encyclopedie/vitamine-d)

Guido Camps (36) is a vet and postdoc in Human Nutrition. He enjoys cooking, beekeeping and unusual animals.

# THE PLASTIC DETECTIVE

Washed-up plastic has often come a long way. Wouter Jan Strietman tries to determine its origins using CSI-style detective work, in the hope of stemming the tide.

**D**rifting plastic can cover enormous distances. By way of illustration, Wouter Jan Strietman, a researcher at Wageningen Economic Research, pulls up an animation made by oceanographers at Utrecht University. 'Imagine, we throw plastic bottles into the sea at IJmuiden,' he says. Dots swarm across the screen, moving from IJmuiden into the ocean. 'Within a year the rubbish is in northern Norway. From there, it goes to Spitsbergen and Iceland. Some of it drifts on to Greenland and beyond, and some of it boomerangs back towards Europe.'

The image is clear and concerning: waste comes and goes from far and wide. How do you deal with that? Removal, along the lines of the Ocean Clean Up project, is a noble but fairly hopeless task. A lasting solution requires a different approach. 'Plastic in the ocean is the result of human actions,' Strietman continues. 'If you want a structural solution for the plastic, you have to know where it comes from and how it ends up in the ocean. That is research into human and economic activities.'

## Sherlock

Strietman and his Arctic Marine Litter project have been doing this detective

work for three years. Together with local groups and other stakeholders, they run workshops to try to trace locally found waste. They have already visited beaches on Spitsbergen, Iceland, Greenland, and the island Jan Mayen. And, closer to home, De Griet in the Wadden Sea. The coasts of Canada and Russia are on their wish list, but the coronavirus has thrown a spanner in the works for now. The method Strietman has developed and applied, Plastic Litter ID, is simple. Collect plastic, sort it and try to trace its origin as far as possible. He likes to use the term plastic detective, which is exactly what he is. Like a kind of Sherlock Holmes, he deduces as much information as possible from the recovered plastic. By zooming in on objects, or by zooming out in search of patterns.

This results in some impressive feats. Strietman produces a small yellow



Tekst Roelof Kleis

## Klokhuis prize

The Wageningen waste project is competing for the Klokhuis science prize awarded by a children's TV programme, under the banner 'The Plastic Soup Detectives.' Strietman is among the final 10 contenders. Voting is still open on the Klokhuis website, and the winner will be announced on Sunday 15 November. In 2016 WUR researcher Wieger Wamelink won the inaugural Klokhuis prize with his study of gardening on Mars.

plastic object found on the beach of Jan Mayen. It looks like a miniature cruise ship. Small letters on the bottom read *Mauretania*. 'When I started googling, I ended up with a series of model boats that were added as freebies to Sugar Pops boxes in the United Kingdom. That's a

kind of breakfast cereal. But wait for it: that was in 1958! Of course I don't know how long it had been lying on the beach. But it does demonstrate two things: plastic travels far and stays intact a long time.'

### For Men

Zooming out is just as useful. 'If you sort objects by type, you start seeing patterns,' says Strietman. 'There is always a story behind it.' The language on labels, for example, can be revealing. Or the fact that almost all the shampoo bottles and deodorant spray cans found on the beach on Spitsbergen are for men and in Russian. That turned out to match the fishing nets they found, which mostly came from Russian boats. Strietman: 'Most of the fleets in the area come from Russia or Norway.' Analysing the nets brought something

else to light, too. 'More than 90 per cent of the nets turned out to have been cut loose during maintenance work. That shocked me at first, but it is actually positive, in a way. The nets did not end up in the ocean accidentally, which means that littering could be prevented. We saw the same pattern in other research locations. We don't yet know which fishers are responsible for it, but we do know it is preventable waste.'

