

Inspiring Women at WUR



WAGENINGENUR
For quality of life



Inspiring Women at WUR



Cover: Sculpture *Take My Knowledge* by Petra de Vree. Photograph by Petra de Vree.

This sculpture was commissioned by the Network for Wageningen University Women Alumni (*Vrouwennetwerk Wageningse Ingenieurs*, VWI) as a gift to Wageningen UR. It stands in Impulse, building number 115 on campus.

Each layer of this strong talented woman's dress has a meaning. The deepest layer stands for earth and agriculture: it is the University's foundation. In the second layer, literacy is the theme. The initials of the first woman professor at Wageningen University are included here to represent the women who have followed, or will follow, in her footsteps. The spirals in different skin tones stand for the international character of the University and refer to growth, progress and development. The third layer is open: it is possible to see *through* the sculpture; an open attitude is needed in order to be able to make a change. The uppermost part of the dress is full of information and refers to this woman's science. In her hand she offers a piece of knowledge.

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Room for talent and growth

Introduction

Do we provide better education and management in departments with a mix of men and women? Does the quality of our research improve when we employ more minority and women professors? In short, does diversity significantly boost creativity and results? Many studies point to one answer: yes.

Of course, diversity in sex and gender is not the only important factor: diversity in terms of age, education, culture, personality and experience also plays a big role. And yet this book focuses specifically on women at Wageningen University & Research Centre – as women are, even to this day, under-represented in leadership positions.

The colleagues whose stories are included in this book are wonderful examples: women who have impressive achievements to their names and are a source of strength for many. Day after day their knowledge and effectiveness inspire and motivate the people around them. A number of them hold challenging management positions as well. This book gives them the platform that they deserve, but do not necessarily seek for themselves.

Role models and inspiring examples are invaluable. These portraits highlight women who have made their own choices, found their own way – with or without help – and continued to push forward! One thing these women all have in common is the courage to continually raise the bar and get the very best out of themselves. Now it's your turn!

Louise Fresco
President of the Executive Board



Judith van der Horst

Wageningen is dear to my heart

Judith van der Horst will soon be running her second marathon. She often cycles 60 kilometres to work, and she gave birth to her three children in the space of three years. At Wageningen University & Research Centre she is part of the FBR-MT, and as R&D manager she keeps more than 30 people busy. Both in and out of the office, Judith enjoys a challenge.

Originally from Wageningen, Judith earned her PhD in Wageningen UR's Division of Human Nutrition. For the past 18 months, having held various positions in the food industry, she has been a member of the Management Team and head of the Consumer Science and Health Group within Food & Biobased Research – a contract research organisation at Wageningen UR. Though content with her last job in the food industry, Judith would nevertheless look regularly at the Wageningen UR website. 'Wageningen is dear to my heart. Although I wasn't looking to make a move, I saw this position and knew at once that it was made for me. It combines everything I have done so far: managing *and* staying abreast of developments in a field that links scientific research with industry.'

In her present position, Judith holds overall responsibility in all areas: not only for the work content but also for strategy; not only for commercial performance but also for human resources. The scientific quality of her team is not a source of worry. She has some very senior scientists and it is precisely her team members' wealth of scientific expertise that frees Judith from being occupied with the day-to-day choices that arise in the course of their work. Where strategy is concerned, by contrast, she sees many possibilities for her team. 'For a while the team was without an R&D manager, so it was lacking guidance. I hear that people are now happy with the vision and direction we are pursuing. There's clarity about where we stand, for example in terms of work in the pipeline and expertise development. There is more management and, above all, more focus: acquisition pathways are now better managed by two newly hired employees dedicated to this. We are already noticing the first revenues from this in our group. This year we hope to have our future workload managed even better.'



Biography

Judith M. van der Horst-Graat is R&D manager of the Consumer Science and Health Group within Food & Biobased Research, a contract research organisation of Wageningen UR.

Dr van der Horst-Graat studied Biological Health Sciences at Maastricht University, specialising in Nutrition. Her MSc was followed by a PhD in Human Nutrition at Wageningen University; she won the 'NWO Young Investigators Award' for her PhD thesis. After earning her PhD, she worked for nearly 12 years in the food industry. Her first job was at the R&D department of a multinational chocolate confectionary company, first as senior nutritionist and later as a project leader. She continued her career at the R&D department of an infant nutrition company. In this multinational, Dr van der Horst led an international team of nutritionists, and later became leader of a multidisciplinary science programme. She has been a member of the Management Team of Food & Biobased Research for the past 18 months, and currently heads the Consumer Science and Health Group. Dr van der Horst was appointed Theme Director Food & Health for applied research by the TKI Top Sector Agri & Food.



I really only grow when my team grows

Team player

Like strategy, both financial and commercial performance are now in clear focus. Through 'learning by doing', Judith has learned to keep the business afloat financially too, relying on the people around her. For example, she has a financial expert who can tell her the cash flow situation, turnover, costs and margins to two decimal places so that she can intervene whenever necessary. This leads to perfect insight into the pipeline which, although well filled, remains a recurring concern. The team's sound financial health is due in part to this ongoing attention. 'And besides, as Food & Biobased Research MT members, we are acutely interested in our financial policy. Every day we can see how well we are doing. FBR is fighting fit!'

Moreover, in order to be successful, says Judith, she uses her ability to build bridges between people. She enjoys working with academically trained people, and not for a moment has she regretted her decision to come and work in Wageningen. 'While we've got a solid basis, I think I have even more to contribute as an MT member and can grow in my position as R&D manager. My aim is to enable the team to function even better. I am a team player. I help my people to set priorities, to give each other feedback, to play more to their strengths. I've noticed that the team has become closer and is working together better. Everyone is unique and everyone brings something valuable to the table. One person is good at acquiring projects, another is a professor and has a wealth of knowledge. I like to get these capabilities to grow; I feel my own interests are secondary to the improvement of the team and its individuals. To be honest, I only really grow when my team grows.'

Walk-in hours

Why did Judith decide to earn a PhD when she always aspired to a management role? Rather than having a scientific motive, she realised that all higher-ranked managers within R&D organisations held a doctorate. That is why she wanted a PhD, and the reason she does not foresee any academic development for herself in the future. Then, as now, she sees herself fulfilling only management roles. That she is accessible and will use unconventional methods to maintain her own effectiveness goes without saying. 'A number of times a week I have "walk-in hours". Members of my group know that at these times, instead of planning meetings, I am available in my office and they can drop by for whatever reason. It works superbly: sometimes only a few people come along, but often there's a constant stream of people.'

'As well as creating clarity about my availability, the walk-in hours also ensure that my team members take the initiative for cooperation and contact. In addition, these hours offer me the opportunity to complete my own work undisturbed during the rest of the day. Our Management Team and my Consumer Science and Health Group are great teams. As an MT member I experience the unconditional support of my MT colleagues. That is part of what makes my work as R&D manager so enjoyable!'

Liesje Mommer

Rooted in diversity

'If you are a woman who wants a top position in the academic world, Wageningen offers a challenge,' says Liesje Mommer while she glances at the news story in the *NRC Handelsblad*, an article reporting a ranking of women in top university positions in the Netherlands. The statistics did not stop her from becoming a professor.

In her inaugural address, she made a plea for considering multiple perspectives when performing experiments, and when building teams. Liesje is convinced that these diverse perspectives are essential to stimulate creativity and make progress in science. One example is to link science with art. The artwork accompanying her inaugural lecture was made by Diana Scherer: a photograph of roots growing in a beautiful arrangement.

In general, though, roots are hidden in the dark. Here, secrets are hidden that determine the functioning of our ecosystems. The interactions between plant roots and the microbes in the rhizosphere drive important ecosystem processes such as productivity, biogeochemical cycling, and tolerance to biotic and abiotic stresses.

There was one major problem when Liesje started to work underground. Unlike above ground, where most biologists can identify species based on flowers, leaves or shoots, the visual identification of species in roots is impossible, even when brought to the light. Therefore, she developed a DNA method that allows the quantification of species-specific abundance below ground. All of a sudden, it was possible to figure out which species is 'hanging out' where in the soil. Modestly, she calls it 'just a little molecular biology trick'. The innovation was the result of building a bridge between ecology and plant sciences. As a next step she included the interactions between roots and soil-borne pathogenic fungi – 'the bad guys' in her research. She learned to take the perspective of a phytopathologist, and integrated it in her research.



Biography

Liesje Mommer (1976), mother of two children, is a full professor with a personal chair in the Plant Ecology and Nature Conservation Group at Wageningen UR. Her research focus lies below ground: how interactions between plant roots and soil microorganisms affect biodiversity and ecosystem function. Dr Mommer combines ecological concepts with techniques from plant physiology, molecular biology and plant pathology.

After earning her PhD, which focused on plant responses under water, she moved to the subsurface. As a VENI postdoctoral researcher, she developed a molecular method to quantify species-specific root biomass in diverse plant communities, allowing rigorous testing of ecological theories on plant competition and coexistence. Based on this work, Dr Mommer is frequently consulted as a root expert in projects worldwide, for example the Jena biodiversity experiment in Germany and intercropping projects in China.

Recently, Dr Mommer was awarded a VIDI grant. In her new research line, she integrates the fungal perspective into root ecology. This project is another example of how ecology and plant science can inspire one another.

With diversity and multidisciplinarity so central to her scientific work, it is perhaps not surprising that Dr Mommer also highly values diversity and collaboration among people.



In plants, diversity leads to enhanced performance

The importance of diversity

Her drive to work towards a greener world runs deep. Even as a student, Liesje chose Wageningen because she aimed to find solutions for the worldwide food problem. However, after doing student projects with cocoa in West Africa and leek intercropping in Switzerland, she understood the complexity of this global issue. Changing agricultural practices involves much more than just the perspective of a plant scientist. These 'Wageningen topics' require true multidisciplinary perspectives. Liesje became more convinced that ecologists need be more visible in this arena. 'In agriculture, we should learn from nature, implementing practices that have proven to work in natural ecosystems.'

Liesje sees many parallels between plants and people. 'Looking at plants, we have learned that a diverse community leads to better performance, which is also more resistant to disturbance. This has clear parallels to people working in teams: more diverse teams are more creative and have more success, and more fun. Yet we so often seem to look for *more of the same*. I used to think that it was just me, but I have learned in gender-awareness training sessions that it is part of our culture. We have to change this. Diversity should be one of the top priorities of our institute.' The good news, says Liesje, is the recent appointment, in Environmental Sciences, of two women chair holders. 'In our department change is in the air. It is of major importance that we hire people who have varied backgrounds, who are able to take different perspectives. That will really pay off in the future.'

Qualities, values, creativity

Although she notices that people hear her differently now that she has '*professor doctor ingenieur*' in front of her name, explains Liesje, 'To me it's not about the title, but about a certain amount of experience. Of course I have worked hard, but mostly on the things that I think are important – and without losing myself and my values. For example, two afternoons per week I make time for my two children. I believe that we, as a university, should be more aware of the conditions under which people are working. And also more aware of each individual's qualities and values.'

By keeping a sharp focus and working efficiently, Liesje is able to meet her objectives. However, she cannot do without creativity. 'I love music; I am sensitive to its beauty. This is one of my sources of inspiration. If you are stuck in your head as a scientist, you cannot perform. While worrying about your child you may be able to mark exams, but you cannot really be creative. In that way we have much in common with artists. Could science be an art? Art within fixed rules?'

Yuling Bai

One step back before forging ahead

Would she need a raincoat in the Netherlands? She was advised to take one. And when Yuling Bai first arrived here 19 years ago, an umbrella would not be enough in this climate. A raincoat was a must in 1998, when the country saw the wettest autumn for many years.

'Before I came to Wageningen, I was an associate professor of horticulture in the province of Henan in central China. It was an honour for me to be selected by the Chinese government to go abroad, just like a large number of other scientists, to broaden my knowledge. Whereas I most wanted to go to the United States, I was advised to go to the Netherlands, mainly because the crème de la crème in my field is here. I took that advice, even though I didn't have a clue where Wageningen was. As soon as I arrived, at the end of October 1997, I devoted myself to finding out how I could get my PhD here. In 1998, I decided to join the Biotechnology Master's programme. That wasn't really a logical move, but I was convinced that the knowledge integration, biotechnology with traditional genetics and breeding, would bring me the furthest in the end.'

It was an emotional decision for Yuling, having already obtained her first Master's degree (Plant Genetics and Breeding) and having held a position as an associate professor in China. Struggling with her feelings, she started on her second Master's, and also embarked on research in the Plant Breeding laboratory at Wageningen University. She did more than 20 exams in one year and later graduated *cum laude*, and was astonished by the mentality of her fellow students. 'It was amazing to see that my classmates aimed for an exam mark of 7, and even considered a 5.5 satisfactory. Personally I always studied with the aim of getting a 9 or 10.' It was tough for Yuling to return to the classroom, but it was worth it. 'Sometimes you have to take a step back in order to forge ahead later. I certainly enjoyed my study days in Wageningen!'



Biography

Dr Yuling Bai is an associate professor at Wageningen UR Plant Breeding. Since 2007 she has been leading the research group 'Breeding for resistance in Solanaceae'. Her strong point is the strategic translation of fundamental research to applied breeding practices. In her research she uses genetic and genomic approaches to discover natural resistance genes in tomato and potato, and studies the interaction of these genes with the corresponding pathogens. In 2009, Dr Bai proposed using plant susceptibility genes as an innovative way of breeding disease-resistant crops. In the last few years, she has conducted proof-of-concept research and is acquiring a leading position in this field.

Dr Bai has been awarded more than 15 research projects by the Dutch government and private Dutch and international vegetable-seed companies. Her research has resulted in many publications in high-impact journals in her research fields and has been influential in breeding practice through the development of novel breeding strategies, tools and pre-breeding plant materials. Since 2012, she has also been serving as chair of Section Vegetables in EUCARPIA, the European Association for Research on Plant Breeding.



