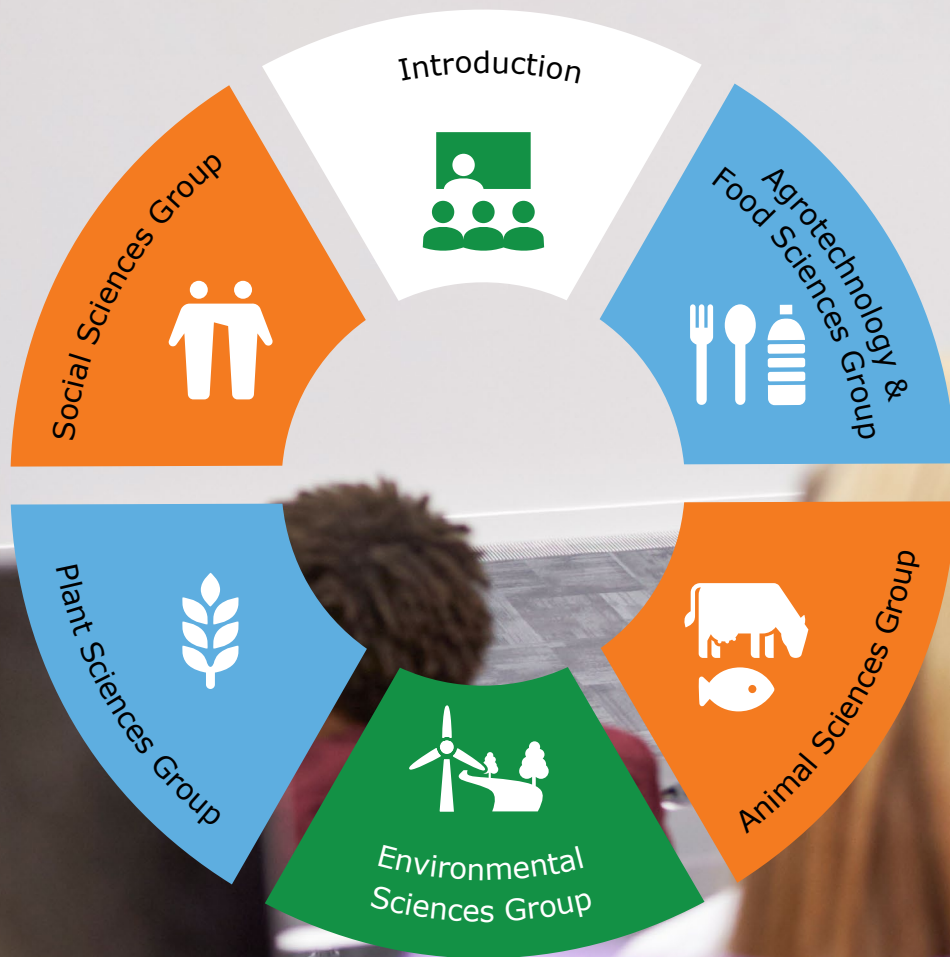




Teaching and Research Remits

Part of the Wageningen University Chair Plan 2025-2028



WAGENINGEN
UNIVERSITY & RESEARCH

Introduction

For each regular chair,¹ a teaching and research remit has been centrally documented in this addendum of the [Chair Plan 2025-2028](#). In the teaching and research remit, the chair's specific domain is described within the framework of the mission and objectives of Wageningen University & Research (WUR). With this specific scientific domain the chair holder leads and directs the chair group.

The teaching and research remits have been categorised by department and displayed in alphabetical order led by their acronym. Every teaching and research remit contains the name of the chair holder; the acronym, the English and when applicable the Dutch name of the chair; a summary of the remit; a description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair; and a description of the remit regarding teaching, research and value creation.



¹ Regular chairs are chairs with a chair holder. Personal, special and endowed chairs are embedded in a regular chair.



Agrotechnology & Food Sciences Group

Biobased Sciences

Biobased Chemistry & Technology (BCT)
Biological Recovery and Reuse Technology (ETE)
Environmental Technology (ETE)
Bioprocess Engineering (PBE)

Biomolecular Sciences

Biochemistry (BIC)
BioNanoTechnology (BNT)
Biophysics (BIP)
Microbiology (MIB)
Organic Chemistry (ORC)
Physical Chemistry and Soft Matter (PCC)
Systems and Synthetic Biology (SSB)
Toxicology (TOX)

Food Sciences

Food Chemistry (FCH)
Food Microbiology (FHM)
Food Process Engineering (FPE)
Food Quality and Design (FQD)
Physics and Physical Chemistry of Foods (FPH)

Nutrition Sciences

Global Nutrition (HNH)
Nutritional Biology (HNH)
Nutrition and Disease (HNH)
Nutrition, Metabolism and Genomics (HNH)
Sensory Science and Eating Behaviour (HNH)



Agrotechnology & Food Sciences Group

Bio-based Chemistry & Technology (BCT)

Chair holder: Prof. Harry Bitter

Biobased Sciences

*Name of the chair group
(in English and Dutch).*

Bio-based Chemistry & Technology (BCT).

*Brief summary of the (teaching and
research) remit in max 35 words.*

To expand the potential of global resources, the BCT group enables the transition from a fossil-based to a circular/bio-based economy by developing efficient and sustainable (catalytic) conversion processes, products and chains.

*Brief description of the way the domain
of the chair fits in the domain and
mission of Wageningen University and
the societal importance of the chair in
max 35 words.*

The chair focusses on the use of renewable feedstock to produce the molecules present in chemicals, materials and fuels. The feedstock molecules can be directly taken from nature or can be the side streams of food production and/or agricultural production.

*Concise description of the remit
regarding teaching, research and
value creation, max 150-200 words.*

The chair's objective is to reduce industrial energy consumption on a global scale, to fully exploit available and as yet uncovered cheap resources of agricultural (waste) streams, and to decrease CO₂ emissions and pollution.

Research themes are:

- conversion: environmental concerns, fluctuating oil prices and dwindling reserves are leading to the need for the production of bio-based chemicals, materials and fuels. Achieving this new biomass requires pre-treatments, (bio)chemical conversions and catalyst developments. These bio-based molecules offer opportunities for the production of novel and functional materials as well.
- multiscale modelling: creating a bio-based economy needs sustainable solutions for biomass conversion and separation. Knowledge of mechanisms of conversion and separation, and how to control these mechanisms is essential. Experimental and modelling work are combined to elucidate complex interactions in biomass conversion and to drive the interactions in the aimed direction.
- physical chemistry: nature offers natural constructs (oil bodies, protein aggregates, etc.) which offer great potential as bio-based functional materials. To give the materials target, desired properties (e.g. drug delivery) it is essential to understand the physico-chemical properties of these constructs and to understand their interaction with the environment in which they are applied. Physico-chemical studies of (modified) constructs is essential to achieve the desired understanding.

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Agrotechnology & Food Sciences Group



Biological Recovery and Reuse Technology (ETE)

Chair holder: Prof. Annemiek ter Heijne

Biobased Sciences

<i>Name of the chair group (in English and Dutch).</i>	Biological Recovery and Reuse Technology (ETE) / Biologische Kringlooptechnologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	This chair seeks to solve environmental problems by using bio-based technologies to recover energy and (in)organic compounds from residual streams.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair develops innovative technologies and concepts to build bio-circular agrofood and material systems, which contribute to connected circularity.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Innovative research is ongoing in the following areas: • production of electrical energy, fuels and sustainable heat from residual biomass: This type of biomass is left over after extraction of valuable (food) ingredients from agricultural products. The use of residual biomass enhances the economic and social potential of our processes; • application of the biological sulphur cycle in water and gas treatment; • biocrystallisation: biological recovery and removal of metals and minerals from industrial wastewater and/or groundwater. • biological modification of (waste) materials to reduce the environmental impact or improve the efficiency of industrial processing; • cities and their challenges are addressed in accordance with the principle of cyclic, rather than linear, thinking and analysis. The focus is on biorecovery integration in reuse of solid waste, in creating feedbacks of urban nutrients and organics to agriculture (fertilisers and organic reuse in agriculture) and integration of sustainable energy technologies in cities (renewable energy).
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Agrotechnology & Food Sciences Group

Environmental Technology (ETE)

Chair holder: Prof. Adriaan Mels

Biobased Sciences

*Name of the chair group
(in English and Dutch).*

Environmental Technology (ETE) / Milieutechnologie

*Brief summary of the (teaching and
research) remit in max 35 words.*

This chair addresses sustainable cyclic water solutions for drinking, urban, industrial and agricultural purposes. Water quality factors such as organics, nutrients, micropollutants, pathogens, salts and colloids are tailored by bio-based and advanced technologies and system designs.

*Brief description of the way the domain
of the chair fits in the domain and
mission of Wageningen University and
the societal importance of the chair in
max 35 words.*

The chair contributes to safeguarding water quality in water resources and recycling, and to metropolitan and urban-rural solutions connecting industrial and urban water for reuse in agriculture, and natural and engineered biodiverse systems.

*Concise description of the remit
regarding teaching, research and
value creation, max 150-200 words.*

Environmental Technology offers an education and research programme that is focused on sustainable technological solutions for the worldwide environmental problems. It combines several disciplines (microbiology, environmental chemistry, physical chemistry, fluid dynamics, mathematical and computational system and grid theory, and system design) in order to achieve innovations for environmental solutions. social scientists.

The research is divided into three working lines:

- micropollutants and pathogens, seeking to resolve water quality problems related to pharmaceutical, pesticide, and industrial chemical compounds in the water cycle (ground, drinking, waste, and reused water), using biological self-cleaning capacities in nature and engineered bio- and advanced technological systems;
- physico-chemical water treatment, focusing on fluid dynamics and mass transfer processes in suspended and granular biosystems, electro-membrane reactors for specific ion separation, and light and chemical induced oxidation/reduction systems;
- urban system engineering, focusing on development of concepts and integration of technologies for sustainable urban water, materials and energy cycles, with a focus on green infrastructure, and energy and resource grid modelling and design.

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Agrotechnology & Food Sciences Group

Bioprocess Engineering (BPE)

Chair holder: Prof. René Wijffels

Biobased Sciences

<i>Name of the chair group (in English and Dutch).</i>	Bioprocess Engineering (BPE) / Bioprocesstechnologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair studies and develops photoautotrophic (microalgae and cyanobacteria) and heterotrophic production systems (bacteria, yeasts and fungi) for bio-based products, as well as high-quality processes for the production of biopharmaceuticals (mammalian, insect and sponge cells).
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair's objective is a sustainable and healthy future by engineering efficient bioprocesses for high quality products. It bridges basic research towards application for implementation of sustainable processes in industry.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Research is organised in three lines: • microbial biotechnology: studying and engineering efficient conversion of bioresources into chemicals and food ingredients using microorganisms; • microalgal biotechnology: studying and engineering conversion of sunlight or organic compounds into food, feed, chemicals and fuel ingredients with a focus on proteins and lipids by microalgae and cyanobacteria; • animal cell biotechnology: studying and engineering scalable processes for the production of biopharmaceuticals such as proteins, vaccines and sponge-derived products.
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Agrotechnology & Food Sciences Group

Biochemistry (BIC)

Chair holder: Prof. Dolf Weijers

Biobased Biomolecular Sciences

<i>Name of the chair group (in English and Dutch).</i>	Biochemistry (BIC) / Biochemie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	Biochemistry is the study of the chemistry of life processes. The chair's research focuses on how biomolecules form, function and degrade inside cells.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Proteins are at the heart of any process in living cells, but are also key food components. Understanding their workings is of key importance to much of the biological and food domain of the university.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Cellular biochemistry is the central theme in which protein biochemistry, proteomics and structural biology are combined with molecular genetics, bioinformatics, cell biology and imaging to understand how key proteins and other biomolecules control biological processes in the living cell and organism. The evolutionary context is explicitly regarded, but experimental model organisms that allow genetic interventions are used. The biological processes that are studied are diverse and in flux, but for all of them the same philosophy is followed of integrating various approaches to arrive at deep functional insight into the function of biomolecules in their natural context. Current focus areas encompass plant development and hormone biology, receptor function and signalling and prokaryotic immunity mechanisms.
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Agrotechnology & Food Sciences Group