### Fellow travellers

Strietman always works with local stakeholders. 'It is super important for them to know where the waste is coming from. In Greenland, for example, they thought most of the rubbish floated in from distant places. Our research showed that almost all of it came from local sources. Now they are going to see how they can tackle that locally.' Solutions for

## 'PLASTIC TRAVELS FAR AND STAYS INTACT A LONG TIME'

the fishing net problem are being sought at a national level. Strietman has also been asked to take a seat on the Arctic Council's waste working group. Tracing the source of waste is not the only focus, though. Within WUR, Strietman is working together with marine and environmental researchers who study the interactions between plastic and local environments. 'Marine biologists are interested in the organisms that travel with the plastic. Those are potentially invasive species. At the same time, those organisms are evidence of the journey the plastic has made. That kind of multidisciplinary collaboration is what makes it so interesting.' ■



Researchers clear up plastic in the Arctic Circle. Photo: Wouter Strietman

## Meanwhile in the chat

# TEACHERS IN TIMES OF COVID-19

Wageningen teachers talked to rector Arthur Mol and education director Arnold Bregt about work pressure and stress in Covid times in an online meeting on 8 October. Here is a selection of their comments in the chatroom. The big problem for teachers is not being able to teach 'live' as they get energy from interacting with the students, plus feedback on how the students are doing with their studies and faring more broadly.

09:05 ✓✓

My biggest disappointments are '**complaints**'. People should accept that not everything is possible at the moment. This is stressful.

09:00 ✓✓

Continuously having **the feeling that I am disappointing people**, while working more hours than usual.

09:10 ✓✓

A source of stress is that we seem to have **to accept new protocols** but are not involved in the design of those protocols.

09:07 ✓✓

Extra emails, extra (preparation) meetings, meetings less efficient... it often feels like **nonstop working** for 24h, particularly for staff working from home with small children.

09:15 ✓✓

As an extrovert my main job motivation and added value comes from interacting with students and **I do not get energy** from the online education.

09:18 ✓✓

**I am very worried** about the health of the students because of virus-related risks, and also because of the increased risk of mental health problems.

09:20 ✓✓

A concern for me is that current teaching requires a lot of energy, but energy returns from teaching are very low. The better you prepare **online education**, **the less response you might get from students** (especially large groups).

09:12 ✓✓

Teaching three practicals on one day is exhausting and you have **no time to recover or take breaks** because you're also facilitating students at home as well as fixing scheduling issues.

09:25 ✓✓

We need more experienced people for education, not student assistants. That will **increase our workload** because we have to teach them first before they can do teaching.



09:21 ✓✓

Maybe we need to **teach a little less** and use time in 'lectures' for more group discussion?

09:22 ✓✓

**Adding to stress:** the fun side of meeting colleagues and students, which gives me a lot of energy, is gone.

09:24 ✓✓

WUR students that take courses at other universities or have friends there, are **even more positive about our education** (as WUR teachers seem to be doing much better than national average).

09:27 ✓✓

It would help to allow Zoom for online teaching: **virtual classroom is limited to 150 students** and other programs do not work well when other software with sound and video is being used... yet our department does not allow us to get a Zoom licence.

09:30 ✓✓

Online teaching with different software packages to be installed and used by students = **lots & lots of technical issues**, all of which land on the plate of the course coordinator, while they should go to IT.

09:32 ✓✓

I am currently piloting **virtual interaction** environments in my teaching. I see huge potential here. These are relatively easily implementable browser-based programs making the interaction between students and lecturers more engaging and fun.

09:29 ✓✓

We have **thesis ring meetings on MS Teams** with our thesis students. We are also having the meetings when there are no documents, just to check how everyone is doing.

09:40 ✓✓

IT and Dig Exam are really trying **very hard to keep up with the demand** 'we' impose on them. That's great, but still not enough, adding to our stress.

09:45 ✓✓

MSc thesis students should also get **VPN** access.

09:49 ✓✓

I miss the many **non-verbal signs** between me as a teacher and students, which are normally very important in teaching.

09:59 ✓✓

I got energy from the **hybrid teaching**, was really happy with some students in the room!!