If a boy could do this, so could I

Voice deep inside

No sooner had she found her feet in the Netherlands than Yuling was asked by a Chinese university to help set up and be dean of a new College for Life Science. A great opportunity – but although Yuling briefly considered returning to the land of her birth, she decided to stay in Wageningen. Still, she maintains a close connection with China. In collaboration with Chinese universities and institutes, she has initiated several projects, including the Dutch-Sino Joint Lab of Vegetable Genetics and Breeding and the training project on plant breeding that aims to train Chinese breeders working in China for Dutch and international vegetable-seed companies.

Yuling, who is from a Chinese farming family, was ambitious right from childhood. In the countryside boys tend to be valued more highly than girls, something the Chinese scientist has experienced all her life. 'You heard the muttering in the village when you walked by. I am the youngest and I only have sisters. In my childhood, people looked down on a family with only daughters. Although there is a lot of discussion about it in China at the moment, passing on the family name to the next generation is still very important. Maybe this is where my drive to achieve comes from. I've always had a voice deep inside me that says: if a boy can do this, so can I.'

A different university

The drive to distinguish herself might have been stimulated by another incident too. For her first Master's programme, in corn breeding in Henan, Yuling was expected to work on the land in the summer just like her male colleagues. It was tough field work, not least

because of the high temperatures. At some point the supervisors decided not to admit women students to the programme. This was not stated explicitly, although everyone knew of the decision. Yuling relates indignantly: 'All my supervisors advised me to go to a different university. But I was the best student! I thought: I'm not going anywhere! I wanted to fight for my position. And I succeeded.' For Yuling there was a lesson here: be better than the men, as that is your only chance of not being rejected. The need to prove that she can achieve at least as much as her male colleagues has lessened, but it remains a theme that runs through Yuling's life.

Yet her experience has not made the associate professor cynical. On the contrary, she is aware of the opportunities she has had in the Netherlands. She also sees the rapid pace of positive change in Chinese society. 'Your connections used to be much more important there than your qualifications. That is changing. In the Netherlands you are valued for your ability and results. That attracted me to this country from the start. I also like the openness here: you just say what you think!' When she was appointed as assistant professor in 2007 she started setting up her own research group, and she succeeded in obtaining many projects. In 2012 she was promoted to associate professor and entered the tenure track system. 'In the course of my career I have been offered several chances to work in business. But I have followed my heart and stayed where I belong, at the university. I am very happy in my work where education and research are balanced and interconnected. Hopefully soon I will become a personal professor.'

Nicoline Soede

I no longer drown in work

How many certainties are there in life? What have you been convinced of your entire life simply because you never questioned it? Associate professor Nicoline Soede is often amazed by the insistence with which statements are expressed. Are speakers truly convinced they are right? Have they no doubt? Or do they just not express it? And why does this scientist always have more questions than answers?

In terms of work, Nicoline Soede has no real role models – though she does admire people who can grasp complex information with ease. People who know a great deal about a particular topic and are able to tell about it in just the right way. 'Those who have everything straight in their mind and can convey it clearly, I do admire them. It is a talent; you've either got it or you haven't. I tend to take longer to consider something and then still wonder whether I'm telling the story clearly,' says Nicoline. When she abandons the idea that a role model is always a professional, she says: 'One thing that I find important in people is their attitude towards others; caring for and caring about other people. I can definitely learn from that. And in that sense, one person springs to mind: my mother.' Does professional performance make a role model? Not for Nicoline.

'At Wageningen UR, performance sometimes seems the only thing that counts: secure a lot of projects, be a good teacher, supervise as many PhD candidates as possible. The number of articles you publish. These are the criteria for a successful professor. I wonder fairly often whether these are the skills that make someone a role model. At times this picture only intimidates me. Don't get me wrong; it is great that people can deal with that and even derive satisfaction from the quantity of their output. But I am not a good rat in that race. I guess that is related to the everlasting battle, the urgent versus the important things to do and my focus on details.'



Biography

Nicoline M. Soede is associate professor at the Adaptation Physiology Group of Wageningen UR's Department of Animal Sciences. Her main research area is the reproduction and fertility of pigs and cattle. Studies focus on the role of environmental factors (e.g. nutrition, housing) and genetics in reproductive processes and their endocrine regulation (e.g. follicle development and ovulation) and on reproductive performance (e.g. litter size, piglet birth weight). The research has both increased understanding of reproductive processes and contributed to improved management to optimise reproductive performance on farms.

Dr Soede has supervised nine finished PhD students and currently (co-)supervises three PhD students at Wageningen UR and three PhD students at the University of Helsinki. She has published over 130 papers in refereed international journals and is regularly invited to speak at international scientific conferences, meetings and courses for veterinary practitioners, pharmaceutical companies and the feed industry. She is vice-chair of the International organizing committee of the International Conference on Pig Reproduction (ICPR) and treasurer of the European Society of Domestic Animal Reproduction (ESDAR).

Of course, Dr Soede also spends a considerable amount of time teaching BSc and MSc Animal Science students. Recently she became the education coordinator of the Adaptation Physiology Group.



I enjoy the combination of research and education

Better living conditions

This scientist has worked in Wageningen for many years, where from 1988 to 1992 she earned her PhD at the Department of Animal Sciences. Her research involved embryonic mortality and embryonic diversity in pigs, focusing on the ovulation process, using ultrasound. Afterwards she was able to go straight into a job as an assistant professor; in 2003 she took the position of associate professor in the same department. Since then Nicoline's work has included research and teaching on animal adaptation physiology, and she supervises PhD candidates in the field of pig and cattle reproduction.

The subject of fertility continues to fascinate her. Her father kept pigs, yet it was a long time before Nicoline decided to study animal sciences. She and her team now work with pigs mostly at the animal facilities in Wageningen and at Pig Innovation Centre Sterksel, a multifunctional research centre for sustainable pig farming, affiliated with Wageningen University. 'Over the years, pig living conditions have already improved considerably. Sows used to be crated for a large part of their life and, longer ago, were even chained up. That's unimaginable now!'

Our understanding of pigs is growing all the time, thanks to countless studies on how living conditions impact pigs, including their fertility. 'Pigs are very social animals and real individuals. All the more important than that people care about animal welfare. Fortunately, awareness is increasing and many improvements are being made,' says Nicoline. The contracts of supermarkets with slaughterhouses regarding poultry are just one example: lately, changes have been evident, influenced by growing consumer awareness.

Qualities and preferences

Nicoline finds Wageningen an extremely friendly place to live. This was brought home to her when her health forced her to take a leave of absence last year and is still forcing her to slow down. The concern and attention shown by her colleagues made a lasting impression. Her own qualities and preferences also became clearer to her. 'I always feel the urge to teach people something. That's why I enjoy the combination of research and teaching here so much!' A professorship? No way. I have neither the talent nor the ambition.'

While Nicoline enjoys her work and this has motivated her year in, year out to work long hours, last year she made a deliberate decision to no longer let herself drown in faculty work. 'I was already 37 when I met my husband. We then had three children, and all the while I continued to work full time. They are now 12, 11 and 9 years old. This is not to say that I spend my afternoons waiting for them at home with a pot of tea, but it does mean that more than ever before I am taking the time to do things outside work that give me a sense of fulfilment. I spend time in the garden. I try to take breaks more often. Not only do I need that physically; I also find it more important now. And when I work, I prefer to mix with people who work hard and who, like me, gain a lot of pleasure from their area of expertise. For me, it is more important than ever that I stay true to myself, do what I promise and speak my truth. That keeps me going.'

Tia Hermans

Dare to doubt

Restless. Curious. Critical. These three words sum up Tia Hermans. She chooses her words carefully – in Flemish. Because speaking Dutch is something she will not do. 'We have to constantly ask ourselves whether we are making the right assumptions. Is the basis upon which we are building sound? Did we start off correctly?'

Tia began her career with the Centre for World Food Studies (Dutch acronym SOW-VU) in Amsterdam. She recounts, 'I was seconded to the Department of Theoretical Production Ecology in Wageningen. I found it very difficult, because I had been plonked there with the task of making a model for livestock farming. The place was full of plant people, which meant that no one was concerned with me and my subject matter. I had no idea of what I ought to be doing. And with my Belgian background, I was not so assertive that I would go looking for someone to ask. Nobody said anything. It ended up costing me a lot of time trying to figure out what was expected of me and what, exactly, had to be done.' Airily, she concludes: 'I also learned so much from it. How do you start when you don't know what you need to do?'

Her next job, at the Research Station for Cattle, Sheep and Horse Husbandry in Lelystad, was absolutely perfect for Tia. She was working on 'integrating agriculture and nature' before that concept existed. Because integrating animal farming with nature was still unfamiliar territory for many farmers, the task was not easy. But Tia enjoyed it nonetheless. Her work was concrete and practical. 'And as the research commissioner is always eager for your results, you really know who you are working for.' She left when she was not allowed to answer 'no' to a question from a client about the profitability of a new business activity. Objectivity turned out to be a basic value in her work. To this day, Tia still stands 100 per cent behind this core value – although over the last few years, her thoughts on objectivity have become somewhat more nuanced. Through her intensive contacts with ministries, she has also come to see how crucial a subtle word choice can be.



Biography

From 1974 to 1980 Tia Hermans studied for her Master's in Agricultural Sciences (specialisations: plant breeding and livestock farming) at KU Leuven in Belgium. Since 1981 she has been employed within Wageningen UR; since 1994 at Alterra, the Research Institute for a Sustainable Green Environment.

Ms Hermans is a member of the umbrella committee for the Top Sector for Horticulture and Starting Materials and a board member of the Doorwerth Conference, which offers top executives of nature conservation organisations, government agencies and public bodies a platform for discussion in the privacy of Doorwerth Castle. The agenda ranges across current issues affecting rural areas. Since 2012 Ms Hermans has been Business Developer for Health and Nature and she heads up the priority area of Health & Environment within the European PEER network. Since 2008, as leader of the domain Nature and Biodiversity, Ms Hermans has advised the Dutch Ministry of Economic Affairs on programming its policy-support research.

She derives pleasure from work that moves policymaking forward, as well as crossovers between specialist fields. Managing, networking and acquisition best capture the nature of her work. Ms Hermans is able to convert matters of policy into practical action. Above all, she enjoys the variety of her work.



Incorporating accumulated insights pays off substantially

Supply-oriented

In her role for the ministry as leader for Nature policy-support research, Tia is closely positioned with policy management. She travels to The Hague every week, where she spends an entire working day seeing and hearing what is being discussed within the Nature domain and what happens in parliament, as well as everything the state secretary has to say on related matters. Even though she initially said yes to this role in order to be able to change things, Tia has now noticed that her added value especially lies in translating The Hague procedures into Wageningen practice. 'One example: here we endlessly toil over full and correct document content, yet civil servants there don't have the time to read lengthy reports. So instead of quickly producing a summary at the end, it would be prudent to spend more time and energy on it; more often than not, it is the only part that ever gets read.'

In fact, this Belgian often acts as a translator between different worlds. It surprised her, for example, that the healthcare sector makes little use of the knowledge gathered by Alterra about the health benefits of nature. 'That is why I began looking at what healthcare professionals need, in terms of policy as well as in daily care practices, in order to do more with nature to promote health. Then you really notice how supply-oriented we are, that we merely state how beneficial nature is and which mechanisms are at work. We can't understand why our information doesn't get through to them. That's why I think that we should learn a different language; that we have to devote some effort to turning our jargon into language used in the care sector. And we have to fit our nature options into their usual way of

working. We really have to *frame* our knowledge differently if we want them to use it.'

Incorporating insights

Do her colleagues sometimes find her difficult? Definitely. Mainly because Tia systematically questions everything. 'I have the feeling that many set ways of thinking keep circulating. People tend to parrot each other, and so readily embellish what already exists. I hate that! It gives me the impression that people don't think for themselves any more, that we have become lazy and have stopped asking ourselves: is it really correct, what we all so implicitly assume? I often say, "in my opinion this cannot be right – it doesn't make sense". Lengthy discussions with colleagues or management often result.'

Tia believes that, as scientists, we must constantly reflect on our perspective. And must – always – dare to doubt. 'You have to dare to acknowledge absolutely everything when it turns out that your point of departure was incorrect. Each time, you have to be able to admit that you jumped to conclusions. Even at the end of your research project. That can be a bitter pill to swallow, but incorporating accumulated insights pays off substantially.' No matter how often Tia challenges matters, though: once she is convinced that she is right, then you would have to present an ironclad argument to convince her otherwise. Honest and authentic, that is Tia Hermans. Why does she still speak Flemish after all these years? Her answer is firm: 'I have nothing at all against the Netherlands, but speaking Dutch is something I will not do.'

Louise Vet

The inspiration that ambition brings

The world has changed quite a lot since she started her PhD at Leiden University. Although acceptance of women working full-time has grown, it is still far from easy to climb the corporate ladder in an academic environment, says Louise Vet. 'Let us not forget that one forges a career in science within the context of an international rat race. If you are ambitious enough to reach the top, you should see your vocation as high-performance sport.'

It all starts with being ambitious, says Louise, director of the Netherlands Institute of Ecology (NIOO) – one of the largest institutes of the KNAW – and professor of Evolutionary Ecology at Wageningen University. 'At the beginning of their careers, a lot of young people simply don't see any possibility of getting a foot in the door. They would love to have some influence, but they just can't find a way to make it work for them. This is when it is important not to get startled by the idea that things might become difficult. Of course I had the same amount of competition, not only in the Netherlands, but also in the United States and Canada. Yet I remember being very ambitious – which I would say is positive. I was a dedicated student and earned my PhD, which led to Wageningen University requesting I become a teacher. Nowadays I see a lot of ambitious women students; they love achieving high grades, working hard and performing well. I recommend that all women students draw on the inspiration that ambition brings.'