BioNanoTechnology (BNT)

Chair holder: Prof. Aldrik Velders

Biobased Biomolecular Sciences

<i>Name of the chair group (in English and Dutch).</i>	BioNanoTechnology (BNT) / BioNanoTechnologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair of BioNanoTechnology is active in fundamental and applied research, teaching and valorisation of (bio)inorganic and supramolecular chemistry, spectroscopy and imaging techniques, and technology of micro- and nanosystems.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair's mission is to explore the potential of (bio)nanotechnology to improve the quality of life. BNT applies fundamental knowledge of nanomaterials and technologies to environmental and plant monitoring, agro-food and health.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Research interests of BNT range from dynamic supramolecular chemistry in solution and on surfaces, to biomedical use of nanomaterials, and from microfabrication to enabling technologies. Applications comprise the development of, for example, multimodal diagnostic and theragnostic agents, and the fabrication of microfluidics and sensing systems based on optical/fluorescence and magnetic resonance spectroscopy (EPR and NMR) and imaging (MRI). The main research topics within the chair are: • nanoparticles and nanomaterials; • supramolecular assembly; • development and application of micro/nano-NMR and MRI; • sensor development and enabling & open technologies; • inorganic and photoactive complexes.
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Agrotechnology & Food Sciences Group

Biophysics (BIP)

Chair holder: Prof. Herbert van Amerongen

Biobased Biomolecular Sciences

<i>Name of the chair group (in English and Dutch).</i>	Biophysics/ Biofysica (BIP)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair advances light- and magnetic-resonance-based methods to study biological systems and food. BIP teaches the fundamentals of (bio)physics and the advanced methodologies together with their application in the life sciences.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair develops new methodologies for the food and life sciences. BIP focuses on photosynthesis research for improving biomass/food production and research on analysing composition/structure-property relationships of foods.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	BIP develops and applies novel methods that use NMR/MRI or optical spectroscopy and imaging to study biological and food systems with ever-increasing spatiotemporal resolution. The research is organised into different areas: • biophysics of photosynthesis with special attention to photosynthetic light harvesting: regulation and acclimation. A variety of biophysical methods are developed and applied, for instance methods based on ultrafast (micro)spectroscopy; • NMR/MRI methods applied to porous (bio)systems, soft matter and foods, to assess their complex multiscale physico-chemical properties both under static and dynamic conditions (e.g. processing/reactivity, non-Newtonian flow, digestion); • development and application of single-molecule and super-resolution microscopy for application in the food and life sciences.
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Agrotechnology & Food Sciences Group

Microbiology (MIB)

Chair holder: Prof. Thijs Ettema

Biobased Biomolecular Sciences

<i>Name of the chair group (in English and Dutch).</i>	Microbiology (MIB) / Microbiologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair is engaged in research and education focusing on fundamental and applied aspects of the diversity, physiology, ecology and evolution of microorganisms and their viruses.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The generated fundamental knowledge is exploited in areas of health and food, bioproducts and energy, and the natural environment and sustainability, and contributes to explore the potential of nature and improve the quality of life.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The general scientific objectives of the chair are: • to discover fundamental aspects of selected microbe-based model systems at ecological, cellular and molecular levels; • to understand the molecular basis of key processes in bacteria, archaea and their viruses; • to apply the obtained insights to develop and optimise processes related to improving human quality of life. The research is organised into four complementary research themes: • microbial ecology aims at understanding and exploring the functioning of microorganisms in natural and man-made ecosystems, including interdependencies with their living and non-living environments; • microbial physiology studies the physiology of anaerobic microorganisms and communities that play important roles in environmental biotechnological processes, such as wastewater treatment, soil remediation, production of chemicals and biofuels and recovery of metals; • bacterial genetics focuses on studying prokaryotic host-virus interactions, as well as on unravelling relevant features of the central metabolism of thermophilic bacteria and archaea; • microbial evolution aims to gain insight into the diversity and evolution of microbial lineages through phylogenomics, comparative genomics and advanced cultivation approaches.
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Agrotechnology & Food Sciences Group

Organic Chemistry (ORC)

Chair holder: Prof. Han Zuilhof

Biobased Biomolecular Sciences

<i>Name of the chair group (in English and Dutch).</i>	Organic Chemistry (ORC) / Organische Chemie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The research conducted by the ORC chair is directed towards the structure, reactivity, properties and analysis of organic molecules, specifically at the overlap of nanotechnology, chemical biology and organic synthesis.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The 'exploration of nature' focusses increasingly on the molecular aspects of nature. Organic chemistry fits precisely in this development and in the expansion of the potential of nature.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Research focuses on the study, development and analysis of organic reactions, and of (bio-)organic molecules and materials at or relevant for surfaces. The chair's three research themes: synthesis of (bio-) active molecules, surface-bound analytical chemistry, and interactive surfaces, are developed in various research focus points: • active organic surfaces; • advanced materials for chemical selectivity; • analytical chemistry; • bio-organic synthesis; • dynamic polymers; • nanochemical biology; • surface-bound analytical chemistry; • theoretical surface chemistry.
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Agrotechnology & Food Sciences Group

Physical Chemistry and Soft Matter (PCC)

Chair holder: Prof. Jasper van der Gucht

Biobased Biomolecular Sciences

<i>Name of the chair group (in English and Dutch).</i>	Physical Chemistry and Soft Matter (PCC)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The PCC chair aims at understanding how macroscopic properties of systems or materials follow from the chemical nature of matter and interactions on the nanoscale.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair provides fundamental knowledge of complex systems of macromolecules, colloids, and surfactants, which is relevant for different WUR domains.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	PCC is interested in phenomena on the nanoscale, where creative chemistry is essential, complex physics is a rule rather than an exception and biology comes to life. The research covers a wide range of topics from fundamental to applied, and typically involves a combination of innovative experimental studies and a complementary theoretical analysis. Topics of study include phase behaviour and self-assembly of macromolecules, mechanics of polymeric materials, colloidal materials, protein self-assembly, rheology of granular materials and emulsions, and self-assembly of amphiphiles. A lot of effort is also made to develop novel experimental and theoretical tools.
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Agrotechnology & Food Sciences Group

Systems and Synthetic Biology (SSB)

Chair holder: Prof. Maria Suarez Diez

Biobased Biomolecular Sciences

<i>Name of the chair group (in English and Dutch).</i>	Systems and Synthetic Biology (SSB) / Systeem- en Synthetische Biologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	SSB contributes to elucidating mechanisms underlying basic cellular processes, evolution and interactions among microbes and between microbes and their environment (including humans), and to translate this knowledge into applications of biotechnological, medical, and environmental interest.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair's activities lie broadly within the living environment focus of WUR, which is relevant for different WUR domains.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair addresses critical issues and novel biotechnological applications in the areas of health and food, biobased products and environment in an integrated way. The chair's strategy is to develop and apply theoretical frameworks supporting (and relying on) experimental research towards the understanding of the various processes and hierarchies of cellular networks and circuitry. Four major areas are covered: • computational systems biology; • microbial systems and synthetic biology; • systems health and disease; • big data and semantic systems biology.
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Agrotechnology & Food Sciences Group

Toxicology (TOX)

Chair holder: Prof. Nico van den Brink

Biobased Biomolecular Sciences

<i>Name of the chair group (in English and Dutch).</i>	Toxicology (TOX) / Toxicologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair concentrates on gaining insight into mechanisms through which toxic compounds induce adverse effects on the health of humans and environmental organisms, either via food or via different exposure pathways related to environmental pollution.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	TOX develops the scientific underpinning of safe use of chemicals in food and environment. Scientific progress contributes to healthy, versatile, adequate and safe food and healthy environment and living conditions.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Teaching and research activities include: • risk assessment of foodborne chemicals; • mode of action of foodborne chemicals; • alternatives to animal testing, developing novel in vitro bioassays and translating in vitro data to the in vivo situation using physiologically based kinetic computer modelling; • the role of the gut microbiota in the toxicity of foodborne chemicals; • environmental toxicology: effects of low, chronic exposure of organisms to contaminants and to mixtures of environmental chemicals, with an emphasis on non-standard effect endpoints (behaviour, immunomodulation) and model development.
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Agrotechnology & Food Sciences Group

Food Chemistry (FCH)

Chair holder: Prof. Jean-Paul Vincken

Food Sciences

*Name of the chair group
(in English and Dutch).*

Food Chemistry (FCH) / Levensmiddelenchemie

*Brief summary of the (teaching and
research) remit in max 35 words.*

The FCH chair generates knowledge on the analysis, molecular properties and interactions of key components within the food matrix during industrial processing and digestion of foods, and develops biochemical tools for improving their quality and healthiness.

*Brief description of the way the domain
of the chair fits in the domain and
mission of Wageningen University and
the societal importance of the chair in
max 35 words.*

By providing knowledge on food constituents at the molecular level, the chair contributes to making healthier, more palatable foods

*Concise description of the remit
regarding teaching, research and
value creation, max 150-200 words.*

Research themes are:

- food proteins: analysing the various protein characteristics; understanding physico-chemical properties of proteins with respect to foam/emulsion stability and gelling; understanding the reactivity of proteins during processing; understanding and predicting enzymatic protein degradation, in relation to their functional properties and nutritional aspects;
- phytochemicals: studying a broad range of plant-derived, small molecules with respect to their analysis, reactivity (oxidation / reduction / prenylation) and properties (colour formation / (bitter) taste / health (hormone look-alikes) / antimicrobial activity);
- carbohydrates: analysing the structure of carbohydrates in detail to relate distribution of substituents to functional properties (e.g. gelling), and to understand their prebiotic and immune-modulatory effect;
- lignocellulosics: studying oxidative enzymes to understand the degradation of crystalline polysaccharides and recalcitrant lignin;
- food lipids: detailed compositional analysis of the various lipid species, and understanding lipid oxidation which is key to understand off-flavour formation in foods;
- plant bioactives: employing computational approaches to recognise structural motifs underlying bioactivity (e.g. antimicrobial) and predict bioactivity upon analysing food composition

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Agrotechnology & Food Sciences Group

Food Microbiology (FHM)

Chair holder: Prof. Marcel Zwietering

Food Sciences

<i>Name of the chair group (in English and Dutch).</i>	Food Microbiology (FHM) / Levensmiddelenmicrobiologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair generates and disseminates genetic, physiological and ecological knowledge, to understand and predict microbial behaviour in foods and fermentations and proposes strategies and intelligent interventions, to assure microbiological food safety, quality and nutritional value.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair explores the potential of microorganisms to improve the quality of foods, thereby contributing to healthy living, sustainability, food safety and security and to enjoyment of food by linking knowledge from molecule to management.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	In Food Microbiology both positive (fermentation) and negative aspects (spoilage, disease) of micro-organisms are studied. The four main fields of the research programme are: • quantitative risk assessment; • quantitative ecology of pathogens; • food fermentation; • physiology and genomics. Aspects at the molecular level, at the process level, in food products and through the supply chain are studied to get mechanistic understanding of and insight into ecological behaviour of microorganisms to optimise food safety management and fermentation control.
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Agrotechnology & Food Sciences Group

Food Process Engineering (FPE)

Chair holder: Prof. Karin Schroën

Food Sciences

*Name of the chair group
(in English and Dutch).*

Food Process Engineering (FPE) / Levensmiddelenproceskunde

*Brief summary of the (teaching and
research) remit in max 35 words.*

The FPE chair aims at finding processes that are significantly more sustainable, producing products that combine excellent taste with better nutrition.

*Brief description of the way the domain
of the chair fits in the domain and
mission of Wageningen University and
the societal importance of the chair in
max 35 words.*

The chair focuses on food which fits squarely in the WUR domain. It explores the potential of natural food materials to create the best quality in product (nutrition, taste, acceptability) and process (efficiency in material, energy, water use).