10:13 ✓✓

Often practical skills are not specifically mentioned in the learning outcomes, but contribute greatly to them none the less..... **their importance should surely not be underestimated!**

10:18 ✓✓

Add a Corona Implication chapter in each MSc thesis, reflecting on **positive and negative impacts**, and how the student is prepared for post-academic life.

10:20 ✓✓

Thesis contents are moving a lot towards data analysis, modelling, etc. **The fieldwork-based and lab-based theses are currently getting 'phased out'** (sort of). Fine for theory-based and data-inclined students, but this will not solve the global problems we are facing (after Covid-19): the biodiversity crisis, climate change. Meeting stakeholders in the field etc is essential.

10:21 ✓✓

I set up a weekly drop-in discussion hour for students **using Virtual Classroom** to try to make an informal way to say hello / talk about weather, or ask specific questions.

How are you finding online teaching? Share your experiences with us via Resource-online.nl, Resource@wur.nl or social media @Resource-wur.

# New European agricultural policy: A (too) small step towards climate targets

Over the past few months, European heads of government have come to an agreement on a new EU agricultural policy. Krijn Poppe, a Wageningen researcher and adviser on food policy, puts the new policy in perspective – for the last time before he retires. photo Harmen de Jong

‘The first pillar of the EU policy, income support in the form of a subsidy per hectare for farmers, will be changed. At the moment, Dutch farmers get 375 euros per hectare. Once the reforms have been approved by the European Parliament, they will get 300 euros per hectare, and they can recoup the rest with ecosystem services such as herb-rich field edges, meadow bird management measures or CO<sub>2</sub> sequestration in the soil. Farmers can sign up for this eco-subsidy on a voluntary basis. Between 60 and 80 per cent of Dutch farmers are expected to do so, which will result in subsidies of up to 100 euros per hectare.’

## What good is an extra 75 or 100 euros per hectare to the farmers?

‘Most Dutch farmers need to make between 1800 and 2000 euros per hectare, so in that light, 75 euros is a drop in the ocean. But farmers could still benefit from it. If an arable farmer with 100 hectares of land creates flowering field edges, he will be compensated for all those hectares and could earn 10,000 euros from ecosystem services. That soon adds up.’

## But the environmental organizations were not satisfied?

‘The environmental organizations were hoping for more than 20 per cent for ecosystem services, so that the agricultural policy would dovetail with European



Text Albert Sikkema

Commissioner Frans Timmermans’ Green Deal. They are disappointed now. But this is a compromise – a lot of Eastern European countries would prefer a fixed subsidy to an eco-subsidy of this sort. Each EU country now has to make its own plan for agricultural development, for compensation for ecosystem services, and for the criteria which farmers have to meet to qualify for EU support.’

## What does this reform mean in the Dutch context?

‘With this money, you can stimulate strip cultivation, create financial incentives for raising the water level in the peaty soils areas or stimulate the use of green fertilizers to cut emissions from the soil. But the downside is that you have to apply for the eco-subsidy every year, and farmers won’t make systematic changes to their farms for annual subsidies. They could link the subsidy to sustainability measures for the long term, such as the Better Life label.’

## Has Agriculture minister Schouten’s circular agriculture run out of steam?

‘The implementation of the approach has stalled because farmers don’t see good financial prospects.

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‘THE GOVERNMENT  
SHOULD SUPPORT FAR-  
MERS WITH DIGITALIZATION’



‘There is a culture war going on between the fans of export agriculture and the environmentalists.’

A lot of farmers want to participate but there is no blueprint or business model. And anyway, closing the cycle doesn’t solve all the problems, such as the climate goals and land subsidence. We have a liberal policy at present. As long as the market and consumers won’t pay for it, we won’t make headway with making agriculture sustainable.’

#### **What needs to happen, in your opinion?**

‘The Dutch government should take the lead again, like it did in the 1950s and 60s. Then the government took care of the modernization of Dutch agriculture, using instruments such as land consolidation. It is now time that the government supported farmers and consumers in digitalization. This can help farmers to make their production processes transparent and it can help consumers to adopt a healthy lifestyle and diet. Then digitalization contributes to sustainable agriculture, as long as all the data and algorithms do not fall into the hands of a few big companies. And also, the government should make regional land use plans, allocating land to housing, solar farms and agriculture.’