Biography

Louise E.M. Vet is director of the Netherlands Institute of Ecology (NIOO), an institute of the Royal Netherlands Academy of Arts and Sciences (KNAW), and professor of Evolutionary Ecology at Wageningen University. Vet has been awarded several international prizes for her research on plant-insect interactions, delivering basic knowledge for the strategic development of sustainable agro-ecosystems (e.g. British Rank Prize for Nutrition). Vet is an elected member of the Royal Netherlands Academy of Arts and Sciences. She has published more than 200 papers in international journals.

Vet is a biologist with a broad interest in ecology and evolution, devoted to stimulating positive interaction between ecology and economy. She serves in various roles on a broad range of national and international boards and committees, including: chair of the Netherlands Ecological Research Network (NERN); member of the Earth and Life Sciences Board (KNAW); Supervisory Board BE-Basic Consortium; the Environment Steering Panel of the European Academies Science Advisory Council; The Circle Economy; and WWF.

Vet was the driving force behind NIOO's prize-winning sustainable laboratory/office complex for which she received the 2012 Golden Pyramid state prize (www.nioo.knaw.nl/en/building). Linked to these activities, Vet stimulates public-private partnerships to encourage new eco-technological developments. She is active in the media and in 'science for policy', and is frequently invited to speak, including at TEDxAmsterdam (2009 and 2011).



To me, working less than four days a week is out of the question

Role models

According to Louise, success is not just a matter of being ambitious. It is essential to find role models and mobilise support. Teaching all of the ecology courses while also conducting research, Louise sadly did not have any role models within Wageningen University for a long time. 'It was a crazy time. I could only get a temporary, yet highly desirable position in Leiden. However, because Wageningen wanted me to stay on, I was offered a more permanent position here. A few years later, in 1989, only senior scientists were being given positions as associate professor (*Universitair Hoofddocent*, UHD). Not only was I the only woman, and the youngest employee, but I published more than any of my colleagues. I never asked for the position as UHD. Then, because they really wanted to keep me on, two other professors spoke up and said it should be possible to offer me that position. I am convinced that support really helps in becoming successful.'

In addition to being ambitious, having role models and receiving some support, one more element is needed in order to perform to the max, says Louise. 'When I was in the United States, I worked on Saturdays and spent every evening in the lab. At that time, my work had absolute priority over any other activities. When we went to Canada some years later, it meant me working many long hours again. At that time my husband took a larger share in looking after our two wonderful boys. In fact, I have always worked hard. I enjoy my work. I get a lot of positive energy out of the things I do. When I came back to Holland, the nine-to-five mentality here really struck me. To me, working less than four days a week is out of the question: you would end up being marginalised.'

The academic world is an international rat race. I always recommend to Dutch women that they work hard – even if, financially, they don't need to work more than three days a week. If you want to make it in science, you have to realise that it is a high-performance sport; you cannot expect to excel at it in four days or less.'

Exciting step

'For me, a huge eye-opener was the moment I was asked to chair the International Advisory Board of the NIOO. This meant I got to see ecology in its broader sense. It is not only wonderful to stretch so much and to have a greater overview of science, it also helps to become more visible and keep on learning. It really was an exciting step.' This, Louise believes, is one of the best recommendations to young women for accelerating their careers: to expand their knowledge and improve other necessary skills at the same time, instead of focusing only on their PhD subject. Also of great benefit is to capitalise on 'the ability to quickly switch between different topics and activities. I have learned much about it throughout my career. When I was young, it drove me crazy trying to do so many things at the same time. But things got easier along the way. In fact, if you keep on learning and arrange things properly, anything is possible.'

Silke Hemming

Knowing for sure that things are done correctly

What do you need in order to excel? German-born horticulturalist Silke Hemming knows the answer: people around you that you can trust, people who do the job right when asked. And it doesn't hurt to have people who occasionally go a step further, taking care of things that you *haven't* asked of them, says the leader of the Greenhouse Technology research team.

Silke gets right to the point. 'The researchers in my team are very responsible: they take things on and enjoy them. My team members are academically trained. I have to coach them here and there, but otherwise I give them free rein. It is so interesting to see how their skills and personality develop, to see how we can offer them opportunities, and also how they, in turn, present us with possibilities. For example, we have people from Italy, Spain, Germany, Serbia and Iran on our team, as well as Dutch natives who have spent time living abroad and therefore speak other languages. It is remarkable how quickly this allows us to establish contacts in other countries. We can make use of the personal networks of our people to put forth new, serious project proposals. We never hire people primarily for that reason, but it does help! You can see that, even for purely financial reasons, it's a clever move to look beyond our borders. In addition, bringing together a team of mixed cultures, approaches and experiences is personally fulfilling, and an international team also helps to attract more foreign personnel and students to Wageningen.'

Her clear view of how to achieve the best results from her team becomes quite evident as Silke talks further about the way she likes to be supported. 'I find it difficult to divide my attention well among all tasks, due to the high expectations of customers and other stakeholders. We try, as a team, to regularly attend conferences abroad, to enable us to network and to maintain our visibility. More and more, of course, we are expected to conduct research for business clients, so a good personal network is essential. As interesting as that can be, it also changes the dynamic of our work: since we are increasingly doing short-term research, there's more pressure. Business partners expect results today, not tomorrow.'



Biography

Silke Hemming studied Horticultural Sciences at the University of Hannover, Germany, earning her PhD in 1998. Since 1999 she has held different positions within various institutes at Wageningen UR: as junior researcher at IMAG (1999–2003), researcher at the Agrotechnology and Food Sciences Group (2003–2005) and at the Plant Sciences Group (2005–2011). Since 2007 she has been head of the Wageningen UR Greenhouse Technology scientific research team.

Presently Dr Hemming is leader of the International Society of Horticultural Sciences (ISHS) 'Light in Horticulture' scientific working group. She is an expert on novel greenhouse design concepts and modern greenhouse coverings and has led several international research projects on greenhouse systems; she has designed concepts for tropical lowland areas in Indonesia and sub-tropical climates of Taiwan, sustainable greenhouses for semi-arid climates in Turkey and several energy-saving greenhouse concepts in the Netherlands. Dr Hemming has authored some 50 scientific papers.

Her group is part of Wageningen UR Greenhouse Horticulture: a contract research institute studying innovations together with the greenhouse horticultural sector. The research on greenhouse systems, operational management and cultivation techniques is conducted in collaboration with business, scientific or public partners, and translates relevant results into innovations for the horticultural sector.



Businesses expect results today, not tomorrow

To do this kind of work well, I need good support. I'm delighted with the help I receive from my management assistant – but I wish our support departments would take more work off my hands. If I know for sure that things are being done correctly, I can focus on contacting new companies for our research. These days, that is what we desperately need.'

Soldering iron

That being the case, then what truly important things does this horticultural scientist like to devote her time to? The answer: everything being produced in greenhouses worldwide. 'My colleagues and I design production systems for different locations around the world. This is custom work, because each location has a different climate, different resources and different levels of knowledge. We can build the most amazingly high-tech greenhouses here in the Netherlands, with advanced sensors and a robot that moves around the greenhouse, with LED lighting and diffused glass with coatings, but they are not very practical for use in, say, Africa. Most locals there could never afford such production systems, and even if they could, they would not have the knowledge and experience to use them to their advantage.' With centres in the United Arab Emirates and Saudi Arabia, the Wageningen UR Greenhouse Horticulture Business Unit also designs greenhouses for arid areas, in the desert. The team leader imparts enthusiastically, 'We just got the data back from the first cucumber harvest in a specially designed, water-saving greenhouse in the Emirates. Only 2.5 litres of water was used per kilo of cucumbers. That is unbelievably low!'

Precisely this international focus leads Silke to always look for good all-rounders. On the one hand, new co-workers should complement the existing team, preferably with a different background; on the other hand, they should fit in easily. On top of that, they eventually have to become fluent in Dutch. The reason is simple: many customers are Dutch companies who want Dutch-speaking contacts. Silke goes on, 'Everyone is welcome to speak English when they arrive, but the desire to learn Dutch needs to be evident.' Language acquisition isn't the only high demand; in addition, all team members need to be completely versatile. 'One day you're talking with a CEO about new project acquisitions, and the next, you're in the lab with a soldering iron in your hand,' adds Silke. Then she goes on to say that this is why she prefers working with academically trained people. 'They understand the overall system, and they are the most flexible. They are able to write a scientific article, and they can also do practical things themselves. If there's a loose cable somewhere, they have got to be able to fix it.'

Ikram Blilou

Collaboration is the key to success

Ikram Blilou is part of a conservative family. However, her father and mother were so progressive that she and her brothers and sisters were always encouraged to get a good education, and were also supported – not only morally but also financially – to pursue their studies abroad.

Enthusiastically, Ikram says about her work, 'It is fantastic to discover something that no one else has found yet. Look at what we have achieved in research in the last years! We know much more now than we did then. One of the projects I work on is trying to find out how, in plants, cells communicate with each other. How do proteins move between cells and what mechanism is regulating this process? And how can we ensure that cells in plants get the relevant information to achieve a specific function during a biological process?' In fact, Ikram explains, it's just like when we deal with neighbours: we need to maintain boundaries and transfer only the necessary information. 'We are discovering the developmental relevance of this regulation through genetic manipulations.'

This associate professor grew up in Morocco, where she graduated from the University of Tetouan. Subsequently she got her PhD at the University of Granada in the south of Spain. Then she moved to the Netherlands, where she did postdoc research for five years at Utrecht University within the department of Molecular Genetics. Later she became an assistant professor and an associate professor after receiving the Aspasia grant. In September 2012, she moved to Wageningen University, of which she says, 'I am proud to be part of the Wageningen community because it is prestigious to work here. But I certainly don't see this as my ultimate goal. This is just the beginning! The path is still long, and my goal is to reach the professorship level in the coming years. It's fantastic to show that women can be good in leading positions, and they should be given the chance to do so.'



Biography

Dr Ikram Blilou is an associate professor at the department of Plant Developmental Biology at Wageningen University, the Netherlands. Her PhD studies, at the University of Granada in Spain, focused on molecular mechanisms in plant defence during early responses to symbiotic mycorrhiza. She then moved to the Netherlands for postdoctoral research at Utrecht University, where she studied cell-cycle regulation and polar auxin transport. After completing her postdoctoral work, she was appointed assistant professor within the department of Molecular Genetics at Utrecht University, where she established a line of research focusing on mechanisms regulating protein movement in plant roots.

In September 2012, she moved along with her department to Wageningen University. She has been awarded the prestigious VIDI and Aspasia grants. Her work has been published in influential journals such as *Nature*, *Science*, and *Cell*.



I especially believe in kindness

Own motivation

With age, many uncertainties disappear, Ikram feels. 'As a woman in Morocco, you're not allowed to open your mouth in a large gathering. It is not appropriate. This created many barriers that prevented me from launching scientific discussions during my early days as a postdoc. Now I've been able to overcome these issues, especially because I want my ideas to be heard and my questions to be answered. I could achieve this only with support from people surrounding me – and especially from my mentor, professor Ben Scheres, who believed in me and gave me the opportunity to be part of this team.' That alone is not enough: 'You also need to work hard, and be motivated and greatly ambitious.' Setting up lasting partnerships, being open in discussions, making sure people know you . . . Ikram has fully mastered the art. 'After all, collaboration is the key to success.'

Ikram is headstrong and has strong views: 'I try to keep my own identity. Being a good and ambitious scientist does not mean that you have to be aggressive. There are occasions when you need to be firm, but I believe in kindness. I also think that women should keep their identity and do not have to act as men to prove themselves.' She points out that you do, however, need to, 'Know what is happening in the world, and what competing groups are doing. Still, you shouldn't become someone you are not and lose yourself in the process. I love science and enjoy doing it, and that's what matters at the end of the day.'

True heroes

Combining a successful scientific career with a satisfying family life? Ikram doesn't believe in it for herself. That's why she consciously chose to remain single. 'For a Muslim woman it is difficult to achieve this, because the nature of our work does not fit with many traditional rules and concepts.' The scientist doesn't regret her choice, but she does admire the women who are juggling their careers alongside their family life. 'Those are the true heroes! Of course, it's fantastic if you can combine the two, but I don't think that would work for me.'

Meanwhile, she and her family try to see each other three times a year, sometimes in Morocco and otherwise in the Netherlands. They are very proud to have a daughter who has graduated, when they haven't had the opportunity themselves. 'My mother wasn't allowed outside the door by her own brothers,' says Ikram with a tinge of sadness in her voice. 'That is exactly why she always encouraged her children to get a good education. It is through their support, and the unwavering confidence of professor Ben Scheres who always encouraged me to go further, that I reached my current position.' In return, Ikram now feels responsible for stimulating the ambitions of her younger colleagues. What would she like to tell them? 'Find a mentor. Be strong. Don't cry. Stay in good shape. Don't lose your identity, and above all: enjoy science.'

Cathelijne Stoof

The person behind the scientist

In February she was awarded the prestigious, individual Marie Curie fellowship. She is proud of that, and even prouder of having gotten where she is under her own steam. Every day she reaps the benefits of her work. 'I have the pleasure of conducting interesting research that I enjoy doing with a large network of nice people.'

In her role as assistant professor in the soil sciences, Cathelijne Stoof investigates how human and natural disturbances can influence soil and water resources. She studies how small-scale mechanisms influence large-scale patterns, and she supervises PhD students at both Wageningen University and Cornell. This research is a good outlet for her passion, especially when courses aren't in session.

Cathelijne is a soil scientist by training with a passion for interdisciplinary work on water and fire sciences. Her key questions are: what are the fundamental processes affecting soil hydrologic functioning, and how can we improve understanding of these processes to sustainably manage soil, water and landscapes? Her main focus is fire, but she also works on other topics including land use change for bioenergy, biochar amendment to soils, and the relationship between soil hydrology and soil and water conservation, which mostly started when she was doing a postdoc at Cornell University in Ithaca, New York.