*Concise description of the remit
regarding teaching, research and
value creation, max 150-200 words.*

Research themes are:

- food structure engineering and characterisation, which comprises the creation of structured semi-solid foods by deformation-based processing, precision engineering and characterisation of dispersions, emulsions and foams, and drying and additive assembly (3D printing);
- molecular conversions, namely enzymatic conversions, and understanding and steering gastric digestion;
- new separation principles, which includes new drying technology, solid-state separations, electrically driven processes, and membrane-based methods.

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Agrotechnology & Food Sciences Group

Food Quality and Design (FQD)

Chair holder: Prof. Kasper Hettinga

Food Sciences

<i>Name of the chair group (in English and Dutch).</i>	Food Quality and Design (FQD)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The FQD chair investigates food quality from a technological, social and human well-being perspective. The chair provides education and research on food design and food system management combining advanced food technology with an interdisciplinary, consumer-oriented approach.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The overall aim of the FQD chair is to improve the quality of food and all the aspects connected to it: high-quality production, consumers' pleasure and human health.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair's projects encompass different food production steps, selection of raw material (primary production), transformation (technological aspects), and formulation (bioactive ingredients), and combine them with consumer perception, and human behaviour. FQD research establishes new principles to achieve discoveries in the food science field that can be applied into industrial product development. The chair aims to be a catalyst of trans- and interdisciplinary research to ensure societal embedding of results from scientific research. Research is clustered according to the needs of stakeholders, namely society, consumer and human body. Food quality can be efficiently improved by using mathematical modelling tools to study and predict the effects of composition and processing conditions. Designing active and intelligent food packaging can enhance shelf life and reduce food waste. The FQD chair studies several topics on dairy product quality including processing of immune-active proteins for formula, glycation of milk proteins and cow's milk allergy, casein composition and casein micelle properties. The FQD chair investigates food digestion from the oral cavity through the stomach and the intestine. The aim is to understand the mechanisms of interaction between food components and the gastrointestinal system.
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Agrotechnology & Food Sciences Group

Physics and Physical Chemistry of Foods (FPH)

Chair holder: Prof. Erik van der Linden

Food Sciences

*Name of the chair group
(in English and Dutch).*

Physics and Physical Chemistry of Foods (FPH) / Fysica en fysische chemie van levensmiddelen

Brief summary of the (teaching and research) remit in max 35 words.

To teach and conduct research on formulating quantitative physical and physico-chemical relations between molecular, mesostructural and macroscopic properties of food relevant systems, during their processing, storage, transport and consumption.

Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.

The chair provides understanding and control of food transitions in relation to constraints imposed by the according environment and its natural potential, ensuring tasty, healthy, affordable and sustainably produced food, and improving quality of life.

Concise description of the remit regarding teaching, research and value creation, max 150-200 words.

Quantitative physical and physico-chemical relations between properties on length scales ranging from molecular to macroscopic, during transitions in processing, storage, transport, and consumption, are essential to the teaching and research by the chair.

Phenomena that are studied in two and three dimensions range from supramolecular assembly, phase changes due to changes in temperature, volume, pressure, concentration and/or externally applied fields, non-equilibrium mesostructural evolution by externally applied fields (like flow, temperature gradients), non-equilibrium behaviour of mesostructured soft and hard surfaces and interfaces, friction, fracture to viscoelasticity.

Theoretical and computer simulation methodologies range from statistical mechanics, information theory, scaling, non-equilibrium thermodynamics, molecular dynamics, to coarse grained models.

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Agrotechnology & Food Sciences Group

Global Nutrition (HNH)

Chair holder: Prof. Alida Melse-Boonstra

Nutrition Sciences

*Name of the chair group
(in English and Dutch).*

Global Nutrition (HNH) / Voeding en gezondheid in mondiaal perspectief

Brief summary of the (teaching and research) remit in max 35 words.

The chair in Global Nutrition aims to understand the causal pathways of malnutrition in all its forms (over- and under-nutrition), and to prevent malnutrition at the global and European level and in low and middle income countries by studying the effects of nutrition-sensitive and nutrition-specific interventions.

Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.

The chair actively contributes to several of the sustainable development goals such as Zero Hunger, and Good Health and Well-being, Reduced Inequalities, and Sustainable Cities and Communities – all key to the mission of WUR.

Concise description of the remit regarding teaching, research and value creation, max 150-200 words.

The chair addresses the following research themes:

- Sustainable food systems and healthy diets (ecological entry): Research focuses on improving the quality and sustainability of diets in settings where the risks of negative health consequences of both under- and overnutrition are rapidly increasing. Food-based dietary guidelines and dietary quality are important outcomes of this theme.
- Aetiology of malnutrition in the lifecycle (physiological entry): This research area focuses on unravelling determinants of malnutrition in vulnerable population groups, such as infants, children, adolescents and women of reproductive age, mostly but not exclusively in low- and middle-income countries. In this research area diets are the exposure and the approach is based on physiological and biological insights with consequences for public health.
- Innovations in dietary assessment: Innovations in dietary assessment using apps, sensors and wearables, and their validation and application, are developed to improve monitoring intake and evaluate the impact of dietary advice.

Date of adoption of this description (decision of the EB) (only for filing purposes).

8 November 2021.



Agrotechnology & Food Sciences Group

Nutritional Biology (HNH)

Chair holder: Prof. Kerensa Broersen

Nutrition Sciences

<i>Name of the chair group (in English and Dutch).</i>	Nutritional Biology (HNH)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair focusses on the interplay between nutrition and functional health, defined as the ability to adapt to physical and psychological challenges, in particular during ageing.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	In line with the mission of WUR, the chair aims to make a substantial and internationally recognised contribution to understanding and developing effective lifestyle strategies. These should improve health and quality of life during ageing or resulting from physical or psychological stress.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	As an overarching theme the chair strives to better understand how nutrition modulates the balance between ageing and degeneration on the one hand, and regeneration and recovery on the other hand. The research is predominantly centred around three organ systems: brain (in relation to cognition), the musculoskeletal system, and the gastro-intestinal tract. Next to ageing itself, comprising a series of processes that basically start long before people grow old in a literal sense, the chair focuses on the outcome of other potentially stressful events, including strenuous exercise, undernutrition and severe illness. In terms of models and methods, the focus is on (individual) humans and intervention studies. At the same time, the chair also applies other methods, ranging from <i>in vitro</i>/biochemical techniques to observational studies.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Agrotechnology & Food Sciences Group

Nutrition and Disease (HNH)

Chair holder: Prof. Ellen Kampman

Nutrition Sciences

<i>Name of the chair group (in English and Dutch).</i>	Nutrition and Disease (HNH) / Voeding en Ziekte
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair conducts research on nutrition in disease aetiology, during treatment and for prognosis. Teaching encompasses concepts and methods of human research, and on nutrition and specific diseases.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair contributes to the domain and mission of WUR by aiming to decrease the risk of (chronic) disease and improving the health and quality of life of those with a disease through better nutrition.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair comprises a multidisciplinary team of epidemiologists, nutritionists, physicians, biostatisticians and medical biologists working on two main themes: • disease aetiology and prevention: healthy and sustainable nutrition, genetic susceptibility and lifestyle factors in the aetiology and prevention of chronic nutrition-related diseases; • nutrition in care and disease prognosis: recovery of diseases and improving quality of life during and after treatment through healthy, sustainable diets and foods, in combination with physical activity.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Agrotechnology & Food Sciences Group

Nutrition, Metabolism and Genomics (HNH)

Chair holder: Prof. Lydia Afman

Nutrition Sciences

<i>Name of the chair group (in English and Dutch).</i>	Nutrition, Metabolism and Genomics (HNH) / Voeding, Metabolisme en Genomics
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair contributes to a better understanding of the molecular mechanism of action of dietary nutrients and their impact on human health and metabolism. Particular attention is given to dietary lipids and fibre.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Healthy nutrition is important for maintaining a high quality of life. The chair helps to understand how certain diets, foods, nutrients and food components impact on health and disease.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Research covers the following main themes: • molecular regulation of lipid metabolism, aiming at further understanding the molecular regulation of lipid metabolism in liver, adipose tissue, and intestine, partly via elucidating the functional role of specific genes; • immunometabolism, adipose tissue, and metabolic health, aiming at better understanding the role of the adipose tissue and the immune system in metabolic dysregulation caused by overnutrition and characterising the underlying mechanisms using molecular and omics tools; • nutritional regulation of intestinal health, focusing on the nutritional programming and systems biology of intestinal health, with special interest in dietary fibre, the gut microbiome, food digestion, transcriptomics, and epigenetics.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Agrotechnology & Food Sciences Group

Sensory Science and Eating Behaviour (HNH)

Chair holder: Prof. Ciaran Forde

Nutrition Sciences

<i>Name of the chair group (in English and Dutch).</i>	Sensory Science and Eating Behaviour (HNH) / Sensoriek en Eetgedrag
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair focuses on the meaning of sensory signals for nutrition and health, i.e. food choice, food and nutrient intake, and health/well-being/quality of life.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Sensory science is a bridge between food and health/quality of life. The focus on the meaning of sensory signals for nutrition is relevant for societal issues like obesity, nutrition and growth, nutrition in the elderly.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair focuses on the psychobiology of food choice and eating behaviour with two main research themes: • food structure, oral processing, sensory perception and food intake; • food-gastrointestinal tract-brain focusing on sensory (e.g. taste, smell, reward) and metabolic drivers (e.g. gastric emptying, hormones) of eating behaviour. It deals with the impact of sensory and nutritional properties of foods, diets on physiological, psychological, and neurobiological mechanisms underlying eating behaviour.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Animal Sciences Group

Adaptation Physiology (ADP)

Animal Nutrition (ANU)

Animal Production Systems (APS)

Animal Breeding and Genomics (ABG)

Host-Microbe Interactomics (HMI)

Infectious Disease Epidemiology (QVE)

Aquaculture biology and Fisheries ecology (AFI)

Behavioural Ecology (BHE)

Cell Biology and Immunology (CBI)

Experimental Zoology (EZO)

Human and Animal Physiology (HAP)

Marine Animal Ecology (MAE)



Animal Sciences Group

Adaptation Physiology (ADP)

Chair holder: Prof. Bas Rodenburg

<i>Name of the chair group (in English and Dutch).</i>	Adaptation Physiology (ADP) / Adaptatiefysiologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The ADP chair focusses on research and education on ways to facilitate and support adaptation of animals to their changing and challenging environment in order to optimise their welfare and health.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	ADP contributes to sustainable future food systems by studying impacts of housing and management innovations (animal husbandry) on robustness, health and welfare of livestock and companion animals in perspective of societal concerns (animal stewardship).
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	ADP provides courses in Adaptation Physiology, Health, Welfare and Management, Animals in Society and closely related basic domains/ areas like thermoregulation, animal reproduction, behaviour and immune competence for BSc, MSc and PhD students and postdoctoral training. ADP combines expertise in immunology, reproduction, energy metabolism and behavioural physiology using an interdisciplinary, whole animal physiology approach to study husbandry and management factors that support adaptation and resilience of animals exposed to environmental perturbations. Currently, key elements into research and education are long-term effects of early life conditions on adaptive capacity, health and welfare in later life, support of animals during critical transition periods and development of new (dynamic) indicators of health, welfare and resilience, in farm animals.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Animal Sciences Group

Animal Nutrition (ANU)

Chair holder: Prof. Wouter Hendriks

<i>Name of the chair group (in English and Dutch).</i>	Animal Nutrition (ANU) / Diervoeding
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	Education and research into fundamental and practical aspects of nutrition, feedstuffs and feed formulation on health, growth, welfare and longevity of various animal species for the betterment of society.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Nutrition is essential for the health and welfare of all animals in our society, for sustainable animal agri-food systems to provide high quality and nutritious foods, and to ensure global food security.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The contribution to University courses and research into the nutrition of various animal species encompass the utilisation of nutrients/components in feed/feed ingredients and their impact on animal health, growth, welfare and longevity. Knowledge is actively communicated to various societal actors. The research also encompasses the use of model animals for human nutrition. Dietary nutrients/components as they are broken down (digested or fermented), absorbed and metabolised by animals are part of the remit. Nutrient analysis, feed technology, digestion and absorption, fermentation, nutrient metabolism and the effects of nutrients on gene expression are core areas of research. In vitro simulation methods for digestion/fermentation processes and mechanistic modelling of nutrient utilisation are instrumental to provide further insight into nutrient metabolism by animals. Epigenetics and transgenerational effects of feeds/nutrients are part of the remit of the chair.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Animal Sciences Group