#### **How can the government solve the nitrogen problem?**

‘The central government can formulate a national objective for, say, halving emissions of greenhouse gases, nitrogen and ammonia. To achieve those objectives, you need emission rights and quotas for individual companies. Those emission rights are controlled by sensor networks on the farms. Such digital tools make food production transparent. You can hold the farmers accountable and if they perform well, they can be given more scope for development.’

#### **Why isn’t this innovation process getting off the ground in the Netherlands?**

‘That is partly because of the make-up of the coalition, but a more fundamental problem is the lack of shared vision. There is a culture war going on between the fans of export agriculture and the environmentalists. They are locked in a battle for the Dutch countryside. What should it be used for: housing, wind farms, livestock farming or nature? As long as there is no consensus on that, the politicians will be kept busy firefighting.’ ■



## Swallow your pride

‘Ten years ago I had a severe burnout after organizing events for WUR for over 15 years. One year later I began the reintegration process and I was determined to return to the same work. A big mistake, in retrospect. I was being guided by my pride. I wanted to prove I could do it. I should have been honest with myself then and asked: does this suit me, and will it make me happy? The answer to that was “no”.

But I only realized that last year, when I ended up off sick for the second time. Something had to give. I always felt I had to do my best. But in the end, I really had no wish to go on proving myself anymore, and I was very unhappy. I said to the doctor, “I’ve had enough, I’m stopping.” That was such a relief. I was listening to my needs at last.

It would have been good if I’d thought of doing that 10 years ago. But I think it was also something that comes with age. As you get older, you get less tolerant of bullshit. So then I started looking around.

Turning points: sometimes you recognize them straightaway, and sometimes only in retrospect. In this series, WUR folk talk about a moment they will never forget. This time, Meira van der Spa, previously an event organizer and now a translator.

What would suit me? The work of events organization is never done, and it could always have been done better. I’m a perfectionist and I take criticism very much to heart. And I like to have clear-cut tasks to do. I studied languages at university and did a postgraduate course in journalism. So I came up with the idea of translation work. It is much less stressful, even though it is often very busy and there are hard deadlines. Every task has a clear beginning and end. And it is wonderful to sit down on the sofa in the evening and think: right, all done and dusted!

**As you get older, you get less tolerant of bullshit** It is quite a step to make a big change like that when you are 52. And I was scared of how colleagues

might react to me continuing to work at WUR. But they were all positive. I would say to other people who get stuck like I did: don’t be tempted to stay on the same track because you think that’s just the way it has to be, or because it’s what you have got used to. However good you are at something, if it doesn’t make you happy, the price you pay is too high. I think it’s logical to change tracks like this more than once in the course of a career. And I think you can learn to do anything if you are interested in it. You usually demand higher standards of yourself than other people do.’ - TL