Relocating to an unknown city several years ago, where she would start all over on the bottom rung of the ladder, was quite a challenge. She felt she was investing a lot of time in things that didn't pan out. 'Lots of time goes into applying for funding even though the chances of getting it are slim. In the USA we applied for a long list of grants for the group, and in three years we weren't awarded a single one! Finally, the week after I had left, a message arrived that a grant proposal was awarded.'



Biography

Cathelijne R. Stoof is an assistant professor in the Soil Geography and Landscape Group at Wageningen University. She does multi-scale interdisciplinary research to contribute to the sustainable management of soil, water and landscapes, while focusing on the impacts of human activity and natural hazards on soil and water resources. Dr Stoof actively engages the general public as well as the media to communicate her research to a broader audience. This has led to international media attention on three continents, as well as to participation in television and radio programmes, 17 articles in popular-science magazines and more than 130 articles in newspapers and on the Web.

Dr Stoof graduated with an MSc *cum laude* from Wageningen University and has won several awards, including a scholarship from the International Association of Wildland Fire in 2008, the Storm-van der Chijs Award for most talented woman PhD student in Wageningen in 2011, and a Marie Skłodowska-Curie individual fellowship in 2016.

In 2015 Dr Stoof founded the Wageningen Fire Centre, a transdisciplinary network of Wageningen University researchers and external stakeholders, working on the environmental aspects, socioeconomics and management of wildland fires. She has authored 30 peer-reviewed papers, serves on an editorial board, and has supervised many junior researchers as well as graduate and undergraduate students.



It's not about role models but about sources of inspiration

Inspiration

Who was credited with the successful application? Even though she had already left the USA, the credit went to her – thanks to her supervisor, Tammo Steenhuis. He always made sure that positive accomplishments were visible, and his postdocs counted as full members of the team. 'Tammo has a big heart for research and teaching, and particularly for the individuals behind the work. One place you can see it is in his devotion to directing a large teaching project in Ethiopia. He gives everyone a sense of being valued, regardless of status, background and culture. For me he is an enormous source of inspiration.'

These traits, together with his keen analyses, says Cathelijne, can make him a role model – though she prefers not to use that term. She does, however, try to bring elements of his approach into the way she now builds a team of her own. Is she becoming a role model herself? The question makes Cathelijne laugh. 'I'm working on interesting things, and I like communicating my work to others within and beyond the scientific world, and it is great if that inspires others.'

Being the only female staff member in her group required some getting used to ('It still strikes me that in meetings without PhDs and postdocs, the only other woman is the secretary.'), and she is also still getting used to the way some scientists express criticism or challenge ideas. 'Scientific discussions can sometimes be very sharp, and I needed to train myself not to be knocked off balance by the tone that discussions sometimes take. You need to be prepared for the discussion and not take it personally – because it is about research, not about you.' Being persistently turned

down for funding was a similar challenge, as you do start to wonder, am I not good enough? By now, Cathelijne knows that it doesn't work that way. 'You have to remain confident and keep on trying, again and again and again. The academic world is harsh but at some point you will succeed.'

Australia

In her personal life there is plenty of understanding for the challenges that accompany her love for her field. When she was looking for postdocs after finishing her PhD, and found one in the USA, her husband joined her. 'Find a job,' he said, 'and I'll go with you.' Cathelijne believes supporting each other is key when you both work in research. 'It's almost impossible for two people to land good jobs in the same place. That's why, when his career took him to Australia for two years, I got myself a desk there at the University of Sydney.' She is grateful to her PhD supervisor for that opportunity. 'It is essential that the people around you recognise that you have a personal life, and are supportive. You can really go far if they take into account not only your expertise, but also the person behind it.'

Maria Barbosa

I want to make things happen

Microalgae need only sun, CO₂ and seawater to produce many biochemicals which could replace many fossil-based products. Production is presently expensive and the technology is still immature, and this is where research offers a wide range of opportunities. Maria Barbosa, director of AlgaePARC, is a strong believer in the future implementation of this new technology in our society. 'We are all looking for alternative sources of energy, chemicals and food. That is why more than 50 international companies are collaborating with us.'

After Maria earned her PhD in Wageningen in 2003, on microalgae, she spent a number of years in Zurich, Switzerland and in Heidelberg, Germany. She was happily surprised when approached by Food & Biobased Research in 2008 to set up a research pilot facility, AlgaePARC, in collaboration with the Bioprocess Engineering chair group at Wageningen University. Since then Maria has been at the helm of AlgaePARC, where she must see to not only the perfect execution of current projects, but also to the acquisition of new projects. 'It remains a challenge to find the financial means necessary to turn ideas into concrete plans. Everything has to be kept in motion.'

Maria derives enormous pleasure from her work. Last year she entered the University tenure track system as an associate professor, with the ultimate goal of becoming a personal professor. For her, 'It is not about the position but about what I can achieve within that position. This is sustainable technology that could have a massive impact on the world; as a professor, I can make a great contribution to that.' By assembling her own group she will be able to focus more on content. 'However,' declares Maria with a wide grin, 'I will continue to combine the insights from science with their applications.'



Biography

Maria J. Barbosa is director of AlgaePARC (www.AlgaePARC.com) and associate professor of Microalgae Biotechnology at Wageningen UR. The focus of her work is the physiology of photosynthetic microorganisms (microalgae and cyanobacteria), which are the shortest route from the sun to chemicals and therefore a sustainable feedstock for energy and food. Her research aims to improve the performance of these microorganisms in industrial settings, developing process strategies to achieve high biomass yields from light and on the scale-up to pilot processes. She coordinates several large research programmes with more than 50 industrial partners and 20 academic partners, covering the entire microalgae production chain.

In addition to obtaining her PhD in Bioprocess Engineering from Wageningen University, on microalgal biotechnology, her work has included bioengineering at ETH (Swiss Federal Institute of Technology) and science policy at EMBO (European Molecular Biology Organisation). In 2013 she received the Dutch L'Oreal-UNESCO 'For Women in Science' grant.

Dr Barbosa is a member of the editorial board of several scientific journals, and is often invited to speak at scientific conferences and to serve as examiner in PhD thesis defences. She has chaired international conferences and has been on the scientific advisory board of a number of international conferences. Dr Barbosa sits on several European-level committees and has been a consultant for the petrochemical company SABIC since 2012.



We should always turn both ideas and worries into actions

Microalgae

Italy. That is where Maria began studying microalgae in 1996. Her first steps in that field were motivated by the potential for use of the technology to fight malnutrition in developing countries. Microalgae contain high protein values, they can be used as food, yet they do not require fertile agricultural land. Rapidly it became clear that there was widespread interest. 'For a biobased economy we need more sustainable sources of chemicals and energy. Innovation is a driving force for me. By developing a new technology I will be able to foster its implementation for different applications, in both developing and industrialised countries.'

'We are working on a new process that can impact our lives. In the last five years of research we have developed strains and processes that lowered production costs by 50 per cent. For energy and other commodities, production costs need to be further decreased, and we have a clearly defined research agenda to achieve that. For medium- and high-value products such as food and feed ingredients, cosmetics, and specific chemicals, there are present market opportunities awaiting a stable and reliable process.' The collaboration with the many international companies joining AlgaePARC in the search for more sustainable possibilities constantly makes Maria and her co-workers confident that they are very much on the right track.

With a smile

With her transition to the University, Maria expects her administrative burden to diminish, and she expects to have more space and freedom for personal development and for action: to be able to make it happen! Although combining children with a career in research is not always easy, both provide lots of energy for Maria. 'It's hard work. Once the kids are in their beds at night I open up my laptop again. Though it is tough, it is both possible and fun! As the children get older I plan to gradually resume my hobbies: painting, piano playing, reading. For now I have a retreat house in Portugal, close to the sea and in the middle of nowhere, where I spend my summer holidays with my children and husband and recharge my energy.'

Determination is what ensures that Maria happily heads off to work every day. 'Of course I worry sometimes: whether our children are healthy or will grow up to be happy, and also whether we can progress and be innovative in our research. But overall I think that we should always turn both ideas and worries into actions. Worry alone will not get us anywhere. Most of what I do, I do with a smile – so people often think that things come easily to me. That is most definitely not the case. I work hard to achieve results, and if I don't like how things are going, I take action. Would she ever return to Portugal? It wouldn't be for the many sunny hours. 'I love Lisbon, but as long as I am happy here I will stay. I don't need the sun, the microalgae do!'

Hedwig Bruggeman

We are jointly responsible for this world

Should our agricultural production methods be applied across the board in emerging markets? According to Hedwig Bruggeman, who lived in Africa for 25 years, that's not a good idea. 'The short food-production chains that have suddenly become hip in the Netherlands have been common practice in Africa for decades. We certainly do not know everything better.'

Hedwig feels very committed to the issue of worldwide food security. She wholeheartedly supports the United Nations' 17 Sustainable Development Goals, to which countries have made a commitment until 2030. 'I see the world as a whole. There is no "us and them". We are jointly responsible for this planet, together with the emerging countries.' Her more than two decades in Africa have unmistakably contributed to Hedwig's inclusive vision of the world. 'As people, we are really not so very different from one another. Throughout the world we have the same desires, we laugh at similar jokes, and the same things make us cry.'

According to Hedwig, a fair division of resources is essential for making the world a better place. 'Look at cocoa-producing farmers. We buy more and more fair-trade chocolate, but the largest margin is in the processing. What do farmers earn from producing cocoa, and how can we ensure that they have sufficient income for their children and grandchildren to go to school? In my position with CDI, I am dedicated to achieving a fair situation for farmers of both sexes: producers at the base of the food chain.' For Hedwig one thing is certain: we must not impose our Western will on the rest of the world. 'In the Netherlands we've only recently rediscovered short food-production chains. They're suddenly very hip. But in Africa, farmers still bring their own products to market in cities and villages. Online platforms offer enormous opportunities for what's known as producer2consumer (P2C) chains as well as for new operators within those chains; we are now seeing this in Europe and, to a large extent, in China. We should hang on to this open mind, especially when working towards those 17 Sustainable Development Goals.'



Biography

Hedwig I.J. Bruggeman is director of the Centre for Development Innovation (CDI), one of the two DLO institutes of the Social Sciences Group at Wageningen UR. Ms Bruggeman was educated as an animal husbandry scientist at Wageningen University, with the specialisation crop-livestock interaction. She gained extensive international experience through several long-term assignments in African countries: Zimbabwe, Chad, Uganda, Burkina Faso and Cameroon. These assignments varied from providing support to associations of livestock keepers and dairy cooperatives to managing the projects and country offices of international organisations.

Joint action, joint learning, and seeking to achieve complementarity across the boundaries of institutions and organisations are key elements of Ms Bruggeman's leadership. From 2005, until joining Wageningen UR in November 2015, she was director of AgriProFocus, a network organisation supporting entrepreneurship among small farmers in developing countries.



I am fully committed to the importance of food security in this world

No messing about

As director, Hedwig doesn't need to manage this task on her own. 'I have a fine team. It is a very intellectual environment, and people are both engaged and independent. So independent! Sometimes I ask, "Is there anything here that still needs managing – or can you do it all yourselves?" When difficult issues arise, I trust my intuition more and more; things will turn out fine. And if not, we'll figure it out.' She says she used to be quick-tempered, but with the passing years has come to realise that some issues just need time. Another insight Hedwig wants to impart to her team members is that they are extremely privileged. She raised her three sons with that idea in mind, throughout their childhood in Africa. 'Make the most out of who you are. With all that you've been given, you can't just mess about. And in the meantime, don't forget to enjoy whatever you do. That's the message I want to pass on.'

Mixing roles

Back to CDI. What is the most important task in store for the institute, according to the director appointed in November 2015? 'The strength of CDI lies in its ability to bring together groups of stakeholders – businesses, government, civil society, science – on the basis of content and purpose, in order to come up with sustainable and innovative solutions. Each time, the question arises: how can we get the various parties to the table? That, in general, is a Dutch talent, but I also believe that women are unusually good at it. At CDI we like to adapt the mission statement of Wageningen UR by adding two words: "To explore the potential of nature and society to improve the quality of life". I would like to

learn how we, as an agricultural university, can ensure the interaction between scientific concepts and society. Not just here, but internationally as well. To my way of thinking, there is a world to gain.'

Hedwig's strong involvement with policy at Wageningen UR becomes clearer when the conversation turns to the organisation's presence in the public debate about food in Europe. 'Food is a hot topic here in the Netherlands. We consume way too much fat, salt and sugar. But there is a lot of misinformation around that simply doesn't make sense. I believe that we at Wageningen UR have a duty to enter into society's debate. I think we could take on a much stronger role on this topic within Europe.' To do that, Hedwig would prefer to use One Wageningen as a platform. 'Right now our forces are relatively scattered. Of course there is nothing wrong with everyone competing to be the best, but in the end it is important to face the world unified, especially from an international point of view. I would like to work towards that.'

Hedwig switches easily between her various roles. 'I am completely myself, in every role. I am very driven; I want to attain the goals I set. It is not always easy to be me, but I get an enormous amount of pleasure from it. I enjoy everything I do, as a professional, as a mother and as a spouse. But it's important not to get those roles mixed up,' Hedwig asserts with a laugh. 'Then I hear the comment at home that if I really want to go around managing everything, I might as well go to the office.'

Simone van Klaveren

Life is full of surprises

'Wageningen UR owns both the land and most of the buildings on it.' Nobody knows better than the head of the Real Estate department, Simone van Klaveren, that this property extends far beyond Wageningen's city boundaries. From Lelystad to Yerseke, Wageningen UR owns premises totalling around 700,000m², and 2500 hectares of land, including laboratories, offices, sports facilities and even windmills.

Simone came to work for Wageningen UR in 2010, bringing with her a preference for unusual real estate – having worked for the police, whose premises are especially multifunctional. In Wageningen she found a fully worked-out Master Plan for the campus, with implementation already in full swing. Visitors to the campus are struck by both the pleasant vibe and the diversity of architectural styles and materials. Simone explains why: 'The broad lines of the Plan are well thought out, but each building is unique. Because these are major building projects, they all have to go through a European tender process. As a result, all the buildings had different architects and contractors and we don't have one uniform style. But the University is growing and that's partly thanks to the layout of the campus. Concentrating education in the two buildings at its heart helped create a pleasant climate for all students, both local and international.'