Animal Production Systems (APS)

Chair holder: Prof. Simon Oosting

<i>Name of the chair group (in English and Dutch).</i>	Animal Production Systems (APS) / Dierlijke Productiesystemen
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	To provide an integrated analysis of existing and innovative animal production systems to design a sustainable future, with a special focus on the environment, animal welfare and the livelihood of people. A systems approach is vital to the chair's integrated analyses.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Building healthy and sustainable food systems requires (radical) changes in the way our food, in particular animal-source food, is produced, processed, prepared and consumed. APS aims to work with nature and use technology to determine and strengthen the role of farm animals in such sustainable food futures.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair's education and research generates knowledge that enhances a transparent societal and political debate about future options and limitations of farm animals in sustainable food systems across the world. We acknowledge that eating well within our planetary boundaries requires building deep partnerships across disciplines, and beyond academic boundaries. Achieving this aim, however, is highly context specific, and we therefore focus on regional food systems. To this end, our research and education is rooted in systems analysis, and combines a diverse set of qualitative and quantitative approaches to explore the role of farm animals in regional food systems (e.g. food systems modelling, stakeholder power analysis, participatory scenario analysis). Our work yields tools and insights that can be used by diverse food actors (e.g. farmer, industry, retailers, government, NGOs) to improve the sustainability of animal production systems.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Animal Sciences Group

Animal Breeding and Genomics (ABG)

Chair holder: Prof. Mario Calus

<i>Name of the chair group (in English and Dutch).</i>	Animal Breeding and Genomics (ABG) / Fokkerij en Genomica.
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The mission of ABG is to generate knowledge and provide education on the role and sustainable use of genetic variation in farm, companion and wild animals. By integrating quantitative genetics, genomics, bioinformatics and artificial intelligence, ABG aims to further our insight into the biological mechanisms underlying phenotypic variation in animals.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	ABG aims to contribute to sustainable genetic management of animal populations. Genetically healthy populations are a prerequisite for sustainable production in harmony with the living environment. Based on natural ecosystems, enable safe and healthy food of animal origin and safeguard the biodiversity of managed as well as wild populations.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	ABG combines expertise in three closely related disciplinary domains: genomics, quantitative genetics, and breeding programmes. The focus of the research and education of ABG is on artificial and natural selection in farmed animals, companion animals, wild species and animals kept in zoos. Climate change and habitat loss have a strong effect on biodiversity. An important research question within ABG is how to keep small populations genetically healthy. ABG aims to unravel the molecular mechanisms underlying phenotypic variation and to move from understanding phenotypes towards predicting phenotypes. Climate change and different management systems force animals to adapt to changing environments. ABG therefore focuses on improving animals' resistance to stress and diseases while at the population level, the focus is on social interactions and genotype by environment interactions. In its research ABG uses techniques based on sensor technology, complex cell systems and artificial intelligence, combined with detailed genomic information.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Animal Sciences Group

Host-Microbe Interactomics (HMI)

Chair holder: Prof. Jerry Wells

<i>Name of the chair group (in English and Dutch).</i>	Host-Microbe Interactomics (HMI)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	HMI's research and teaching domains are focused on host-pathogen interactions and microbiota-host interactions.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The domain of the chair is to explore the interactions of bacteria, viruses, archaea, and fungi with each and other their hosts and provide knowledge and understanding to prevent and treat diseases in humans and animals (Global One Health).
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	HMI develops and applies genomics, advanced genetic approaches and organoid models to enhance the understanding of host-microbe interactions in humans and animals. It also develops knowledge to underpin the development of strategies to prevent and treat infections, including development of novel antimicrobials, cross-protective vaccines and biomarkers of risk to target control measures. In this domain other research topics include understanding of host mechanisms associated with disease resistance and resilience. Furthermore, the research and education tasks of HMI involve understanding of the interplay between host-associated microbiomes and the role of specific species/groups of bacteria and their bioactive metabolites (e.g. short-chain fatty acids and natural products) on microbiota ecology, host physiology using organoid models and studies in vivo. HMI develops knowledge and understanding to underpin microbiota-based strategies for the management of health and combat negative consequences of microbiota imbalance (dybiosis) observed in many diseases and disorders. The research contributes to the one health approach of attaining optimal health for people, animals and our environment.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Animal Sciences Group

Infectious Disease Epidemiology (QVE)

Chair holder: Prof. Quirine ten Bosch

<i>Name of the chair group (in English and Dutch).</i>	Infectious Disease Epidemiology (QVE) / Infectieziekten Epidemiologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	Teaching and research on management of infections within and between populations of animals and humans, by studying transmission mechanisms and by estimating transmission rates and effect of interventions on the transmission.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The field is important to animal and public health in that epidemiology of infection dynamics and interventions is often used as the basis for implementing control measures both by governments and individuals managing animals.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	QVE combines population dynamics of infections and epidemiological techniques. Emphasis is on studying the transmission routes and their quantitative contribution to overall transmission under different circumstances and with and without particular interventions. The chair uses stochastic modelling to study transmission, and we teach statistical and modelling skills. This quantitative skill set is important in basic epidemiological research, risk assessment and risk management. The chair is involved in designing methods to quantify different relevant parameters not only as a modeller and statistician but also thinking about the biology of transmission. In that way we contribute to improving animal and human health by finding better methods to control and manage infectious diseases.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	29 January 2024.



Animal Sciences Group

Aquaculture biology and Fisheries ecology (AFI)

Chair holder: Prof. Geert Wiegertjes

<i>Name of the chair group (in English and Dutch).</i>	Aquaculture biology and Fisheries ecology (AFI) / Aquacultuur biologie en Visserij ecologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	To improve food and nutrition security worldwide, AFI educates and performs research on the sustainable harvest and production of animal food from marine and freshwater aquatic ecosystems including land-and sea-based aquaculture.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	AFI explores a large range of technologies and disciplines required for a sustainable and circular food system approach to both aquaculture and fisheries, supporting the provision of healthy food from aquatic animals for mankind.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Global consumption and demand for aquatic food will continue to increase. Climate change will affect life in oceans, North Sea and large rivers. AFI plays an important role in managing sustainable aquaculture systems of the future with a minimal impact on environment and positive effect on human and animal health. To protect biodiversity and ensure fish stocks are available for future generations, AFI plays an important role in managing sustainable approaches to fisheries. AFI integrates multidisciplinary approaches and provides courses on a broad range of disciplines relevant to Aquaculture and Fisheries. PhD education is a major focus area. The teaching and research scope of AFI encompasses fish (and shellfish) physiology, nutrition, health, and welfare which all closely interconnect with water quality, and encompasses fisheries ecology, adaptation of fish, and studies on the composition of fish communities.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	2 December 2024.



Animal Sciences Group

Behavioural Ecology (BHE)

Chair holder: Prof. Marc Naguib

<i>Name of the chair group (in English and Dutch).</i>	Behavioural Ecology (BHE) / Gedragsecologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair maintains education and several research lines on wild animals and on companion animals with specific attention to animal social interactions.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Understanding behaviour of animals in their social and ecological context is relevant to our fundamental understanding and for assessing and improving nature conservation, biodiversity and animal welfare, and thus the quality of our living environment.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Behavioural ecology is the branch of ecology that focuses on the evolutionary causes of variation in behaviour among individuals, populations and species. It is thus concerned with the adaptiveness of behaviour, the ultimate questions of why animals behave as they do. In this field of science, the principles of natural selection are applied to behaviour with the underlying assumption that, within the constraints of their evolutionary histories, animals behave in such a way that they maximise their genetic contribution to future generations. BHE runs several research lines in behavioural ecology with a focus on behavioural ecological aspects of the social interactions of animals. These research lines cover topics such as animal communication, sociality, cooperation, cognition, and animal conservation, mainly using birds and fish as model species and knowledge is also applied to companion animals. Overall, the contributions to understanding animal behaviour are at the core of understanding how evolution acts on organisms and at the same time core to understand how humans impact animal life and well-being.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Animal Sciences Group

Cell Biology and Immunology (CBI)

Chair holder: Prof. Mangala Srinivas

<i>Name of the chair group (in English and Dutch).</i>	Cell Biology and Immunology (CBI) / Celbiologie en Immunologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	CBI explores the immune system to improve human and animal health, and excite the next generation about immunology. The group is active in areas such as immunomodulation, impact of diet, immunotherapy, infection, allergies, vaccination and fundamental cell biology.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	CBI focuses on exploring how proactive and preventative health mechanisms in both animals and humans can improve disease resistance, and enhance quality of life. The activities fit in the WUR strategic themes of Preventive Health, One Health, and Resilience. Within ASG, work is primarily done on human and animal health in mutual interaction.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	CBI uses a multi-species approach, including chickens, pigs, horses and humans, to study the immune system. This exploration covers infection, diet, allergy, veterinary immunology, and immunomodulation. The group provides a robust molecular and cellular foundation to generate tools and novel mechanistic insights into disease prevention and immunotherapeutic treatment, for example through rational vaccine development, non-communicable diseases, dietary immunomodulation, allergy, and in other diseases involving the immune system (e.g. infection, cancer, neurodegenerative diseases, diabetes, inflammatory disorders). CBI also evaluates the safety of new protein sources particularly in relation to food allergies and immune impact. The research of CBI delves into fundamental (immune) cell biology and complex cell cultures, with techniques including nanotechnology, biophysical methods, advanced microscopy and flow cytometry. The focus is also on the development of non-invasive and quantitative means of studying the immune landscape in vitro and in vivo, with and without modulating therapy, using imaging modalities such as Magnetic Resonance Imaging (MRI). CBI is dedicated to the translation of research findings into practical immune modulation strategies for the benefit of animals and humans, leading to societal impact. The group teaches courses from basic cell biology to advanced immunology, and also hosts thesis students, emphasising laboratory and soft skills and developing critical thinking, over textbook knowledge.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	2 December 2024.



Animal Sciences Group

Experimental Zoology (EZO)

Chair holder: Prof. Florian Muijres

<i>Name of the chair group (in English and Dutch).</i>	Experimental Zoology (EZO) / Experimentele Zoölogie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair investigates and teaches the relationships between form and function in animals, across behavioural, developmental, and evolutionary contexts. Research and teaching share an integrated focus on experimentation, modelling, and biology-inspired design.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The fundamental research translates into new and improved technological applications and better understanding of animals and their evolution and development. This contributes to the quality of life and trains graduates in interdisciplinary thinking.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Animals evolve, develop, and behave in a complex and dynamic world. To understand their structure and function, an interdisciplinary approach is researched and taught combining physics, engineering, and molecular techniques to analyse carefully chosen cases of interest. The resulting quantitative models provide crucial insights into organismal development and behaviour, and frequently reveal unexpected strategies and structural solutions devised by natural selection, which can overcome superficially intractable physical constraints. Reverse engineering these solutions can help to solve problems of societal relevance. Current examples are the development of novel instruments for minimally invasive surgery, efficient traps for disease vectors, and novel flapping drones. To facilitate the uptake of such fundamental insights into applied science, the chair cooperates with technical universities, research institutes, and industrial partners. The tight coupling between theory and experiments and the particular attention to engineering applications is also reflected in teaching, which equips students with a versatile analytical and experimental skillset for a career in both science and industry.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Animal Sciences Group

Human and Animal Physiology (HAP)

Chair holder: Prof. Jaap Keijer

<i>Name of the chair group (in English and Dutch).</i>	Human and Animal Physiology (HAP) / Fysiologie van Mens en Dier
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	HAP studies and teaches human and animal physiology and molecular/biochemical physiology. The research focus is on metabolism and how it affects health in humans and (model) animals. The aims are to understand metabolism and improve human health.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	HAP provides essential training in human and animal physiology, a core component of life sciences. Its research to understand and target metabolism and mitochondria, provides knowledge and tools to improve functioning of individuals and to prevent and treat human metabolic, lifestyle- and age-related disease.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Human and Animal Physiology (HAP) studies and teaches physiology, nutritional physiology, and molecular/biochemical physiology of humans and animals. The research focus is on metabolism, encompassing energy metabolism, intermediary metabolism, redox metabolism, and mitochondria. Results are obtained by performing experimental research in humans, model animals (including invertebrates), organs/tissues, and cells. This is done by using state-of-the-art physiological, functional, computational, biomolecular and related bioanalysis tools in an integrated manner. The research aims are i) to obtain new mechanistic insights into how metabolism influences health and organ/tissue functioning of humans and animals, including improved translational physiological understanding of metabolism, and ii) to significantly contribute to preventive human health, especially the prevention and treatment of metabolic, lifestyle- and age-related disease of humans. This is done by generating data and developing new concepts and methods to provide leads for and substantiate the efficacy of interventions, compounds and foods, with society and industry, to ensure healthy lives at all ages. Last, but not least, HAP provides solidtraining of BSc, MSc and PhD students in physiology, molecular/biochemical physiology and in experimental research.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	2 December 2024.