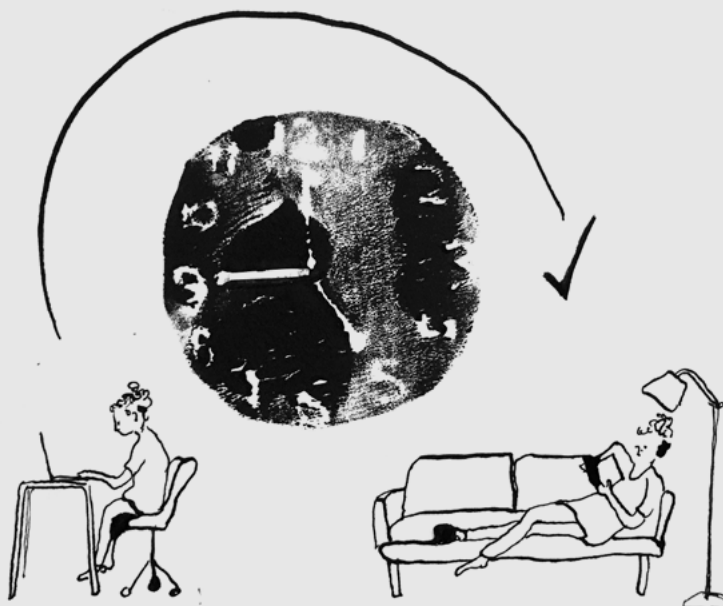


Illustration: Marly Hendricks





## Campus ♦ companies

### Kubota

A newcomer arrived on the Wageningen campus a few months ago: the Innovation Centre Europe of Kubota, a Japanese multinational with 40,000 employees, which makes agricultural machinery. In Japan the company mainly develops machinery for rice cultivation; in Europe it focuses on tractors and agricultural vehicles for arable farming, fruit and vegetable growing, and vineyards.

Kubota works on smart farming and wants 'to be part of the Wageningen ecosystem of knowledge companies,' says Peter van der Vlugt, manager of the innovation centre. He started work recently in Plus Ultra II, together with a staff of 10 and a few student interns, but because of the coronavirus measures, it is all quiet there now.

The machinery manufacturer has been collaborating with WUR for about 20 years, mainly with the Agrosystems Research group at Wageningen Plant Research on the development of smart farm machinery. Kubota's aim with the new innovation centre is to collaborate more with Wageningen startups, StartLife and One Planet. 'We want to

### 'Because our business continues to grow'

invest in promising young companies, so we are now studying how we can continue collaborating

tions in the areas of new technologies, products and services.'

Kubota is working with research institutes within public-private research projects funded by the EU and the Dutch 'top sector' Agrifood. The company focuses on the digitalization of farm machinery and harvesting processes, and on the development of artificial intelligence. Van der Vlugt: 'We have vacancies and internship positions, because our business continues to grow in spite of the coronavirus crisis.'

There are about 100 companies located on campus. We introduce you to one of them in every issue of *Resource*. This time: Kubota in Plus Ultra II.

All the flavours of the world can be found in the WUR community. Suraj Jamge, who works in the Knowledge Transfer Office at Corporate Value Creation, takes us to his home country, India.



Flavours of WUR

## Kanda Poha

'Kanda Poha is a traditional Maharashtra (Western India) breakfast that is simple to make and very tasty.

This is my mother's recipe. Kanda means onion and Poha means rice flakes in Marathi. I sometimes make this dish at the weekend; it reminds me of the early morning university canteen and enjoying it with friends before our classes.'

- 1 Gently wash the rice flakes in a colander or soak them in water for no more than 2 minutes and drain off the water. They should be moist but not soggy or mushy. Add 1 tsp sugar and a pinch of salt, mix gently and set aside.
- 2 In a pan, heat the oil and add the mustard and cumin seeds. Once the seeds start to splutter, add the chilies, curry leaves and peanuts. Sauté for half a minute.
- 3 Add the finely chopped onions. Continue to sauté until the onions shrink without turning brown. Add the turmeric powder and mix well. Sauté for another minute.
- 4 Add the rice flakes to the pan and stir them in. Cover the pan and simmer for 2-3 minutes, stirring occasionally. The rice flakes will absorb all the flavours and colour and should cook through nicely.
- 5 Top it off with lemon juice, fresh coriander and coconut, and stir well. Serve hot with a slice of lemon on the side. Enjoy Kanda Poha with a cup of desi chai or filter coffee.

### Ingredients (for 2 people) :

- 2 tablespoons oil
- 1-2 teaspoons mustard seeds
- 1-2 teaspoons cumin seeds
- 2-3 green chillies
- 6-7 fresh or dried curry leaves ('kadhi patta' from the Toko store)
- 1-2 teaspoons turmeric powder
- cup of peanuts
- juice of half a lemon
- 1 teaspoon sugar
- salt to taste
- 2 teaspoons fresh coriander
- 2 teaspoons grated coconut
- 2 medium red onions (Kanda)
- 200g rice flakes- Thick ('poha' from the Toko store)



Suraj Jamge

Knowledge Valorization Officer

## In other news science with a wink

### ◆ YUK!

The ecological footprint of our pets is massive. Producing pet food for the world's dogs and cats takes an area of farmland 11 times the size of the Netherlands, scientists at the University of Edinburgh have calculated. That feed production results in CO<sub>2</sub> emissions equal to those of the Philippines. And then we haven't even mentioned all their poo!