One of the projects Simone and her 65-strong team are currently working on is a second sports hall. 'The entire development of the Wageningen campus, including the infrastructure, has been the product of my department. We oversee not only the building and renovation projects but also the management and maintenance, the real estate policy, safety and environmental issues, the rental, purchasing and sales of structures and land, property development, and the financial management and all it entails. This variety of real estate-related activity makes the job interesting, but it can get complicated at times too. Fortunately all my colleagues are professionals with their own specific areas of expertise.' Simone especially enjoys collaborating with a bunch of people who tackle the work with enthusiasm, and seeing what good work they deliver between them, often resulting in a beautiful building.



Biography

Since 2010 Simone N. van Klaveren has been head of the Department of Real Estate and Housing at Wageningen UR. She earned her first degree in logistics and economics at the University of Applied Sciences in Arnhem, and continued her education at Greenwich University, where she studied brokering and appraisal and received her Master's in Real Estate Management in 2006.

Early on in her career Ms van Klaveren worked in facility services and real estate management for various institutions. In her work for the province of Utrecht and the police, she was responsible for operations and facilities services, and she developed the housing plan and managed the real estate of various regional police departments in the Netherlands. In addition to her work managing all of the multifunctional real estate of Wageningen UR, she also serves as an academic examiner in the field of facility management at the University of Applied Sciences of Amersfoort.

Ms van Klaveren enjoys tackling complex issues, and she sees the power of a good match between an organisation and its housing. The combination of real estate with facility management is where her heart lies. She strives to bridge these two fields, inspiring others with her people-oriented work style.



It's always best to be honest and clear

'Personally, I love complex problems. And I get satisfaction out of putting talented people in the right job. I like giving people opportunities to grow. And then seeing what we've achieved together, such as a new building or a renovation project. I enjoy being part of an organisation because it means you can really build something, literally and metaphorically.'

Organised chaos

There is no shortage of complex problems for Simone, as is clear when the conversation turns to the recently completed Helix building. She is the first to admit that this project wasn't always plain sailing. There were problems with several of the parties involved, and the project took a year longer than planned. Simone: 'The building did not meet the requirements for noise and air quality. That was problematic because it houses laboratories with fume chambers, making air quality and safety crucial.' It took a lot of creativity for Simone and her team to reach a happy ending with the parties involved. 'We target broad parameters in terms of money, time and quality. But however much you look ahead, life is always full of surprises. When you design a building that's going to take seven years to build, you can find yourself being overtaken by events.'

The construction industry is a complex world, in Simone's experience, so the challenge is to keep your eye on the goal. Whatever setbacks come up during a project, the aim is to have things go to plan as far as possible. So the team has to stand its ground on exactly the outcome, timescale and costs agreed on. Over the years Simone has learned to go for clarity. 'I prefer people to be up front and tell us in good time if

something isn't going to plan, rather than pretend there are no issues. Of course we can all keep on beating around the bush, but that's not what I like. In the end you've got to figure it out together. To do that you have to stick to your guns, yet you sometimes have to be pretty imaginative to find a solution. And in the end, it's always best to be honest and clear, in the real estate world like anywhere else.'

There is the same openness, Simone feels, within the team. 'I try to be accessible for my staff. I love it when people tell me their stories, their personal worries or silly jokes. At times you've got to have a good laugh together. Not everything has to be serious and productive! We have a nice atmosphere in my management team. Quite often it's organised chaos.' It is not a nine-to-five job, so Simone does her best to keep a balance and also to get enough relaxation outside working hours. She is an early riser, and that gives her a breathing space, a perfect start to the day. She gets up at six o'clock, walks the dogs and takes her little boy to the crèche. She leaves for Wageningen at about 8.15 a.m. and the first appointment of the day starts three hours after her alarm went off. After work there is some time to relax and have dinner with her family, and then another hour's walk with the dogs in the evening helps Simone put any stress behind her. 'With this routine I can go on enjoying my job.'

Marian Stuiver

Value diversity in its broadest sense

Marian Stuiver is active in the Wageningen community, at Wageningen UR and beyond. This sociologist, with a proven track record of successful collaborations, is socially engaged and stands up for what she believes in. 'I am a true Wageningen.'

Diversity has been of interest to Marian since she was young. She wants to contribute to valuing diversity not only in the sense of gender balance. 'Diversity in its broadest sense is what interests me, such as valuing diversity in personalities, cultures and ecosystems.' For instance, she works to promote more balanced teams including people of differing cultural or ethnic backgrounds, sexual orientations, and so on. As a student, Marian became an active member of the World Student Christian Federation where, as co-ordinator, she spent years advocating emancipation within the church. 'Following the fall of the Berlin Wall, many fellow students arrived from former Eastern Bloc countries. They weren't used to being allowed to air their opinions openly, so we supported them in finding their voice.' Her advocacy of diversity also came to the fore when she was a delegate for the Dutch Women's Council in 2008 to work on the issue of sustainable development at the United Nations.

One of the sources that drives Marian's social engagement is the ideology of Hannah Arendt, the German-American Jewish philosopher and political theorist who studied totalitarian political systems. Arendt explained that every time we make a choice, that choice leads to either good or bad consequences. Marian elaborates, 'Not choosing is also a choice. Along with our thoughts, our behaviour is crucial. That is why the question intrigues me so much: what choices do people make and what, accordingly, is their behaviour. If you don't make a choice in favour of a better kind of society, then you choose to do nothing. That is also a choice.'



'Poldering' is a valuable export product

Biography

Marian Stuiver is a senior researcher at Wageningen UR. Her dissertation in 2008 – entitled 'Regime Change and Storylines, a sociological analysis of manure practices in contemporary Dutch dairy farming' – contributes to a better understanding of the transition in which the dairy sector currently finds itself. This topic is situated at the crossroads of two societal developments: the changing role of agriculture, and changing knowledge production perspectives and practices.

Dr Stuiver's current projects and publications deal with governance, sustainable development and innovation. She is an academic as well as an enthusiastic project manager at the interface between science-policy issues and entrepreneurship. She is often invited to serve as a lecturer or moderator at seminars, both in the Netherlands and abroad.

In the past, Dr Stuiver was actively involved in the IVN (Institute of Nature Education), the Student Chaplaincy, the European Green Party and the UN Commission on Sustainable Development. Nowadays she is chair of the Works Council (*Centrale Ondernemingsraad*) and WUR Council at Wageningen UR, to actively participate in consultations between employers and employees on company policies. In her free time, Dr Stuiver loves cooking, exploring nature on foot, being creative, enjoying novels and art, and writing poetry.



Stakeholder management

It is therefore no surprise that the projects Marian works on involve stakeholders with different interests who come together to create more sustainable solutions. These stakeholders can be societal organisations, agricultural entrepreneurs, investors, local residents, government bodies or scientists. For instance, one of the issues Marian has worked on is the potential of sustainable seaweed production on multi-use offshore platforms in the North Sea. Which production techniques are possible for seaweed and what are its potential applications in, for example, nutritional products, chemicals and energy products? Not only the substantive solution interests her; the question how these new offshore value chains should be governed is also an object of research. Considering the large number of interested parties and the absence of clear modes of governance, this question certainly needs to be answered as well.

It is understandable that those around her often shake their heads as they ask Marian, 'What have you started this time?' For example, she works in European projects on the challenge of combining multiple economic activities at one location at sea in such a way that both ecosystem and economy can benefit without hindering each other. Marian dedicates herself to this cause because the sea is gaining importance as a natural system for economic and technological developments – and because these developments present both opportunities and threats, especially for the ecosystem.' I identify the opinions of all stakeholders so that we can create the best possible design together. That takes a long time and is far from easy, partially because I try to elicit a wide range of ideas from all stakeholders. As opposed to just coming up with quick answers. We are good in interactive design processes in the Netherlands. 'Poldering' is a valuable export product.'

Their own story

Within Wageningen UR, Marian also serves as chair of the WUR Council, the institution's participation council. She leads this group in a coaching role, as a way to contribute to a more transparent, just and sustainable organisation. 'I am passionate about corporate social responsibility. I want us, Wageningen UR, to be able to really show how we disseminate certain social values, to be leaders in ecological sustainability and climate policy, and also in challenges like the Participation Act and equal pay for labour. I hope, for example, that in two years' time we will have at least 80 colleagues who had previously fallen under the old WSW (sheltered employment) and *Wajong* (employment support for disabled young persons) acts, and that they will be working here under good conditions and be satisfied with their jobs. Furthermore I want Wageningen UR to develop a more transparent and critical sustainability and diversity policy in its cooperation with international organisations and businesses. That could definitely be more stringent.' This is familiar territory for the scientist who represented GroenLinks, the 'GreenLeft' party, in the Wageningen municipal council and who has been a member of the Council of the European Green Party.

With regards to diversity within Wageningen University, Marian is optimistic. 'Gender is a construct. Any two women can differ more than a man and a woman. During the last decades Dutch regulations have been developed in favour of diversity, and fortunately there are many inspiring female role models. Of course we need more influential women in Dutch society, and we definitely need more women professors and executives within Wageningen UR. This is an ongoing theme because, for example, we still see that in scientific programmes funds are allocated more easily to men than to women, within formal procedures as well as in informal networks. As the number of female leaders and decision-makers increases, the influence of the enormous old boys' network will decline. But above all let us appreciate, and expand upon, what we have already achieved.'

Mariël Pikkemaat

Modesty above all?

Being good at what you like to do doesn't make you a star, no matter how successful you are. At least that is what three-time World Championship medallist Mariël Pikkemaat believes, whether it's to do with sport or science. 'The adoration of top-class athletes is greatly exaggerated. We don't award that kind of prize to people whose passion for gardening has made them really good at it, do we?'

Current, complex and relevant: that certainly describes the problem of resistance to antibiotics. 'We are still such a long way off from fully understanding the effects resistance can have on a greater scale. Now we often use antibiotics, for instance, as a preventive measure during standard operations; these would become high-risk if that option were suddenly no longer available. One big problem is the use of antibiotics as a growth enhancer in animal farming, which is pretty much standard outside of Europe. The most alarming part is resistance development in non-Western countries: antibiotics are so cheap and easy to obtain that an enormous problem is emerging. With the increased use of antibiotics and the resultant growing resistance, the risk of an infection which cannot be treated is becoming ever more real. We keep going around in circles, as resistance develops sooner or later for every new remedy. And without effective antibiotics, our life expectancy would drop substantially. This seriously worries me.'

Successful twist

Having been a competitive rower at Argo, she felt the urge to start rowing again during her doctoral research at the University of Groningen. 'I had coached for a year. Then, after talking to my PhD supervisor, I went back to competition rowing. Because of his position as a professor, he had put his own amateur cycling on the back burner, yet he felt I should make use of my opportunity. With this freedom and good rowing coaches I got better and better, and in 2000, I got to compete in a World Championship for the first time. As far as rowing is concerned, those were my most successful years.'



Biography

Mariël G. Pikkemaat obtained an MSc in Biotechnology from Wageningen University in 1996; she earned her PhD in Biochemistry in 2004, at professor D.B. Janssen's laboratory at the University of Groningen. From 2002–2005 she conducted postdoctoral research at the department of Food Microbiology of Wageningen UR, in affiliation with Wageningen Centre for Food Sciences (WCFS). In this position she studied molecular biology aspects of bacterial biofilm formation related to food safety and spoilage issues. She combined these PhD and postdoctoral positions with a successful sports career in rowing, resulting in a bronze and two silver World Championship medals.

In 2005 Dr Pikkemaat became a project manager at RIKILT-Wageningen UR, where her work involves legislative and policy-supporting research for the Dutch government and international bodies and she has grown interested in developing bioassays for veterinary drugs and food contaminants. She particularly enjoys work at the interface of analytical chemistry and biological sciences.

Dr Pikkemaat has been involved in several EU framework projects, and is currently coordinating a Joint Programming Initiative on Antimicrobial Resistance project. Furthermore, she is a trainer in international antibiotic screening courses and workshops organised by RIKILT, and a workgroup leader in two ISO CEN Technical Committees.



Be sure to find your own niche

She does feel that her subsequent postdoctoral period in Food Microbiology at Wageningen University suffered due to her fanatical rowing; Mariël didn't get much further in her scientific development at that time. 'I sometimes wondered what I had actually achieved in those three years. My gut feeling is that it was very minimal. I definitely learned from it that you always have to take the initiative yourself.'

Mariël stopped rowing and, before her contract ended, was offered a position at RIKILT. 'Of course I dearly wanted a permanent contract, and because the chance of getting one at a research institute was greater than at the University, I was truly delighted with the chance I had been given at RIKILT.' Mariël realised that if she wanted to get anywhere at the institute she had to take her life into her own hands. She decided to try to make herself indispensable and she indeed landed that permanent position. 'That made life a fair bit easier for me. To me, the University tenure tracks are enough to put anyone off – not in the least because they often exactly coincide with the time your biological clock begins to tick.' In the meantime, she had four children. 'Combining family life with a nearly full-time job can be pretty hard now and then, but I am convinced that it's primarily a question of good organisation. That, and accepting that 90 per cent is also good enough.'

Waiting for appreciation

With delight, Mariël talks about the insights of her years at RIKILT. 'I used to think that a successful career depended on having a good network. It was an eye-opener to realise that I could just use the internet to find specific expertise, and that researchers are generally

very approachable. Now if I want to start up a project, I begin by working out the idea and then I look at who I would like to work with on it. After I peruse publications and information from colleagues, I approach the people I want. It works really well. I advise younger co-workers to create their own niche, and not to limit themselves by having a network that isn't top of the bill. And they should keep taking the initiative themselves. If you are truly convinced of your own ideas they will lead to something, sooner or later.'