Animal Sciences Group

Marine Animal Ecology (MAE)

Chair holder: Prof. Tinka Murk

<i>Name of the chair group (in English and Dutch).</i>	Marine Animal Ecology (MAE) / Mariene dierecologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	MAE studies and teaches how marine animals adapt to their (changing) environment and anthropogenic activities. This includes eco-physiology, early development, population genomics, and community responses. This understanding facilitates managing ecosystem services and biodiversity.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The primary research and education fields of MAE support conservation management, understanding natural and anthropogenic factors governing biodiversity, understanding and mitigating consequences of climate change, reef rehabilitation and creation, closing nutrient cycles, natural resource management, understanding ecological resilience, and nature-based solutions.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	In the next decennia the growing world population and its consumption is expected to increase the pressure on marine ecosystems as a source of food and feed, energy, transport, space, recreation, functional chemicals, etc. Marine ecosystems can only support these and other functions in a sustainable way when combinations of ecosystem services are smartly chosen to make them strengthen instead of hamper each other, while seriously respecting and managing the health and biodiversity of natural ecosystems. The primary research and education of MAE focusses on marine animals and the communities of which they are part, with an emphasis on the relationship between the animal and its abiotic and biotic environment. This understanding is applied to contribute to developing a nature inclusive ecosystem services approach for different environmental conditions and contexts (e.g. North Sea, tropical, polar) and thus contributes to socio-ecological health, wellbeing and resilience.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Soil Biology (SBL)

Soil Geography and Landscape (SGL)

Soil Physics and Land Management (SLM)

Soil Chemistry (SOC)

Aquatic Ecology and Water Quality Management (AEW)

Cultural Geography (GEO)

Hydrology and Environmental Hydraulics (HWM)

Forest and Nature Conservation Policy (FNP)

Forest Ecology and Forest Management (FEM)

Remote Sensing (GRS)

Geo-information Sciences (GRS)

Landscape Architecture (LAR)

Land Use Planning (LUP)

Air Quality and Atmospheric Chemistry (MAQ)

Meteorology (MAQ)

Plant Ecology and Nature Conservation (PEN)

Wildlife Ecology and Conservation (WEC)

Water Resources Management (WRM)

Water Systems and Global Change (WSG)

Environmental Systems Analysis (ESA)



Environmental Sciences Group

Soil Biology (SBL)

Chair holder: Jan Willem Groenigen

<i>Name of the chair group (in English and Dutch).</i>	Soil Biology (SBL) / Bodembioogie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	SBL regards soil life as key to sustainable (agro)ecosystems. Soil biologists study the role of soil organisms in element (carbon, nutrient) transformations in soils. Research themes are: fertile soils; soil functional biodiversity; soils and climate change.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	SBL's research aims at sustainable soil use and increased biodiversity. Thereby it contributes to the WUR domains Natural Resources & Living Environment and Food, Feed & Bio-based Production.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	SBL studies the role of the soil biota in ecosystem processes on a range of scales: from the life in a soil ped ???to the role of soil biota in climate change on a global scale. The mission is to use soil processes driven by soil biota to develop and maintain sustainable agro-ecosystems. Soil biota being studied are earthworms, enchytraeids (potworms), microarthropods, nematodes, fungi, bacteria and archaea. Research is classified in four main lines that are interconnected: • the role of soil biota in nutrient cycling to enhance plant soil interactions and associated ecosystem services; • the richness and community composition of soil biota coupled with soil functions (nutrient provision, carbon management, pest and disease resilience and resistance, water regulation and purification) in (agro)ecosystems; • how soil and land management can enhance soil health and the beneficial soil functions provided by soil biota; • the effects of climate change on soil life, and the controls that soil life exerts on greenhouse gas emissions from the soil.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Soil Geography and Landscape (SGL)

Chair holder: Prof. Veerle Vanacker

<i>Name of the chair group (in English and Dutch).</i>	Soil Geography and Landscape (SGL) / Bodemgeografie en Landschap
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	SGL improves and shares understanding of soil patterns and landscape dynamics. The chair takes an integrative approach that combines biophysical and human elements to gain insight into past, present and future system dynamics, and to support sustainable land management.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Through the understanding of soil patterns and landscape dynamics which includes biophysical and human elements, SGL aims to support sustainable land management.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research and projects of SGL are focused on issues that have a well-defined place within a research chain, reaching from problem identification - in close interaction with stakeholders and specialists from other disciplines - to generation of answers. It ranges from fieldwork, to scenarios and modelling. The following elements may be distinguished in the chain: • developing quantitative methods for obtaining soil patterns on different scales, using expert knowledge, remote sensing, GIS, and geostatistics; • interpretation in space and time of soil patterns and corresponding soil properties on different scales; • interpretations in the context of land evaluation, focusing on soil and water quality and the sustainability of land utilisation types. Research is grouped in the themes: • crop growth and vegetation development; • genetic resources and diversity; • sustainable production and conservation systems; • methodological links; The mission is to contribute to the development of alternative land use types which preserve soil quality and are sustainable. Basic research in this context is focused on the question as to which soil data are needed in the interdisciplinary analysis of sustainability, and how existing soil data can be used to derive unavailable but required data by pedo-transfer functions.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Soil Physics and Land Management (SLM)

Chair holder: : vacant

<i>Name of the chair group (in English and Dutch).</i>	Soil Physics and Land Management (SLM) / Bodemfysica en Landgebruik
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	SLM's research focuses on soil physical processes including distribution and transport of particles, heat, water and solutes over the soil surface and through soils and groundwater, in interaction with land management across various spatio-temporal scales.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	SLM advances understanding of soil physical processes and their role in supporting soil functions, and addresses sustainable land management to support climate adaptation and global societal challenges of water and food security.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The SLM group develops fundamental and applied knowledge of soil physical processes in relation to soil and land management, while also contributing to the academic training of future scientists and other professionals. The group's research investigates how soil physical processes influence and are influenced by land management, with implications for soil quality, water resources, crop growth, vegetation, and associated ecosystem services. A central focus lies on: • Soil physical processes: physical soil characteristics and transport of particles, heat, water, and solutes over the soil surface and through the soil profile and groundwater; • Soil-plant-water interactions: soil physical processes in the root zone, water movement, and ecohydrological interactions and interventions that influence plant growth; • Soil management and land restoration: measures and approaches to address degradation, conservation, and restoration of physical soil quality. SLM conducts research across multiple scales from plot to watershed, using field studies, laboratory experiments, modeling, and scenario analysis, with a strong emphasis on co-development with stakeholders to ensure practical relevance and innovation. The group collaborates with land managers and policymakers to design, test, and assess innovative practices and scaling strategies to prevent and remediate soil degradation and manage waterflows and their implications for water quality.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	27 October 2025.



Environmental Sciences Group

Soil Chemistry (SOC)

Chair holder: Prof. Rob Comans

<i>Name of the chair group (in English and Dutch).</i>	Soil Chemistry (SOC) / Bodemchemie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	SOC studies the characterisation of soil particles (DOM, Fe-oxides) and speciation of compounds in the soil by fundamental research and by more practically motivated studies.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Knowledge of soil chemistry and the chemical soil quality is essential for e.g. food production, soil biodiversity, and groundwater quality.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Chemical substances as nutrients and contaminants interact with reactive soil particles, e.g. with organic matter, clay, iron oxide and aluminium and iron hydroxide. This will affect their bioavailability and mobility in the soil. Soil particles also interact with each other, for example, organic matter adsorbs onto iron hydroxide. This affects soil structure (formation of soil aggregates) and ion binding (competition effects). SOC's research includes the following topics: • multi-surface adsorption modelling of cations and anions on organic matter, clay and iron oxides; • dose-response relationships: heavy metals, such as copper, show a strong soil type and pH dependency; • adsorption of ions (heavy metals, phosphate, arsenate, etc.) on iron oxides; • binding of cations (heavy metals, calcium) on organic matter; • binding of cations on clays; • binding of organic matter molecules such as fulvic or humic acid, onto iron oxides; • new method for measuring free ion concentrations.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	7 December 2023.



Environmental Sciences Group

Aquatic Ecology and Water Quality Management (AEW)

Chair holder: Prof. Bart Koelmans

<i>Name of the chair group (in English and Dutch).</i>	Aquatic Ecology and Water Quality Management (AEW) / Aquatische Ecologie en Waterkwaliteitsbeheer
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	AEW aims to generate novel insights that can help preserving and restoring marine and freshwater ecosystem services. Methodology of research is a systems approach linking physical, chemical and biological processes across scales.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The multidisciplinary research approach and the aim to develop state-of-the-art modelling and techniques solving the great challenges caused by e.g. globalisation and climate change, fit in the domain and strategy of WU.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research focuses on the physical, chemical and biological processes occurring in aquatic ecosystems. The main goal is to develop new knowledge and better instruments for restoration and management of these ecosystems. The research is multidisciplinary (environmental engineering, environmental chemistry and aquatic ecology) and ranges from the laboratory scale (detailed process studies) to the scale of actual ecosystems (field studies). The multidisciplinary expertise of the team comes together in the development of integrated models for ecosystem and water quality management. The research approach thus is quantitative with a strong emphasis on state-of-the-art statistical and modelling techniques. Three main areas of research are identified: • transport and fate of micropollutants and nutrients; • effects of pollution, exploitation and climate on the functioning of aquatic ecosystems; • resilience and critical transitions in aquatic and other complex non-linear systems.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Cultural Geography (GEO)

Chair holder: Prof. Edward Huijbens

<i>Name of the chair group (in English and Dutch).</i>	Cultural Geography (GEO) / Culturele Geografie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	GEO is committed to social theory in all its spatial articulations. The group advances creative, critical-constructive scholarship through exploring the ecological and social challenges facing all life on earth.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	GEO offers socio-spatial and socio-cultural perspectives on core themes of WUR: the environment, development, and well-being, including landscape governance and identity; sustainable tourism, heritage practices, and landscapes; mobility, migration, and social integration.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Interdisciplinarity is at GEO's core. Research and education build on an interdisciplinary approach and on diverse expertise backgrounds of staff, from human geography, spatial cognition, sociology, anthropology, archaeology, social psychology, gender studies, and science and technology studies. GEO encompasses both theoretical and empirical work. Qualitative approaches are used as well as quantitative methods. GEO has consolidated its strong focus on landscape studies and tourism, leisure and mobility studies, but has also incorporated more recent work on the politics of life. The group's research may be broadly identified with the following three main themes, with a strong emphasis on the first two: • space, place and landscape; • tourism, society and the environment; • politics of life.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	2 December 2024.