### ◆ NUTS (1)

So many acorns and beechnuts have fallen from the trees this year that you trip over them. Is that normal? Yes, it is. According to estimates by the Veluwe Wildlife

Management Association, 4.8 million kilos of acorns and beechnuts have fallen on the Veluwe, making this an average year. The record was set in 2000: 10 million kilos. A rare phenomenon, that many nuts.

### ◆ NUTS (2)

But how do you arrive at a figure like that? Simple, you count. The association's counting team counts the nuts from a selection of trees. The number they get is then multiplied by the weight of an average nut, the number of trees per hectare and the total number of hectares of these trees. It's nice for the wild boar to have a plentiful supply of food: they don't have to

go far to fill their bellies. And that is a shame for game spotters... and hunters. OK, that's all the news on nuts for now.

### ◆ HURRAH!

An international group of scientists has unravelled the human proteome. This is the total of all the proteins that our genome has the code for. Well, most of them: 17,874 have now been identified. Still 10 per cent to go. But on the project's 10th birthday, the group could wait no longer. The article in *Nature* included a beautiful timeline showing the rapid developments in protein science. Recommended! RK



## Diary of a caretaker

### Intruder

**Luckily we don't get** many break-ins or intruders. We at Idealis often remind residents of the need to lock their rooms and houses when they go out. Like we were doing one sunny spring morning.

My colleague from the social management side and I made the rounds of a load of student houses to distribute flyers saying 'Watch out: a burglar could have entered here'. We put them in window sills by reaching through windows left open when no one was home. At one point I slowly and cautiously slunk towards a house like a predator approaching its prey (don't ask me why). I glanced around to check that no one was watching me.

**Pushing aside some branches** of a large bush, I saw that the lights were off in the room with the open window. The house looked deserted. Flyer in hand, I reached through the window and tried to deposit it on the desk. But the desk was just too far away so I wriggled a bit further into the room, asking myself: 'Eugene, what on earth are you doing?' At that very

**'I am afraid I am committing a burglary,' I reply sheepishly.**

moment, a Spanish woman (who I know, luckily) walked into the room and looked me in the eye indignantly. 'Eugene,' she said, 'what on earth are you doing?'

**'I am afraid I am committing** a burglary,' I replied sheepishly. It was a good job we knew each other, and we had a good laugh. Meanwhile, I tried to back out of the window so I could conduct a normal conversation, but I didn't realize a loop on my jeans had caught on the windowsill. I was so glad my colleague from social management – still looking on from the garden – was there to help me out of this sorry plight.

**Once I was standing outside again,** I said we wanted to prove to residents that it was very important to lock everything carefully. She totally understood that, and complimented Idealis on our concern for our tenants.



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](http://resource-online.nl)