Mariël doesn't sit around waiting for appreciation. She finds it especially important to do what energises her. It seems to her that she took a long time to become convinced of her own talents. Her doctoral research? Winning three World Championship medals? None of that felt all that special. 'Perhaps that's because my parents raised me with the idea that you should try not to stand out. At home we were told not to think we were better than anyone else. It was only during my third World Championship that my father realised it might be fun to watch it on television.' This doesn't sadden Mariël, but she does realise all the more how very important it is to believe in yourself if you want to get anywhere in life. In her case, this only really happened when she was at RIKILT. 'Looking back, I see that attitude as an enormous handicap if you want to achieve anything. It doesn't exactly give you confidence. Fortunately, I now do what I enjoy and what I am good at.'

Maria Forlenza

My work is my hobby

Although petite, she is impossible to miss: assistant professor of Molecular of Immunology Maria Forlenza calls herself 'curiosity-driven rather than hypothesis-driven'. She is particularly expressive, and strives for 'cum laude' in everything she does – with success.

This dynamic scientist has always been fascinated by the 'power of the immune system', the system that protects animals from pathogens. Maria remembers the lessons of her zoology professor back home, who explained that animals such as fish and amphibians were present on Earth long before mammals, and therefore must already have developed a very successful immune system long ago. Her main focus has always been fish, as they look very simple, yet actually have an immune system that is perhaps as complex as that of mammals.

With unceasing enthusiasm, the Italian assistant professor at the Cell Biology and Immunology Group talks about her research subject. 'Fish live everywhere around the world, in vastly different kinds of water. They may look a lot alike, but they are vastly different to each other. What I investigate is how their immune system works. Then, by understanding this, we can develop vaccines. This is of great importance because nowadays, under intensive aquaculture conditions, an entire population can be infected when one fish is sick. In fact, what's true for human health is true for fish health: preventing by vaccination is better than curing with chemicals.' Because it is impossible to prevent infections in fish, they are given lots of antibiotics. That is not only bad for the fish themselves, but in the long run, also for the people who eat those fish.



Biography

Dr Maria Forlenza was born in Rome and studied biology, at the University of Tuscia in Viterbo. She graduated *cum laude* for her MSc and in 2002 she moved to the Netherlands to earn her PhD, also *cum laude*. In 2011 Dr Forlenza received a VENI grant from the Dutch government to develop a new generation of vaccines to protect fish against deadly viruses. Within the Cell Biology and Immunology Group, she started her group in molecular immunology focusing on fundamental aspects of vertebrate immune system functioning, and more practical applications for vaccine development.

Dr Forlenza has a broad international network and since 2003 she has been an active member of the International Society of Developmental and Comparative Immunology. She has recently joined the board of the International Society of Fish and Shellfish Immunology.

In the past five years, Dr Forlenza has been actively involved in university policy to increase diversity awareness and moderated three editions of the FameLab to promote science dissemination to the public. In addition, she is PhD advisor for PhD students of the WIAS (Wageningen Institute of Animal Sciences) graduate school, and member of the WIAS Education Committee.



Do something either with passion or not at all

Top university

As a teacher, Maria tries to share her enthusiasm with her students every day. Preferably, she does this in person, because even though she believes distance learning to be very efficient, she especially loves the lectures and practicals where she gets to speak to the students at the end, and regularly hold discussions with them. The fact that she always knows the names of all her students within six weeks speaks for itself. 'Am I just old-fashioned?' she sometimes wonders. Perhaps so. Just the same she has been nominated three times for the Teacher of the Year Award at Wageningen University. Yet Maria is not only enthusiastic, she is also very critical. 'I am critical but not necessarily negative. I really dislike people who only criticise, who can only react to comments made by others and do not dare to come up with ideas themselves. I tell my students that being negative leads you nowhere, whereas being critical does lead you somewhere. Having a positive and enthusiastic attitude gives you energy and motivates others around you. Either you do something with passion or you do not do it at all!'

Nonetheless, Maria does admit that working at Wageningen UR can sometimes be frustrating. She especially hates the nine-to-five mentality. 'How can we be a top university if we limit the time scientists can spend on the work that they love so much? Do you think Oxford or Cambridge University have limited office or lab hours? Of course not! Do you think they ask their scientists to communicate a day in advance whether they want to spend extra time in the lab? Unfortunately here at Wageningen we do! It really shocked me when I was told that I would have to pay to use a room in our Zodiac

building after 5 p.m., to hold a meeting with colleagues from other science groups within Wageningen. Security reasons, they said . . . it really made me wonder . . . very sad . . . Of course such an attitude may come at some cost. Luckily my husband is a scientist as well, and understands my attitude perfectly; he actually feels the same. So we just keep an eye on each other, and promise to remind ourselves to slow down now and then. And so we do, and then we start off again.'

High standards

Why does she work so hard? Because she is driven, and because it doesn't bother her to go to bed thinking of an experiment, and wake up with the 'solution' to it. 'My work gives me energy. People who use the word 'workaholic' unfortunately have not experienced what it means to get so much energy from your work. Those are the ones who are rather *drained* by the work they do.' Even when she is at home, Maria works on. She and her husband bought an old house in Wageningen that required major renovation. The roof, floors and ceilings had to be replaced and, after that, Maria and her husband did most of the renovation by themselves: the scraping off, the painting, the finishing touch on ceilings and doors, and so on. Carpentry is a hobby for Maria. As a matter of fact she likes to make her wooden furniture. 'As always, however, you never spend enough time on your hobbies! You want to know a secret? In truth, I am a very, very lazy person. Fighting with my lazy nature, I end up doing a lot of activities. I am glad there is so much work to do!'

Esther Molenaar

Scientists are special customers

When necessary, she makes it very clear to her colleagues that movement is the only option. She also makes use of compliment machines. Esther Molenaar is responsible for managing 14,000 workspaces within Wageningen UR, and also for application development and the management of IT information systems for FB-IT (Facilities and Services-Information Technology).

'If you call our IT Service Desk with a regular question, you get great service. By contrast though, if your question is more complex and requires a certain kind of expertise from various groups, we sometimes have difficulty answering that question quickly,' begins Esther, head of FB-IT and also recently-appointed interim head of FB-IT Information Systems. To offer a high level of service, this department head explains, it is of the utmost importance to look for the answers not only internally, but also outside our own department. Genuine connections with other departments are essential to bringing the internal customer and FB-IT, as service provider, together as one. This same connection is what she promotes within her teams. 'I believe that we should be sensitive to each other as people. Many of my staff are so technically driven, which is definitely a good thing. But of course sometimes that's just not enough. Fortunately we are all becoming more aware that we are not a self-contained entity, but rather part of a chain. That makes personal contact crucial.'



Biography

Esther J.M. Molenaar is currently employed in the Service Company (FB) of Wageningen UR, as interim head of the IT Information Systems Department and also head of the IT Services Department (FB-IT). She well knows how to put her commercial background and experience in the professional IT-service industry to good use: after ten years working for Atos Consulting in a commercial role, she was later seconded to various customers in governmental positions as project, line, contract and process manager.

By now, Ms Molenaar has had eight years' experience with complex organisational development projects, both in and outside Wageningen UR. During this period she has made an important contribution to the initial phase of a central IT-organisation for the National Police. At Wageningen UR, she was the driving force behind an organisational development project within FB-IT aimed at enlarging the change force and flexibility of employees. The follow-up of this project was set in motion in 2015.



We should be sensitive to each other as people

Grabbing chances

In 2008 Esther started out as a service manager in Wageningen, in 2013 she was appointed head of the Services Department, and since quite recently she is also head of the Information Systems Department; Esther is definitely someone who loves to build and change. So she grabbed with both hands the chance offered her to continue her predecessor's work on the organisational development project. Meanwhile, her 'old' department is in full swing and has started creating team plans on the basis of a renewed vision. Esther has an entirely unique approach to spurring people into action. 'Three years ago we started out with a simple list of projects and tasks. We posed questions: who actually enjoys doing this kind of work? Who can see a future for themselves in it? Once we had used this method a few times, we saw that our employees quickly got used to it. They realised that this was a way for them to grab their chance.'

As confident as Esther is, she sees lots more room for improvement within Wageningen UR. She regards information policy there as still in its infancy. 'Not only the vision, but also the policy and its implementation require more attention than they currently receive. A step in the right direction has been taken with the Architecture Board and Users Board, even though users see a number of basic services as beneficial to FB-IT, not to themselves. Co-workers,' she continues, 'aren't allowed any time to talk about IT services: their job, after all, is to realise turnover for Wageningen UR. We would like to know more about what our customers actually need, and then draft – and systematically implement – specific policies accordingly.'

It's precisely that connection with management and employees, of both Wageningen UR and other universities, that makes this work so interesting to Esther. 'Scientists are special customers. Pretty much everyone here is highly educated, and individuality is an important selection criterion. That is, of course, essential for science, but for us as an IT unit, it's not always easy. Many customers think they know better than those who work in our department every day. So it is up to IT to open up more and explain how we do things. This would bring much more understanding, as well as opportunities for more dialogue, which is of essential importance in providing IT services.'

Respectful

What do Esther's colleagues appreciate about her? It's especially the fact that, as a manager, she dares to take a vulnerable stance. She dares to stand up and tell everyone what the strategy is. 'Five years ago we began an internal IT reorganisation project under the name "i4all". The point was to increase our colleagues' flexibility, precisely to be able to better provide answers in the more complex, exceptional cases. This made people more aware that they, through their work, were contributing to the primary process of Wageningen UR.' When asked what makes working with Esther enjoyable, a co-worker answered: 'She inspires people by staying centred and not allowing herself to get caught up in the madness going on around her, even as she is well aware of it. Esther is not impressed by status, and shows respect by daring to be open and unsure.' The IT manager herself thinks this is very nicely put.

Marleen Kamperman

Do we have what it takes?

For a long time, speaking in public would make Marleen Kamperman really nervous. Now she presents at nearly every event she attends. Delivering a talk at the *Dies Natalis*, the University's big jubilee? No problem for Marleen. 'That was terrific. All of a sudden everyone remembers you.'

Her charming American accent still lingers; she worked for a long while as a chemist in the United States, and she earned her PhD from Cornell University. 'What I like best is to look at how natural systems work and then use clever tricks to imitate them. Specifically, most of my work is on underwater adhesion. You can see it at work in nature. Just think, for example, of the way mussels in the water attach themselves to slippery rocks. We humans don't yet know how to bind underwater elements, and yet that would be very useful in both medical and industrial applications. I've been employed here for over five years, and I keep working on new hypotheses. Among my strengths are combining good ideas for research and collaborating. That's why I can see myself doing this for another 30 years.'

Marleen believes it is crucial that scientists develop a clear line of their own by focusing on a specific topic. After all, if your perspective differs from that of your colleagues, you will continue to generate interest. Now that she has received several grants, Marleen has been able to intensify her research with the help of a small group of PhD students. 'Development always takes a long time, but you can see that we're really getting somewhere. That feels very good.' Innovative ideas usually come to Marleen at professional meetings. 'That's where you truly have the time to think, and to listen to what others have to say. The social aspect is certainly enjoyable too. Conferences are wonderful.'



Biography

Marleen Kamperman is an assistant professor at the Physical Chemistry and Soft Matter Laboratory at Wageningen University, the Netherlands. Her research focuses on the biologically inspired synthesis of polymers and nanostructured surfaces with controlled adhesive properties.

Dr Kamperman studied at the University of Groningen, where she obtained her MSc degree in Polymer Chemistry *cum laude* in 2003. She received her PhD in Materials Science & Engineering from Cornell University, Ithaca, NY. From 2008 to 2010, she was a postdoctoral researcher in the Functional Surfaces group at INM – Leibniz Institute for New Materials in Saarbrücken, Germany. Dr Kamperman started as assistant professor (tenure track) in Physical Chemistry and Soft Matter at Wageningen University in 2010. In 2014, she was a visiting professor in the Soft Matter Sciences and Engineering Laboratory at ESPCI ParisTech in Paris, France.

Dr Kamperman was awarded the Netherland-America Foundation-Fulbright Grant in 2003. She was selected for the Materials Research Society Graduate Student Gold Award for her PhD thesis in 2007. To establish her own research group she received a VENI grant from the Netherlands Organisation for Scientific Research (NWO) in 2010, an Athena premium (NWO) in 2012 and a VIDI grant (NWO) in 2014. In 2015, she became a member of the Dutch Young Academy.



If you are looking for support, you'll find Wageningen has more than enough to offer

Gender Action Plan

What major lessons has this chemist learned through the years? 'I used to want to plan absolutely everything in detail. Not anymore – I don't have time for that. One lesson from the coaching I've had in the past year is that I have definite opinions, yet I can be hesitant to exert influence. I could stand to be more assertive, according to the 360 degree feedback at the start of that coaching programme. Just because you're not always the head of a team doesn't mean you can't speak up as a participant. That was an important lesson for me; not ensuring that my voice is heard enough is definitely not helpful. Fortunately I'm getting better at that game.' In Marleen's opinion, Wageningen University offers sufficient support in that area. Not only did she learn a great deal from the Gender Action Plan mentoring programme, she also found a time-management course useful. 'If you are looking for support, you'll find Wageningen has more than enough to offer.'

In any case, Marleen was less convinced of her abilities earlier in her career. 'I remember drinking coffee with two girlfriends on a Saturday morning in the USA. All three of us had started a career in research and we were asking ourselves, 'Do we have what it takes?' So much is expected of you in this profession. Each of us had a boss who had dedicated his whole life to science. The question was whether we wanted that too, and whether we could find it in ourselves to do it. Recently, a number of years later, we were reminiscing about a certain female colleague. She was exceptional in her field, though perhaps somewhat less well known than the three men for whom we had been working. She had found a good balance between all of her interests in life. She was a

forerunner of the new generation of scientists who are enormously successful and yet are able to maintain the balance. Incidentally, all three of us found ourselves a nice place.'