Environmental Sciences Group

Hydrology and Environmental Hydraulics (HWM)

Chair holder: Prof. Martine van der Ploeg

<i>Name of the chair group (in English and Dutch).</i>	Hydrology and Environmental Hydraulics (HWM) / Hydrologie en omgevingshydraulica
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	HWM aims to advance fundamental understanding and prediction of hydrological processes in river basins, aquifers and deltas in support of water management.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Climate change, land use change and other human influences have a substantial effect on the hydrological processes in river basins, aquifers and deltas, and therefore need to be understood to cope with changes and enable sustainable use.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research focuses on catchment-scale hydrological processes and river basin water management. With respect to hydrology, special emphasis is put on the development of physically based and conceptual models of surface and subsurface flow processes to examine the hydrological system and its component processes and to study the effects of climate change, land use change and other human influences on the water balance of catchments. Spatial information technology, such as remote sensing and geographic information systems, are essential tools in this field. To improve model calibration and validation procedures and to improve on-line and off-line simulation performance advanced (geo-)statistical data mining techniques are being studied and applied. Central in this research are mathematical tools, such as neural networks, non-linear optimisation procedures, disaggregation techniques and data assimilation. HWM uses these models and techniques to study floods and droughts in river basins. Another main theme of research is river hydraulics and morphology as an element of hydrological modelling and to support sustainable river and land management planning. Theoretical developments are tested in a fully equipped laboratory.
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Environmental Sciences Group

Forest and Nature Conservation Policy (FNP)

Chair holder: Prof. Georg Winkel

<i>Name of the chair group (in English and Dutch).</i>	Forest and Nature Conservation Policy (FNP) / Bos- en Natuurbeleid
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	FNP focuses on the political, socio-economic and cultural dimensions of forests and nature. It covers themes such as deforestation, forest transitions, climate change, biodiversity conservation and landscape management in the global North and South.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Understanding and finding solutions for nature and forest policies to global challenges such as deforestation, forest transitions, climate change and biodiversity loss.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	FNP focuses on interactions between people and nature in a broad sense, and with a specific interest in forests. The chair group covers three interrelated themes: • Forest and nature policy and governance (political sphere): This theme explores how paradigms, discourses, institutions, and interests play out in policy making. The group also studies the impacts policies have, from global to local levels, and the difference these make to forests and nature. • Value chains and markets for ecosystem services (market sphere): This theme analyses the interplay of markets and policies, including informal practices, along forest landscape related value chains. This includes markets for diverse ecosystem services. A specific focus is on how local land managers respond to change through their land use practices. • Interconnections between humans and non-human nature (societal sphere): This theme explores how humans enact their relationships with nature. Topics range from conflicts to stewardship, from community-based forestry to renaturing cities, and from plural values and meanings of non-human nature to understanding transformative change. FNP embraces theoretical and methodological pluralism, working with concepts originating from the political sciences, sociology, anthropology, geography, and economics. The group enjoys collaboration across disciplines to address wicked problems. Research takes place in locations all over the world, from the local to the global level.
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Environmental Sciences Group

Forest Ecology and Forest Management (FEM)

Chair holder: Prof. Douglas Sheil

<i>Name of the chair group (in English and Dutch).</i>	Forest Ecology and Forest Management (FEM) / Bosecologie en Bosbeheer
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	FEM aims to understand the structure and functioning of forest ecosystems and their responses to changing environmental, biotic and social conditions, and to apply this knowledge for the development of sustainable forest resource use systems.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	FEM's mission is to understand the growth of trees and forests in relation to site and climate, and to apply this knowledge in support of sustainable forest management aimed at provision of ecosystem services.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	FEM research is conducted across a range of spatial and temporal scales and in both temperate and tropical forests, involving a wide range of organisational levels: from cell, individual tree, population, species, forest, landscape to global scales. This allows scaling up from detailed eco-physiological observations to large scale patterns, but also to scale down. The research approach is interdisciplinary, and increasingly transdisciplinary, where the group combines field observations with experiments (field and greenhouse), (wood) laboratory analyses, tree and forest models and scenario analyses. The group also works on socio-ecological systems and explicitly works with non-academic stakeholder groups. Expertise includes ecophysiology, wood anatomy, tree-ring research, tree and forest modelling, forest ecology, forest management, agroforestry, and social ecological systems, where forest biomes under investigation range from temperate to tropical, from natural to production, agroforestry systems, and forests in human modified landscapes. The research is both fundamental and applied and centred on three main themes: • ecology of forests in a changing world; • understanding biodiversity and functional diversity in relation to resource gradients; • sustainable supply of forest resources and environmental services.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Remote Sensing (GRS)

Chair holder: Prof. Kirsten de Beurs

<i>Name of the chair group (in English and Dutch).</i>	Remote Sensing (GRS)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	Remote sensing deals with quantitative, physical and statistical retrieval of land surface parameters relevant for multiple monitoring applications and earth system modelling.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	To find answers and solutions to global environmental challenges, research and improvement of spatial competences is essential.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair advances foundations for quantitative land remote sensing and improves in-situ data collection and analysis for development, calibration and validation of the next generation remote sensing data and products. Particular attention is paid to the use of innovative in-situ and laboratory-based measurements, unmanned airborne vehicles, radiative transfer models, vegetation indices, data assimilation methods, linking soil-vegetation-atmosphere transfer models, soil spectroscopy and calibration and validation procedures. Scientific research is underpinned by long-term expertise in using advanced earth observation techniques (i.e. imaging spectroscopy and LIDAR) in combination with ecological and dynamic vegetation models for applications. Some examples are biodiversity assessment at habitat and ecosystem level, assessing vegetation characteristics and carbon stocks and combining sensing techniques with crop growth models for precision farming. Dedicated research activities are ongoing in the real-time monitoring of global deforestation and forest degradation, precision agriculture, tracking of forest carbon, land use change and greenhouse gas emissions, remote sensing support for ecological modelling, and mapping and assessment of soil properties.
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Environmental Sciences Group

Geo-information Sciences (GRS)

Chair holder: Prof. Systze de Bruin

<i>Name of the chair group (in English and Dutch).</i>	Geo-information Science (GRS) / Geo-informatiekunde
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The group researches and educates in geo-information science, big data analytics, and human-space interactions in thematic domains such as agro-environmental applications and/or smart cities.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The work contributes to improving spatial competences for a sustainable world, and to WUR's strategic themes such as resource use efficiency, resilience, metropolitan solutions, and big data technologies and methodologies.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The overall scope is to conduct fundamental research in the field of geo-information science related to, e.g.: • the uptake of evolving geo-information technologies and methods in innovative research; • improving spatio-temporal (big) geo-data analysis (incl. error estimation); taking advantage of multi-source data; • developing novel approaches for assessing land (use) dynamics on different scales, and work towards their integration in interdisciplinary research, models and applications; • foster understanding, exploration, and prediction of human behaviour in our environment; • increasing the role of geo-information in management of land resources, and enhance the adaptability of agro-environmental communities.
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Environmental Sciences Group

Landscape Architecture (LAR)

Chair holder: Prof. Sanda Lenzholzer

<i>Name of the chair group (in English and Dutch).</i>	Landscape Architecture (LAR) / Landschapsarchitectuur
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	LAR studies how the landscape has originated, its present condition, and functional and sustainable future perspectives. Special attention is paid to sustainability, metropolitan areas, intertwining of urban and rural areas, and planning.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	At WUR landscape architecture is characterised by a thorough tradition of connecting physical landscape genesis with anthropogenic land use, paying special attention to the countryside and the role of landscape in urbanisation processes.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The scientific scope of the LAR chair is to formulate theories and development of landscape architecture by designing methods aimed at sustainability on a regional scale, in metropolitan areas and the large-scale public space. This is done along three methodological approaches in interdisciplinary, multidisciplinary and transdisciplinary collaboration: • research on design covering the study of finished products, critical project analysis and other reflections on design products; • research for design encompassing the research that informs the making of design decisions; • research through design providing knowledge, embodied in the form of new artefacts. The chair focuses on the following societally relevant topics: energy transition, sustainable water management, rural transformations, urban climate, built environment and public space, the new Dutch Environment and Planning Act. Special attention is paid to the balance between results of research in a traditional scientific sense and results that have weight in the evaluation systems of designing disciplines.
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Environmental Sciences Group

Land Use Planning (LUP)

Chair holder: Prof. Martha Bakker

<i>Name of the chair group (in English and Dutch).</i>	Land Use Planning (LUP) / Ruimtelijke planning
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	LUP develops knowledge and expertise, and teaches on spatial planning and accompanying legislative and financial instruments that contribute to deliberate modifications of landscapes.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The societal challenges explored include climate adaptation, transitions in the countryside, and urban developments. Many of these challenges are manifested within landscapes that require comprehensive planning and design solutions.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research topics of LUP include climate adaptation of metropolitan deltas, rural revitalisation, the energy transition, landscape quality, and rural-urban migration. Addressing these topics has to consider a clear spatial dimension, as problems typically arise from a particular spatial distribution of water, nutrients, people, capital, power, etc. LUP analyses planning practices and processes that can contribute to more favourable spatial distributions, and critically reflects on them in terms of effectiveness (in terms of landscape quality), efficiency, legitimacy, justice, and practicability. Spatial planning – as a scientific discipline – is considered as the study of both processes of planning and objects of planning. LUP has a fairly strong focus on the latter, i.e. the landscape. Moreover, it has a specific focus on landscapes that are a mix of agricultural and semi-natural and urbanised areas. Typical for the Wageningen approach to planning is the strong integration between the following three research dimensions: • the landscapes, including the processes by which they are shaped and the services they provide; • the study of (government) decision making, e.g. top-down or bottom-up, technocratic or participatory; • the instruments available for making the actual modifications, ranging from land policy instruments to physical modifications.
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Environmental Sciences Group

Air Quality and Atmospheric Chemistry (MAQ)

Chair holder: Prof. Maarten Krol

<i>Name of the chair group (in English and Dutch).</i>	Air Quality and Atmospheric Chemistry (MAQ) / Luchtkwaliteit en Atmosferische Chemie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	Research and teaching comprises: • chemistry of the atmospheric boundary layer; • earth surface exchange processes of trace gases and air pollutants (atmosphere-biosphere interactions).
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Knowledge and understanding of the atmosphere and its relevance for weather, climate and air, are part of the fundamentals to improve the quality of life.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Many social questions about climate change, greenhouse gases, acidification and eutrophication of ecosystems, particulate emissions, and human health all have a common ground with air quality. In many densely populated regions, as in the Dutch delta, urban air quality is regularly brought under discussion. The chair MAQ provides basic disciplinary knowledge of air quality on local, regional, continental and global scales (processes, measurements and models); the implications of atmospheric chemistry for atmospheric radiation; and basic and policy-relevant knowledge of the relationship between air quality and health. This knowledge is important for: • understanding air pollution; • the interaction between meteorology and air pollution; • model-based conversion of emission to concentration; • interpretation of satellite data. Emissions are converted to atmospheric concentrations, and further to exposure of individuals to air pollution, and finally to health effects and the effect of mitigating measures. In addition, technological developments in sensors and satellites are currently enabling the mapping of air quality with more detail, including the scale on which people live. Finally, there is an increasing demand for applied and interdisciplinary research in the field of air quality, interconnecting with themes such as sustainable urban development.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Meteorology (MAQ)

Chair holder: Prof. Jordi Vilà-Guerau de Arellano

<i>Name of the chair group (in English and Dutch).</i>	Meteorology (MAQ) / Meteorologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair focuses on atmospheric/tropospheric research to providing answers to current and future societal demands such as how atmosphere-land processes influence extreme weather events, and their potential for enhancement due to climate change and natural/urban landscape modifications.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Meteorology chair's mission is to advance knowledge and educate students on the fundamental principles and applications of weather and climate sciences, and to relate them to the WUR core themes (food production, artificial intelligence).
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The core of the chair's research is boundary-layer meteorology and land-atmosphere interactions under a wide range of weather and climate conditions. Research on the understanding of the surface energy balance and atmospheric processes such as turbulence, radiation, and clouds must address challenges driven by global warming and by the rise in greenhouse gas concentrations. This fundamental knowledge is transferred to improve weather and climate model representations (parameterisation). This know-how enables the chair to play an active role in meteorological topics that influence air quality, urban/rural environments, and agrometeorological research. The chair uses an extensive set of methodologies that combine theoretical studies, modelling and observations. It develops and maintains a comprehensive hierarchy of numerical atmospheric models, ranging from numerical simulation techniques that explicitly solve turbulence, to urban and regional scales. Conceptual models are also developed with a view to building bridges between theoretical and numerical findings, and experimental field campaigns related to land-atmosphere interactions. The chair maintains a weather station, where new instrumental techniques are developed and tested. The instruments and experimental strategy are extended to urban areas by deploying a dense network of weather stations completed by mobile platforms.
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Environmental Sciences Group