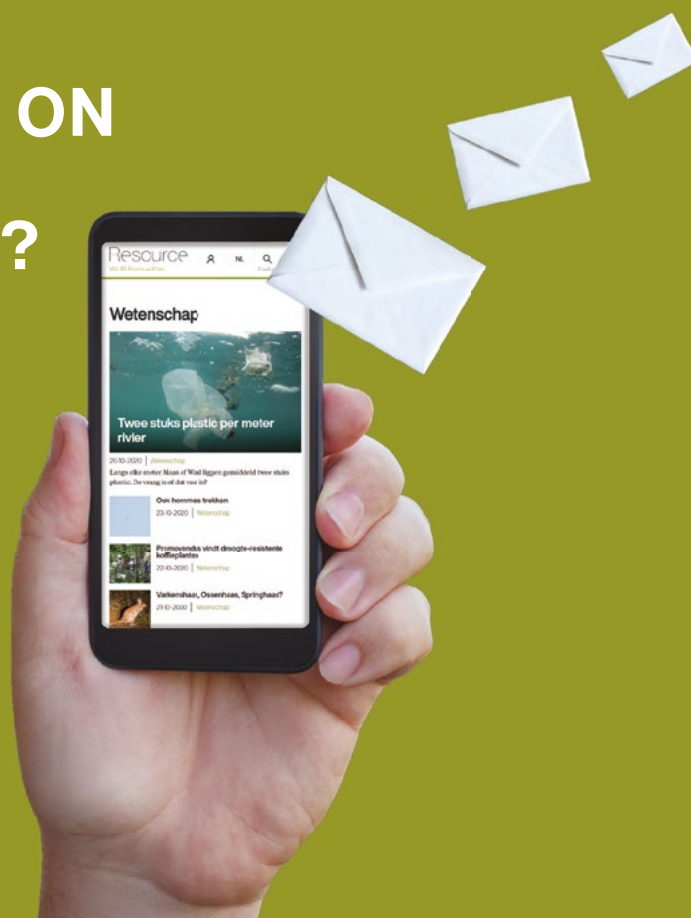
# WEEKLY UPDATES ON STUDENTS AND WORKING AT WUR?

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## 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](http://resource-online.nl). The magazine is published every fortnight on Thursday.

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**'Recently, I've been finding it difficult to stay motivated in my studies. It's hard to get into a routine with online teaching and my social life isn't what it was. I've been thinking a lot about this problem and I don't have a solution. Asking for help seems too excessive. What should I do?'**

International Development Studies student  
(name known to the editor)



### List

'Make a list of the things you plan to do. After finishing an assignment, take a break and reward yourself, for example by going out to get some fresh air. Or you could do some exercise or something else fun. When you get back to studying, you'll feel more motivated. At least, that works for me.'

Ayu Rahma, MSc student of Environmental Science

### Being demotivated is OK

'This can happen to anyone and we tend to look for a quick solution, but that blinds us to what we really want deep down inside. Let go of the idea that you need to fix something; you don't have to "stay motivated" — you either are or you aren't. Relax and allow yourself to be demotivated. Listen closely to what your body tells you about what you actually want. Maybe you want a break, maybe you need to train your discipline or maybe you should start taking steps to become the horse-rider or artist you always wanted to be.'

Ferran Fitó, MSc student of Biology

### Structure, structure, structure!

'Firstly, it's not being excessive to ask for help; that's how you find a solution! A clear structure to your day will do wonders in getting into a rhythm for your studies. You can achieve this by drawing up a schedule for your day and week. Start the day on time, enjoy your breakfast, then get down to work for a couple of hours. Try not to keep at it for eight hours at a stretch, work in blocks of one to two hours, with enough of a break in between. That's not wasted time — you need that time! And take good care of your body by going on walks or jogging, for example with a flatmate or someone else on your course. Good luck!'

Marijn Poortvliet, associate professor of Strategic Communication

### Do get help

'I started online therapy sessions via Skype after we switched to working from home. My therapist is from my home country because it's better for me to talk to someone in my native language. I'm sure the WUR counsellors will be able to help you with your issues related to working, studying and living here!'

Anonymous international student  
(name known to the editor)

### NEXT WURRY

**'As a teacher I'm worried about forgetting certain students because I'm too busy, focused and tired to see that students are becoming isolated or notice that they are having mental health issues. How can I make sure that I "see" my students?'**

Teacher in the chat during the online meeting (see page 24).

*If you have advice or tips for this Wurrier, send an email (max. 100 words) before **18 November** to [resource@wur.nl](mailto:resource@wur.nl) with subject 'noWURries #6'. If you need advice yourself, email your problem (max. 100 words) to [resource@wur.nl](mailto:resource@wur.nl) with subject 'noWURries'.*