Something new

Marleen laughs when she thinks back to the time when she and her husband, who is a writer, had just moved to New York. 'We both started something new. He gave up his job to focus on writing. Getting a PhD was at least on the beaten path, but launching a writing career is a much bigger leap of faith.' After five years, shortly after he had found a publisher for his first novel, the couple returned to Europe. 'Now he has published a number of books. He works from home, which makes it possible for me to go all out in my work. Still, I like to eat dinner at home, and I am selective about which conferences to attend. If you organise it right, you can definitely combine a research career and a personal life. I am living proof.'

Ingeborg de Boois

I'm no scientist but I'm certainly a researcher

Monitoring fish at sea and data-processing keep Ingeborg de Boois occupied for most of the time she spends at IMARES, the Institute for Marine Resources & Ecosystem Studies. Also, she is acting head at the Centre for Fisheries Research (CVO), a position she took up in October of last year. While she has a good idea of the broad direction she wants to take, there's no long-range plan on paper. 'I can do exactly those things I enjoy because there is so much scope to move freely through the organisation.'

Full of enthusiasm, Ingeborg talks about her most recent trip for IMARES on board the *Tridens*. At 74 metres long, she says, this is the largest fisheries research vessel managed by the Dutch Governmental Shipping Company, and it has excellent research facilities on board. 'We start at seven o'clock in the morning, setting out the net. That means you've got fish under your nose from eight o'clock onwards. That's when the catch starts coming on board and we can start determining the fish species that have been caught. We measure at least 50 of every species so our measurements are representative, and we collect fish ear bones to establish the age.'

While they are hard at it, Ingeborg and her colleagues also sort the rubbish they come across. That extraordinary objects are brought to light no longer surprises the researcher. Truck tyres, pieces of iron, nappies, empty cans, sweet wrappers and fishing lines are all part of the catch the institute has to report. By now Ingeborg has developed a feel for when a certain fish species is more or less abundant than it used to be, and whether the fish seem to be getting bigger or smaller. 'I love working with fish,' she confirms. 'Feeling fish, smelling fish and collecting data. I am keenly aware that care and accuracy must be paramount during those weeks spent on the boat; those weeks determine the quality of your data. And once they are gone, they are gone forever.'



Biography

Ingeborg de Boois is deputy head of the Centre for Fisheries Research (CVO), one of the programme units for Legal Research Tasks at Wageningen University & Research Centre. She has gained over 17 years of experience on surveys: first as a data manager, a member of the IMARES project team and participant in various surveys and later as scientist in charge on the Dutch beam trawl survey. Currently she is project manager of the Dutch statutory task surveys.

Over the last decade, De Boois has been very active within the International Council for Exploration of the Sea (ICES). She chaired the Working Group on Beam Trawl Surveys from 2008 to 2010 as well as a number of one-off workshops, and currently chairs the Working Group on Integrating Surveys for the Ecosystem Approach and the Data and Information group.



The world is full of all kinds of people

Ten projects

As well as her love of fish, Ingeborg has another passion: people. She is fascinated by what motivates each of us. Why do things work as they do? And why is it that some things don't work? How do people go about solving problems? To find out more, many years ago she was schooled as a trainer/coach. 'I start from where the people I'm coaching are, at the present moment, and what they have learned in the past. Then I focus mainly on what they will want to do differently in future. People come to me because they seem to have gotten stuck somehow, and they want to change that.' Ingeborg continues adamantly: 'While I can help by listening, the people I help must reflect on the problem themselves. To my mind, the person being coached is the owner of the problem, not me. Suppose you have some problem. I'd say, let's look at it together, you can come and talk to me, and I'm happy to help you develop some insight into what you can or can't do – but I won't solve the problem for you.'

One of the wise lessons that Ingeborg has learned in recent years is this: If there are tasks you don't enjoy, pass them on to someone else. 'Some things don't interest me and so I don't want to do them. I have a HBO (higher professional education) Bachelor's from Van Hall Larenstein University of Applied Sciences. I'm no scientist but I'm certainly a researcher. Which means that spending all my time creating my own research questions holds no appeal for me, nor do I have any ambition to write scientific papers. I have the ability, but it's not for me. I've learned that someone will always come along who enjoys the things I find less interesting, because the world is full of all kinds of people.'

For example, I like to work on ten projects at once, while that would make some people I know downright anxious. By expressing what you don't want, you create space for others.' Her advice to everyone: 'Dare to choose; accept that you aren't very good at some things or that you don't want to do them.' And if that still doesn't solve things? Then go sing with others! 'When you're singing, it occupies your whole mind,' explains Ingeborg. 'Physically, you have to find the right tone and regulate your breathing, listen to what the others are doing, and besides all that, remember the text and sing. That leaves no space for other thoughts. Sometimes when you are singing, whether in a choir or with one other singer, the sound comes together so harmoniously that you can actually feel the vibrations. I love that magic. That definitely makes me very happy.'

Eva van den Broek

Policymakers should apply behavioural insights

Her job takes her places. Even to the back door of restaurants, where Eva van den Broek and her team emptied bins of food waste to measure the effects of their advice. Her ambitions for the next two years: to show with at least ten big projects that behavioural insights can make our daily life better. 'I love to talk about how behavioural economics can change the world.'

'Even a reduction of *one* per cent in energy consumption would make a genuine impact on the achievement of the climate targets. If, that is, such a change were in the 1000 largest firms in the Netherlands.' Thus begins Eva's appeal. It was one of the projects she worked on last year, on a temporary assignment at the Ministry of Economic Affairs. With the ministry's Behavioural Insights Team she applied *nudges* to improve policy: small changes in the environment with a predictable effect on behaviour, without limiting choices. For instance, the team introduced smaller portions in restaurants to reduce food waste, and added a social norm to energy efficiency reports in large firms. These projects offer behavioural advice to policymakers *and* they are experiments to evaluate and continuously improve the advice.

During her studies in artificial intelligence, Eva learned the value of capturing reality in models. 'I haven't truly understood something until I have built a model of it.' She investigated what female birds consider sexy about rhythmic songs; she demonstrated that the Dutch don't understand probabilistic weather forecasts ('a 30 per cent chance of rain tonight') as well as Americans do. When a PhD position opened up at the crossroads of theoretical biology and experimental economics, she applied immediately. She ran lab experiments to study how people make decisions, and how these decisions are influenced by small changes in context. Since 2011 she has worked at LEI Wageningen UR, now as business developer and senior researcher, applying her theoretical knowledge to field experiments that have both an academic and a commercial side. Like how to allocate shelf space to a supermarket product, or how to display the environmental impact of food products.



Biography

Eva M.F. van den Broek is a senior researcher and business developer at LEI Wageningen UR. She has a PhD in experimental economics and theoretical biology from the University of Amsterdam and an MSc in cognitive artificial intelligence.

Since 2004, Dr Van den Broek has been supervising and running laboratory and field experiments on sustainable labelling, reputation, risk communication, cooperation and trust, food marketing, nudging, food waste, communication, process optimisation and energy efficiency across various countries. At LEI Wageningen UR, she leads and designs multi-stakeholder research projects and sells the experimental approach to policy makers, companies and groups of small and medium-sized enterprises.

Translating research for lay audiences is her second vocation; she regularly publishes on behavioural economics in Dutch newspapers and on www.sciencepalooza.nl, a popular science blog that won an award for best Dutch Science blog. Dr Van den Broek frequently gives interactive presentations and guest lectures for large groups, preferably using live experiments.



I want to come up with tangible, testable hypotheses to improve daily life

Eva's enthusiasm about her most recent project is evident. 'Small changes can have enormous consequences on decisions made. Think about restaurants. Would you expect that serving food on smaller plates and offering full and half portions could substantially reduce food waste? We tested hypotheses by comparing the contents of the rubbish bins on test days and non-test days. The difference was striking: more than 10 per cent. There are many more strategies to prevent waste. Since we know that the first and the last item on a menu are chosen most often, restaurant owners put the highest-profit items there. If on slow days they put dishes with perishable products there, they could earn even more by reducing waste.'

Pure curiosity

Her heart-felt enthusiasm helps to put her research in the spotlight; she gives presentations and writes blogs. Youthful enthusiasm, she notes, can be a disadvantage: 'At a conference a man recently said to me, while I put together my materials: "Cappuccino, please." He probably would not have said the same to a man of my age. Yet I don't feel I suffer from being female in a male-dominated field. As soon as people are engaged in conversation, gender seems to be less of an issue. I guess I simply have been lucky to choose a career path with great colleagues. At LEI we might seem like a bunch of nerds, but we're a team of super co-workers.'

Nevertheless, Eva believes she and her colleagues have plenty to learn. 'We all could stand to be more strategically adept. Now, we still present our research projects to countless interested parties just because we enjoy it. If we were to ask ourselves more pointedly if a

presentation is actually going to yield results, we could become more effective. If we do so systematically, our research could obtain high visibility. Our team at LEI Wageningen UR is involved in very practical experiments with high impact on consumer choices, such as shelf management and sustainable product placement, as well as in scientifically exciting experiments to develop new research methods, such as virtual-reality shopping and applied gaming.'

However close to Eva's heart sustainability and health may be, her ultimate drive to do research is curiosity. 'I enjoy figuring out how things work. After my PhD I did a number of postdocs abroad, mostly because I find it stimulating to dive into a new topic. But I want to achieve more than academic answers. That definitely plays a role in my choice to do applied research. Our intuitions about behaviour are often wrong, and the only way to find out what works is to test different versions of a theory. I want to come up with tangible, testable hypotheses to improve daily life and to test whether I was right.' Much like Erwin Bulte does in the Development Economics Group.

'Many policymakers, educated in law or business, have an incomplete idea of how people's minds work. Fines and information that focus on unwanted behaviour may have less effect than a well-placed social *nudge*, as the Dutch tax authority established: tax forms noting, "the others have filled in their forms already" were returned much earlier. Such a nudge tweaks the environment by highlighting social aspects, and directly taps into one of our best-developed brain circuits. Suppose I were invited to *Zomergasten*. I could talk for hours about the potential of behavioural economics to change the world.'

Karin Horsman

Doing your job well isn't always enough

Karin Horsman was frequently bored by research. But heading a section of a staff department at the Administration Centre, she hasn't been bored for a moment. There are strategic questions to be addressed and the work pressure is high. Her idea of relaxing after work is to read management books – never from cover to cover, but leafing through them, reading a chapter here and there about change management, organisational development and the like.

At the Administration Centre, Karin is in charge of Strategy and Strategic Accounts in the department of Corporate Education, Research & Innovation, where she has led a team of 14 people for three years. 'We focus on strategic development and innovation. That only works when you really know what is going on, which is why for the Economic Affairs account we confer with two directorates in that ministry. In effect we are in continuous consultation with representatives of both these directorates. We always have an eye for their interests and the best ways to address them. Being well informed on that front enables us to offer the Executive Board the soundest possible advice so they can make the right decisions.'

Before she got this job Karin earned a PhD and worked in a few places, including the Plant Sciences Group. 'As I love a challenge, puzzling and solving complex problems, the work suits me. But in the last year of my doctoral programme I began to doubt whether I really wanted to go on in research. I was investigating resistance in potatoes, spending many hours in the greenhouse. Isolating DNA was a never-ending task, with hours and hours poring over a microscope. Here I get more variety, because there is hardly any repetitive work. I am happy I made the switch when I did.'



Biography

Karin Horsman is head of the Strategy and Strategic Accounts section of Corporate Education, Research and Innovation at Wageningen UR headquarters. This section of 14 people is responsible for the development of strategy and policy in education and research, as well as value creation. For example, they manage the 150 million euro account of the Ministry of Economic Affairs, international strategy and development of the education ecosystem.

Dr Horsman is a plant scientist with a PhD in Plant Breeding. Her thesis was entitled 'Somatic hybrids of *Solanum tuberosum* and species of the *Solanum nigrum*-complex and their backcross progeny.' She made the switch to policy advice in 1999, starting at the Wageningen UR headquarters. In 2002 she became the executive manager of the graduate school of Experimental Plant Sciences.

For eight years, Dr Horsman was active in local politics. She was a member of the city council of Wageningen between 2010 and 2014, as chair of the Dutch Labour Party (PvdA).

In 2010 Dr Horsman rejoined the corporate staff at the University, focusing on business development and business models. She created a network of business developers within Wageningen that has been active ever since. In 2013 she became head of the Strategy section.



I'm not keen on competition

Important side issues

A second reason to get out of research was that Karin doesn't care for competition. 'In the research world it's all about proving yourself, about being the best. That didn't appeal to me. Why not? To be honest, I'm just not a very good loser. And what's more, I realised that I didn't stand much chance of getting a permanent job in the research world. I was 30, and ready for a change. When I took a test to find out about my qualities, I came out as suited to working as a policymaker – not exactly a logical move, coming from research. When I announced that I was going to get out of research my colleagues responded with, "No! You're not going to work in the 'white madhouse'!?" – the nickname for the head office, where the staff departments were housed at the time, and which was roundly despised by researchers. But I did it and I haven't regretted it for one moment.'

Within Wageningen UR everything revolves around education and research. 'Everything else is detail,' says Karin. 'Extremely important detail, mind you. Things like IT, HRM, policy and strategy are the oil that keeps the machinery running.' She throws herself into working with her team with total conviction. 'I have a need to feel connected with the people around me. So I try to have lunch with my team on a regular basis, partly to keep in touch with what is going on. I am happy when relationships are good because we feel free to speak our minds. Everything we do is visible, so it's important that we are not afraid to be frank. I do so gently, and above all I want to give people space to develop. I am not the kind of manager who only wants the work done my way. What I like best is talking, and I pose questions: "How do you go about things?" I am not quick to say, "You're doing it wrong". I start by trying to understand people's motives. And I always seek to establish a good relationship. That's the only way to keep topics open for discussion.'