Plant Ecology and Nature Conservation (PEN)

Chair holder: Prof. David Kleijn

<i>Name of the chair group (in English and Dutch).</i>	Plant Ecology and Nature Conservation (PEN) / Plantenecologie en Natuurbeheer
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	PEN studies and teaches the processes and underlying mechanisms that link biodiversity, ecosystem functioning and service delivery and aims to implement these insights in the design of effective biodiversity conservation strategies.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The work of PEN is in the heart of the WUR domain Natural Resources & Living Environment and is key to the research theme Nature-inclusive and Landscape.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	PEN examines the impact of land-use change and climate change on biodiversity and the links between biodiversity, ecosystem functioning and the delivery of ecosystem services and public goods. These insights are used to design more effective conservation strategies and to inform policy makers and the general public. Research is carried out on a range of spatiotemporal scales using a variety of study systems but firmly rooted in plant ecology. PEN explores whether the mechanisms underlying biodiversity-ecosystem functioning relations, as identified in experimental plant communities at the plot level, can explain the relations between biodiversity and delivery of ecosystem services and public goods on the landscape scale in natural ecosystems (including tundra, peat bogs and savannah) as well as in agricultural landscapes.
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Environmental Sciences Group

Wildlife Ecology and Conservation (WEC)

Chair holder: Prof. Frank van Langevelde

<i>Name of the chair group (in English and Dutch).</i>	Wildlife Ecology and Conservation (WEC) / Wildlife-ecologie en -beheer
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	WEC offers insights into the densities and distributions of animals, and the interactions between animals and the biotic and abiotic components of their environments.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	With its focus on wildlife ecology and conservation in both natural and human-dominated areas, the chair contributes to sustainable use of our planet's resources.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	WEC studies how changing environments affect wildlife densities, distributions, and interactions. The group focuses on changes in food availability, predators, pathogens, land use, and climate, and the effects are examined in the context of evolutionary fitness and ecological resilience. WEC embraces observational, comparative, experimental, and theoretical studies, which typically have a large field component. Investigations focus on a range of study systems, spanning from the individual level to the ecosystem level. The group primarily addresses fundamental scientific challenges, but also contributes to the application of this knowledge to advance evidence-based wildlife conservation and other applied fields including agriculture, forestry, spatial land use planning, and public health. WEC's topics include the densities and distributions of large herbivores, interactions between large herbivores and the plants they eat, the spread of infectious diseases by wildlife hosts, and the influence of global change on population and ecosystem resilience. These form the core of WEC's interdisciplinary projects within an international context. Furthermore, the group integrates advancements in sensor technology and big data analytics to track animals, measure physiological parameters, quantify population dynamics, and monitor ecological resilience. These and other novel approaches will help to advance fields beyond wildlife ecology, including conservation science.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Water Resources Management (WRM)

Chair holder: Prof. Petra Hellegers

<i>Name of the chair group (in English and Dutch).</i>	Water Resources Management (WRM)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	WRM is engaged in interdisciplinary research and education at the intersection of water, technology and society. The field of study is integrated water resource management and governance questions in the developing world, and increasingly in the developed world.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The overall mission is to improve water and food securities, by paying particular attention to water-based forms of social vulnerability, which is an important part of the WUR domain.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Central questions are how patterns of allocation and use of water can be explained as the combined outcome of technological choices, socio-ecological dynamics and cultural-political processes. WRM's research questions always reflect a combination of the following principles: • commitment to contributing to equity, democracy and sustainability of water management; • socio-technical approach to study how water management practices, policies and discourses are shaped by the interplay of multiple perspectives: socio-political, technological and physical processes; • spatial, temporal and organisational scales of analysis to study how water issues are shaped and linked across multiple scales in order to better understand tensions that occur. The research is grouped in three themes: • water and technology: effects of technologies on water users, water use efficiencies and productivities for various spatiotemporal scales of analysis; • water in global food trade: local water implications and conflicts of global food and biofuels trade, foreign direct investments and corporate farming; • the politics of water expert knowledge: class, ethnic and gender inequalities embedded in and reproduced by water governance forms, water policies, water development and allocative interventions and water knowledge production.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Water Systems and Global Change (WSG)

Chair holder: Prof. Nynke Hofstra

<i>Name of the chair group (in English and Dutch).</i>	Water Systems and Global Change (WSG)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	WSG aims to improve the understanding of anthropogenically driven changes in water cycles in relation to interactions between climate, water, energy and agricultural systems.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	WSG wants to create new knowledge to contribute to sustainable water systems in a changing global environment, aimed at providing sufficient, clean and climate-proof water for society and nature.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	WSG performs integrated assessments of water systems, in which knowledge on water systems and global change is integrated. To this end, a variety of models and observations is used. WSG combines modelling analyses with participatory approaches. The water assessments focus on the effect of changing global drivers on water systems; adaptation and mitigation strategies, comprising novel approaches such as adaptive water management and ecosystem-based adaptation; and climate-water services. WSG thus takes an integrated approach across the water, food and energy systems, at multiple spatial and temporal scales. Research is grouped in four main lines: • land-water-climate interaction; • water pollution assessment; • adaptive planning and design; • water-food-energy nexus. Besides, there are two cross-cutting themes: • climate-water information services, to develop science-based climate and water services, tailored to the needs and in interaction with users such as farmers, power companies and water managers; • future water stress, to develop novel tools to identify and evaluate solutions for future water stress. These tools account for the demand for water by society and nature, the availability of water, and the quality of water. This is studied on the basin, regional, continental and global scales, in spatially explicit models.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Environmental Sciences Group

Environmental Systems Analysis (ESA)

Chair holder: Prof. Hannah Zanten

<i>Name of the chair group (in English and Dutch).</i>	Environmental Systems Analysis (ESA) / Milieusysteemanalyse
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	Environmental systems analysis is a quantitative and multidisciplinary research field aimed at analysing, interpreting, simulating and communicating complex environmental problems from different perspectives.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Exploring, modelling and communicating environmental problems and their causes, mechanisms, effects and potential solutions, by combining multi- and transdisciplinary research and by integrating knowledge from natural, social and engineering sciences.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research combines ecological, economic, technological and policy perspectives in order to develop new insights into the causes, effects and potential solutions to complex environmental issues. All research is related to environmental change and sustainability comprising three specific fields: climate change, pollution and nutrients, and ecosystem services and biodiversity. Research approaches and tools include: • appraisal tools for ecosystem functions, services and their valuation; • models integrating different components, dimensions and scales; • decision support systems for integrated pollution and/or ecosystem management; • integrated environmental assessments with special emphasis on participatory methods; • methods for analysing and communicating uncertainty. These tools are applied to further assess and develop policies and management options, and to provide input for national and international decision-making processes.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Agricultural Biosystems Engineering (FTE)

Applied Mathematics (MAT)

Applied Statistics (MAT)

Artificial Intelligence (AIN)

Bioinformatics (BIF)

Biosystematics (BIS)

Cell and Development Biology (CDB)

Crop and Weed Ecology (CSA)

Crop Physiology (CSA)

Entomology (ENT)

Farming Systems Ecology (FSE)

Genetics (GEN)

Horticulture and Product Physiology (HPP)

Molecular Biology (MOB)

Nematology (NEM)

Phytopathology (PHP)

Plant Breeding (PBR)

Plant Physiology (PPH)

Plant Production Systems (PPS)

Virology (VIR)



Plant Sciences Group

Agricultural Biosystems Engineering (FTE)

Chair holder: Prof. Peter Groot Koerkamp

<i>Name of the chair group (in English and Dutch).</i>	Agricultural Biosystems Engineering (FTE) / Agrarische Bedrijfstechnologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair carries out research and education to enhance, exploit and disseminate the potential of technology in agricultural production systems to fulfil the needs of mankind and nature in a sustainable way. The focus is on design methodologies, with special attention for animal production systems, and on operational management and robotics of biosystems, with special attention for plant production systems.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair fits in the WUR domain by developing technological tools and methods for sustainable production of food, feed and biomass, addressing the challenges of limited natural resources, plant-soil-animal health, environmental impact and quality and quantity of labour.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	FTE combines methods and tools from technical sciences with biological (plant, animal, soil), environmental, agricultural and social sciences to study, understand, manage and design biosystems. Technical components, biological organisms (plants, animals) and human interactions are combined. Scientific challenges are in understanding the impact of and dealing with non-linear dynamic response, errors in measured data and control actions, disturbances from outside the systems (weather, price levels), uncertainty and (spatial) variation within the systems (between biological entities, between farms), and apparent trade-offs in current systems to improve performance on multiple aspects of sustainability at the same time. The generic comprises a cycle of sensing, data processing and modelling of biosystems (formal understanding), making of algorithms to support management or directly control robotic and autonomous machines and systems. This is done at operational (machine intelligence), tactical (technological solutions), and strategic (innovative system designs) levels. The focus is on six research lines: • Active perception and robotics; • Advanced machine vision; • Self-learning in autonomous systems; • Modelling and control algorithms; • Design of sustainable systems; • Assessment of environmental impacts.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	29 August 2022.



Plant Sciences Group

Applied Mathematics (MAT)

Chair holder: Prof. Peter van Heijster

<i>Name of the chair group (in English and Dutch).</i>	Applied Mathematics (MAT) / Toegepaste Wiskunde
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair is responsible for all mathematics education at Wageningen University and performs research on a broad variety of topics, in which mathematical modelling and methodology is applied to real life systems in agriculture, plant sciences, animal sciences, ecology, and socio-economics.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair Applied Mathematics takes, together with the chair Statistics, a central position within Wageningen University, since quantitative approaches become more and more important within the Life Sciences, Social Sciences and Environmental Sciences.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Applied Mathematics, as part of the cluster Biometris, helps to cover a whole line of research, from fundamental development of mathematical methods to commercial application of this knowledge and can be characterised as “Quantitative methods brought to life”. The chair Applied Mathematics cooperates with many other chair groups on a great variety of topics. Examples of current research are the resilience of socio-economic systems, the dynamics of plant-insect interactions, the identifiability of systems biology models, patterning on plant cell walls in relation to microtubular dynamics, damage detection in water supply systems, trichome pattern formation on plant leaves, stochastic processes in synthetic biology, and matrix models and survival analysis for population dynamics.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Applied Statistics (MAT)

Chair holder: Prof. Carel Peeters

<i>Name of the chair group (in English and Dutch).</i>	Applied Statistics (MAT) / Toegepaste Statistiek
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair group Applied Statistics is responsible for the statistics courses of WUR at BSc, MSc and PhD level. The group further develops courses for commercial and non-commercial organisations outside WUR, especially in the area of statistics and data science for life and environmental sciences. The research programme covers a wide spectrum of topics that are relevant to WUR with a focus on statistical models for genetics, genomics and phenomics.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	In all domains of WUR (Plant, Animal, Food, Environmental, Social Sciences), reproducible research requires design of experiments and surveys before data collection and statistical analysis after data collection. A strong statistics group is essential to achieve high quality research. The statistics group should provide education, consultation and support as well as tools, methods and software to address quantitative questions in the WUR domains. Furthermore, imposition and maintenance of statistical prescriptions guarantees research integrity.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research of the chair is determined by statistical genetics, genomics and phenomics. This includes mixed models, penalised regression, functional data analysis, network methodology, stochastic differential equations, Hidden Markov models and various Bayesian approaches to plant adaptation and genotype by environment interaction. In addition, machine learning and deep learning techniques are studied and implemented. Plant phenotypes are statistically modelled as functions of DNA polymorphisms, time, environmental inputs and omics data. There is active collaboration with physiologists, geneticists, plant breeders and further biologists. Increasingly, the modelling approaches are reminiscent of stochastic systems genetics and biology. The statistical work on genetics, genomics and phenomics is embedded in national and international research projects (STW, NWO, EU, BMGF). An important part of the research is done in collaborative projects with companies, especially plant breeding companies.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Artificial Intelligence (AIN)