Changing people

'One thing I have learned over the years is that people don't really change. You've got to work with the set of competencies they bring with them. You can train people in certain things but you can't turn an extravert into an introvert. So my advice to young managers is: don't try to change people too much; just give them tools for doing things a little more effectively. You're not going to change a person's deepest nature. That is why I have learned, when hiring, to look for competencies more than knowledge and qualifications. If you want to succeed you need to have a good idea of your strengths and weaknesses. Then don't concentrate on trying to brush up on your weak points, but get to work using your strengths. When you can make optimal use of your strong points, you enjoy your work the most.'

In scientific research, as Karin sees it, people are mainly assessed on their publishing record and their acquisition of projects and funding, and can be sure of a good position if they perform brilliantly. In contrast, what counts more where she works now are competencies and the 'goodwill factor'. Her advice to younger women just embarking on a career: it is not always enough to do your job well. Karin elaborates, 'There are more women than men in our team, so we have to keep an eye on the balance too. That makes every team stronger. I try to communicate to women that they must think carefully about how to be effective in their workplace. They need to realise that they don't have to do everything themselves. Women often hope in vain that people will change the way they think or do things. And they tend to think that if they just keep on working very hard, the people around them will at some point appreciate that, and reward them for it. I would advise them to give far more thought to strategic influence and figuring out the lie of the land. In a positive way. If they do that, I think they have a world to win.'

Astrid de Greeff

A good follower helps a leader to shine

As a biologist, Astrid de Greeff derives great pleasure from leading projects for CVI (Central Veterinary Institute), part of Wageningen UR. She spends about half her time acquiring new animal health projects. In her free time Astrid likes to travel. 'I love places that are rich in biodiversity. In more simple terms: places with plenty of animal life. I get a kick out of looking at creatures of all shapes and sizes.'

She's lost her heart to Costa Rica. But she's also lyrical about Madagascar and the Galapagos Islands, both so isolated that evolution has been free to run its course. To her these are, 'top locations where your textbook really comes to life. I want to see it all for myself!' Between travels Astrid works at CVI in Lelystad. Her doctoral research examined a bacterial infection that affects pigs, and now too she works with animals. One of the projects under her leadership is developing a vaccine against *Streptococcus suis*, a pathogen causing a common pig disease with the same name. Her day-to-day business is to keep track of the timing, costs, and quality of the project – and the content is her responsibility too. Since Astrid is a generalist, her insights complement the specialist expertise of the analysts in her research team.

Like many other institutes, CVI is actively seeking to generate alternative sources of income because the Ministry of Economic Affairs subsidies for applied research will be gradually reduced over the coming years. This has given Astrid, an extrovert scientist, the ideal opportunity to expand her expertise in a new direction: acquisition. At the moment Astrid devotes a great deal of her time to interesting the pharmaceutical industry in either setting up new research studies together with CVI, or taking on some of the Institute's existing projects. While only a handful of veterinary pharmaceutical companies remain – mergers are the order of the day – these companies have a considerable amount of money at their disposal. Astrid also enjoys the challenge of wooing less obvious companies.



Biography

Astrid de Greeff works at CVI, the Central Veterinary Institute of Wageningen UR, in the department of Infection Biology, where she divides her time between project management and business development. Research within this department focuses on the complex interactions between hosts (livestock) and pathogens.

As a project leader Dr de Greeff is a generalist, seeking multidisciplinary solutions to scientific and commercial challenges. Her research is focused on host responses to infections, nutritional interventions, and vaccines in healthy and diseased livestock. She has a special interest in *Streptococcus suis* infections in piglets.

Dr de Greeff strongly believes that connecting people is a key prerequisite for making both scientific and commercial progress. At CVI, she facilitates scientific interaction between people of various departments by organising the Cees Wensing Lectures, named after a former director. Externally, she initiated a Public-Private Partnership in which industrial, academic, and service-oriented partners work together on preventing *S. suis* disease.

As part of her task as acquisition manager, it is Dr de Greeff's mission to shape CVI into a more professional and customer-oriented organisation, to ensure the institute's prosperous future. With her enthusiasm and expertise, she continues to advertise the unique selling points of CVI, to optimally benefit all parties.



We need to make a go of it together

Female failings

Why should these companies turn to CVI? 'Because we've a lot to offer. Our clients turn to us with their questions, and we provide answers with a firm scientific basis, drawing on the combination of our unique animal facilities and extensive analytical capabilities. This kind of expertise is far from common. The combination is appealing for companies that want to determine the efficacy of their products in animal models. But we can do much more: we can help think through the whole process of setting up and structuring a research study. Our wide-ranging expertise makes us an attractive partner.' Astrid is leading the way. She and her colleagues are engaged, for instance, in joint projects with the food sector. That's a big market, and a relatively new one for CVI – and the Institute is relatively new for food or feed producers. 'It takes time to get results,' Astrid points out, 'because you don't achieve great successes in a day. I think in terms of five years. Within that period I can see a growth in turnover, which frees up more budget for R&D, allowing us to develop new technologies. In about ten years' time that flywheel should be up to speed.'

Although Astrid is confident of her qualities as a project leader and in acquisition, she does, as she puts it, 'fall prey to typical female failings. That I'm a generalist is helpful, as it's easy for me to contribute to a wide range of discussions; but I also tend to be a people-pleaser. That's not bad in itself, because sales is all about pleasing people. But it's important to be able to say "no" as well – after all, some studies aren't scientifically sound.' Another 'failing' Astrid mentions is a 'fear of being found out. I know a lot of women worry like I do:

"any minute now they'll realise I'm not really that good". Or, "people only ask for me because I'm visible, not because of the quality of my work". It's hard to shake off this mindset.' Maybe the doubts will dissipate one day if she becomes a policymaker at Wageningen UR, which is certainly one of her ambitions. 'Being managing director doesn't appeal to me at all. But policy? That's something I could envisage as a career.'

One Wageningen

Shorter term, Astrid wants above all to improve the cooperation between Lelystad and Wageningen. 'There we are doing our thing in the middle of the polder – out of sight, out of mind, so to speak. I've set myself the challenge of reducing the distance between Wageningen and Lelystad, where CVI has a tendency to act up to its big brother. Aren't we all one organisation, "One Wageningen"? We need to make a go of it together, so let's do it in the best possible way and work together more closely. If I can contribute to this in some way over the next five years, I'll be happy.' As a leader or a follower? Astrid is certain: 'You've got leaders and followers. I don't necessarily want to be that leader, because I'm at my best behind the scenes. I don't want to be the boss, but I like advising the boss how to go about it. That gives me influence too. Good followers can help leaders to shine. In turn, leaders who shine light the way for followers.'

Aarti Gupta

I love being a global citizen

With a father in the diplomatic service, Aarti grew up in the world's most exotic countries. She lived in Egypt, New York, Thailand, Saudi Arabia, Spain, Venezuela, Oman and Taiwan, and studied at Harvard and Yale. Today she is settled in Amsterdam and has been working at Wageningen UR for almost ten years. 'I am happy with the choices I've made. But sometimes I wonder, "Is this it then?"'

Aarti's early years were filled with unconventional choices: 'I never did what a good Indian girl was supposed to do'. In high school in India, she decided to study political science in the USA, and soon she chose to focus on environmental issues. 'This was in the early 1990s, and the environment was still a little-known topic. I left a very competitive doctoral programme at University of Chicago, where they had given me their highest scholarship, because they wanted to convince me that an environmental focus had no future in the discipline. Later I gave up a cushy job with the United Nations in New York to pursue a PhD at one of the few doctoral programmes in environmental studies available at the time.'

Priorities

While she was a predoctoral research fellow at Harvard's Kennedy School, Aarti met her future husband. They had been selected in an international competition to participate in a programme on global environmental politics. Intent on continuing his academic career in Europe, he returned home to Germany after the programme, while Aarti stayed in the United States to finish her PhD and do a postdoc. What followed was a transatlantic relationship, until Aarti moved to Germany. 'It was the first time in my life that I didn't put my career before everything else,' she says with a smile. Aarti made sure to line up a job with an international NGO in advance of her arrival. Looking back she's amazed at how much this mattered to her. 'I spent months making sure that I would have a job once I got to Germany. I think it was related to being independent from an early age and always relying on myself.' The couple began life in Berlin, but when her husband was offered a professorship at the Vrije University in Amsterdam, they moved again.



Biography

Aarti Gupta is associate professor with the Environmental Policy Group of the Department of Social Sciences at Wageningen University. Her research focuses on global environmental and climate politics, including anticipatory governance of novel technologies and the role of science therein, and questions of transparency and accountability. She has established an internationally recognised research line on these topics, with numerous well-cited publications including a co-edited volume, *Transparency in global environmental governance: Critical perspectives*, published by MIT Press.

Trained as a political scientist, Dr Gupta earned a PhD in Environmental Studies from Yale University and has been a predoctoral and postdoctoral research scholar at Harvard and Columbia universities. She is associate editor of the premier journal *Global Environmental Politics*, and has been vice-chair of the EU COST Action Transformations in Global Environmental Governance, a research network across 19 European countries. She is also a member of the lead faculty of the international Earth System Governance Project and co-founder of the interdisciplinary REDD@WUR network.

Dr Gupta has received numerous grants and awards, including from the John D. and Catherine T. MacArthur Foundation, the Heinz Family Foundation and Resources from the Future, and is an elected member of the honours society Phi Beta Kappa. She received a 2014 Wageningen Excellence in Education Award and five more awards for excellence in teaching.



I have never been afraid to make unconventional choices

Unsurprisingly, Aarti was already employed when the position she now holds at Wageningen UR became vacant. 'I had just accepted an exciting opportunity with Oxfam. I started enthusiastically, but after six months I realised my heart was in academia after all. When I heard this position at Wageningen was still vacant, I applied.' That she arrived for the job interview eight months pregnant was of no consequence to either her or the interviewer. 'I said I was keen to start but that I wanted to spend the first six months with my baby. Ten days later my daughter was born and six months after that I did indeed start work here.'

Perfect balance

Aarti's first five years in Wageningen were intense. 'It was my first job involving teaching, I was also commuting and building my academic credentials, and at home I was facing a massive learning curve. I knew absolutely nothing about babies! Day by day, however, I find child-raising an intense but immensely joyful experience. It amazes me that so little is said about how it affects you.' Whether it was due to her job in Wageningen or becoming a mother, Aarti's world changed quite dramatically in 2006. 'Before then, I had never stayed in one place for long. When you're young, all options are still open. Then you choose a certain path, you have made your professional and personal choices. That is when the danger of complacency can set in and you might start to ask yourself: is this it?'

Is Aarti happy with the course her life has taken? Absolutely. Partially because she is aware that what gives her satisfaction is constantly changing. 'As a working mother you essentially live with a permanent

feeling of guilt, but I don't see it as a bad thing. What is dangerous is to believe that there is some secret recipe and you can find the perfect balance and have it all, without any trade-offs or costs.' With her cosmopolitan background, where does she feel she belongs?

'Belonging is a difficult concept. When I first got this job, I remember telling my friends and colleagues that I had found my academic home in the Netherlands.

Wageningen UR has offered me a welcoming and flexible work environment.'

Only recently, she reveals, has she come to realise what 'gender bias' means. 'For most of my career and, in fact, most of my life, I never felt that my opportunities were limited by my gender or ethnicity. I never felt like a minority. What mattered was what I wanted to achieve and what qualities I brought to the table. Increasingly, I do recognise the impact of gender bias in our societies.' At the same time she has an aversion to the idea that, in order to succeed professionally, women should feel that they must prioritise work above everything else. 'At this stage of my life that is not what I want. All work and no play isn't for me.' Looking back, Aarti realises the best decisions she made were those with the most uncertainty about how it would all turn out. 'What makes me happy is that, at important moments in my life, I was not afraid to make unconventional choices, and to make a leap into the unknown to pursue what I really wanted, professionally and personally. So far, this strategy has worked for me!'

Why this book?

Women have been making their way in science and leadership positions for decades, benefiting science and organisations.¹ Still, stereotyping about gender and science is strong, including in the Netherlands;² and Dutch Universities have a very low proportion of women in leadership positions.³ In this context, making women's achievements visible and showcasing possible career paths to the younger generation often requires an extra effort.

The Netherlands Organisation for Scientific Research (NWO) specifically supports women in science through the Aspasia funding scheme. This helps individual women to progress to associate and full professorships via individual grants for research, and simultaneously stimulates university-wide activities to support the throughflow of women scientists to senior positions via policy premiums (*beleidspremies*).

Wageningen UR wants to increase diversity in its workforce;⁴ the first four Aspasia grant policy premiums were therefore used to implement an action plan for gender balance that aims to increase the throughflow of women to senior positions. This action plan includes the following components: increasing awareness of gender issues, setting up a mentoring programme, improving selection procedures, and increasing the visibility of role models.

Role models are essential for early career scientists in envisaging what their future career might look like. Moreover, women benefit to a greater extent than men from encountering women role models who contravene stereotypes and feel similar to themselves. Wageningen UR has therefore created this book of women at different career stages who can be an inspiration to others.

Many more women were suggested for inclusion in this book than are represented in the final product. Their absence is due purely to resource constraints – the book is just the tip of the iceberg of what is possible and present in Wageningen. We hope it will provide inspiration to young scientists to seek out the people they look up to, regardless of gender, and motivate more women to increase their visibility so as to spread inspiration more broadly within the younger generation.

¹ See e.g. McKinsey's 'Women Matter' series; EC reports on 'Gendered Innovations' (2013) and 'Structural Changes in Research Institutions' (2012).

² Miller et al. 2015 Women's Representation in Science Predicts National Gender-Science Stereotypes: Evidence From 66 Nations, *Journal of Educational Psychology*, 107, p631.

³ EC's She Figures (2013) and LNVH's Monitor Vrouwelijke Hoogleraren (2015).

⁴ Strategic plan Wageningen UR 2015-18.

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