Chair holder: Prof. Ioannis Athanasiadis

<i>Name of the chair group (in English and Dutch).</i>	Artificial Intelligence (AIN) / Kunstmatige Intelligentie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The Artificial Intelligence group creates, develops, implements and teaches artificial intelligence methods and techniques, inspired by applications in the domains of Wageningen University and Research, and investigates the potentially disruptive ethical, legal and societal implications of artificial intelligence innovations.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Artificial intelligence methods and techniques and their application in data science have the potential to help address the global challenges Wageningen University focuses on, provided the impact on society is carefully considered.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Artificial intelligence is concerned with the development and study of intelligent machines. The Artificial Intelligence group conducts use-inspired research in this field, driven by problems and societal challenges specifically encountered in the domains of Wageningen University and Research, e.g., the environmental, social, life and engineering sciences. Research involves advancing methods and techniques in artificial intelligence, including knowledge engineering, machine learning and deep learning. Given the potentially disruptive nature of artificial intelligence innovations, attention to the governance, ethical, legal and societal ramifications of its use are an integral part of the research program. Education includes fundamental and applied methods of artificial intelligence and extends into domain- and challenge-based learning in connection with domain experts. Value creation follows from the development of new methods and techniques that both support use-inspired research and offer opportunities for solving societally relevant problems through data science, in collaboration with experts in mathematical sciences, computer science and experts in the domains of the Wageningen University and Research.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	11 March 2024.



Plant Sciences Group

Bioinformatics (BIF)

Chair holder: Prof. Marnix Medema

<i>Name of the chair group (in English and Dutch).</i>	Bioinformatics (BIF) / Bioinformatica
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The Bioinformatics chair develops new computational methods to analyse omics data and uses these to address biological questions. The chair also educates life scientists and bioinformaticians in the use and development of bioinformatics methodology.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Progress in life science increasingly depends on the correct analysis, integration and interpretation of ever-larger data volumes. Bioinformatics expertise is essential to perform state-of-the-art research and educate life scientists and bioinformaticians at Wageningen University.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The Bioinformatics chair develops novel computational methods for the representation, analysis and integration of biological data, specifically omics data, to understand how the interplay of genomes, transcripts, proteins and metabolites results in the phenotypic complexity observed in living systems. The chair performs interdisciplinary research at the forefront of bioinformatics, both independently as well as in collaboration with partners in academia and industry, to address a wide range of biological questions. The chair also contributes to biological research in general, by disseminating useful methods and databases, and aims to be the bioinformatics centre of expertise within Wageningen University. Finally, the chair educates new generations of life scientists and bioinformaticians, providing them with the technological knowledge and skills required to not only solve the problems of today, but to meet the challenges of tomorrow.
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Plant Sciences Group

Biosystematics (BIS)

Chair holder: Prof. Eric Schranz

<i>Name of the chair group (in English and Dutch).</i>	Biosystematics (BIS) / Biosystematiek
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The Biosystematics chair addresses fundamental questions about biodiversity and its origins. The chair collects, analyses, interprets and teaches using an array of approaches from field-based observations, biodiversity collections and bioinformatic analysis of biochemical and genomic data.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The mission of WUR, to explore the potential of nature, is also the essence of Biosystematics. The focus on preserving, studying and utilising biodiversity resonates with societies' rising sense of urgency to protect biodiversity that is increasingly under threat.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The Biosystematics chair is focused on the origin and maintenance of plant and insect biodiversity, above and below species level. The chair investigates speciation, domestication and plant-animal interactions, and uses phylogenetic patterns and comparative genomics (phylogenomics) to test hypotheses on the underlying processes. It applies a comparative approach to study species-level systematics of insects and plants, including crops, and the geological, ecological and molecular processes that have shaped existing biodiversity in particular clades. The chair extrapolates from fundamental understanding of how and why evolutionary changes have occurred to asking what new changes are feasible, such as the evolution of new traits in crop plants.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Cell and Development Biology (CDB)

Chair holder: Prof. Viola Willemsen

<i>Name of the chair group (in English and Dutch).</i>	Cell and Developmental Biology (CDB)/ Cel- en ontwikkelingsbiologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The Cell and Developmental Biology chair studies developmental processes at the (single) cellular level. Central to many developmental steps in the plant life cycle are differentiation events that establish the biochemical and physical composition of the cell to regulate growth and division.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair does fundamental research on plants that forms the basis for application of plant sciences to various domains of WUR, notably food and the living environment.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The Cell and Developmental Biology chair studies developmental processes at the (single) cellular level. Central to many developmental steps in the plant life cycle are differentiation events that establish the biochemical and physical composition of the cell to regulate growth and division. Therefore, the chair aims to elucidate how cellular phenomena, like trafficking, polarisation and control of gene expression, drive the key processes that determine cell identity and morphogenesis. In addition to such cell intrinsic cues, cell-to-cell signalling spatially coordinates developmental programmes within tissues. As such, cell-cell communication is a major driver for cell fate specification. The special focus is on the identity of regulatory cues, their distribution routes and how they exert their control at the molecular and cellular level. Questions addressed include: How are asymmetric cell divisions orchestrated? How are cell polarity cues distributed and how do they determine cell fate? How does cell-cell communication via plasmodesmata control cell identity? How are biotic and abiotic signals perceived by root cells and how do they affect plant developmental programs? How does cell morphology influence developmental pathways? How and which gene networks determine cellular identity?
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Crop and Weed Ecology (CSA)

Chair holder: Prof. Niels Anten

<i>Name of the chair group (in English and Dutch).</i>	Crop and Weed Ecology (CSA) / Gewas- & Onkruidecologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	To enhance and teach fundamental knowledge of the ecological mechanisms that determine the functioning of crop and associated ecosystems in relation to the agronomic practices and natural and anthropogenic selective forces under which they operate.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	By blending novel approaches from fundamental ecology and crop science the chair aims to provide the scientific basis for the development of productive sustainable and circular cropping systems that support natural biodiversity and associated ecosystem services.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The mission of Crop & Weed Ecology (CWE) is pursued along two pillars. The Plant trait to crop community pillar uses a physiological ecology and community ecology approach to understand how plant trait variation affects interactions between plants and between plants and other organisms. It then analyses how this interaction drives the functioning of crop systems (yields, resource-use climate resilience and other ecosystem functions). Key in this regard is research on the role of crop biological diversity (e.g. intercropping or agroforestry). The Quantitative agro-ecology pillar then analyses how this crop functioning interacts with populations of other (wild) organisms (weeds, pests and diseases) with special emphasis on the spatial and temporal dynamics of this interaction. It thus links the community ecological approach of the first pillar to landscape ecology and population biology. We use this knowledge to develop integrated approaches for sustainable pest management, and to further our fundamental understanding of the functioning, adaptation and community dynamics of these wild organisms in agro-ecological systems. CWE employs a combination of innovative modelling well rooted in ecological (game) theory, especially 3D virtual plant modelling, spatial modelling of diseases and pests and weed population models. It combines this with greenhouse and off and on-farm field experiments.
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Plant Sciences Group

Crop Physiology (CSA)

Chair holder: Prof. Jochem Evers

<i>Name of the chair group (in English and Dutch).</i>	Crop Physiology (CSA) / Gewasfysiologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	Crop Physiology aims to understand the consequences of physiology of individual plants for crop functioning, scaling up physiological processes from organ to crop level, considering environmental factors and management choices.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair Crop Physiology forms a link in the knowledge chain from molecular physiology to agronomy and plant breeding, thereby contributing to the design of sustainable crop production, increased resource use efficiency and enhanced product quality.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The main objective of the chair of Crop Physiology is to unravel the networks of complex interactions at sub-plant, plant and crop level and aggregate information from these networks into knowledge relevant to crop production for diverse groups of stakeholders: crop ecologists, agronomists, farmers, breeders, extension agents, conservationists, policy makers, and others. Crop physiology does that in a unique way by focusing on research questions investigating those processes that are specific for a plant as a member of a community (i.e. whole-plant physiology of plants in a crop stand) and by focusing on those crop stand characteristics that emerge from behaviour of plants that interact with other plants of the crop stand. The main research tools of Crop Physiology include experimentation under controlled and field conditions with advanced measuring equipment and state-of-the-art computational modelling of processes at various levels of aggregation based on thorough systems analysis of crops.
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Plant Sciences Group

Entomology (ENT)

Chair holder: Prof. Bregje Wertheim

<i>Name of the chair group (in English and Dutch).</i>	Entomology (ENT) / Entomologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The research and teaching programme of the chair of Entomology addresses fundamental and applied aspects of the biology of insects focusing on (1) multitrophic insect-plant interactions, (2) insects as vectors of diseases of humans and animals, (3) molecular biology and physiology of insects and (4) insects as food and feed.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The mission is to unravel the ecology of interactions between insects and other community members by combining ecological studies (population and community levels) with investigations of the underlying mechanisms (subcellular to individual levels). Integrated pest, vector and disease management strategies and applications of insects as food and feed are being developed in both developed and developing countries.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	In insect-plant interactions the chair addresses the dynamics of interactions at the level of individuals with consequences for population and community dynamics at multiple trophic levels (herbivores, parasitoids and predators, and hyperparasitoids). To understand the mechanisms underlying interactions between individuals, processes are investigated at the level of gene transcription and metabolite biosynthesis. This is done for insects as well as their plant resources. In vector biology the biology of haematophagous arthropods is addressed (mosquitoes, ticks) in interaction with their blood hosts (humans and animals) and with the pathogens they transmit, such as malaria, Zika, West-Nile Virus and Usutu Virus. This is taken from the level of individual interactions to regional spatial scales and involves biology, social sciences and geographic information science. In molecular biology and physiology of insects, the molecular basis of sexually dimorphic trait variation in insects and its evolution is investigated as well as the molecular basis of insect neurobiology and brain processes underlying behaviour such as learning. In the research on insects as food and feed the opportunities for using insects as sustainable protein source for humans and livestock within a novel value chain is investigated, by addressing insect nutritional physiology, life-history analysis, behaviour and their immune system. This also involves inter- and transdisciplinary approaches.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Farming Systems Ecology (FSE)

Chair holder: Prof. Rogier Schulte

<i>Name of the chair group (in English and Dutch).</i>	Farming Systems Ecology (FSE) / Farming Systems Ecology
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The Farming Systems Ecology chair focuses on the analysis and redesign of sustainable farming systems and foodscapes, so that they deliver multiple benefits to humankind, using natural processes as the starting point.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	By equipping the actors in the food system with keys to unlock, redesign and transition of farming systems and foodscapes through the experiencing and learning from outstanding examples of farms and foodscapes, the chair contributes to the WUR domain.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The Farming Systems Ecology chair specialises on the radical redesign of sustainable farms and foodscapes, for contrasting socio-ecological contexts around the world. This encompasses the analysis and design of diversity of future farming systems and foodscapes, which is referred to as 'lighthouse farming systems', as well as the elucidation of transition pathways theretoward. To deliver on this, the chair leads the development of integrated systems analyses, bringing together the knowledge and expertise of numerous disciplines in a holistic framework. The unit of assessment is the foodscape, which is defined as food systems in a landscape setting; as such the research pertains both to actors and their context of natural resources, and multi-disciplinary work includes expertise in systems modelling, agro-ecology, agronomy, co-innovation, policy formation and immersive education. This knowledge is brought together in a platform of simulation models that facilitate what-if scenario analyses, for use as Discussion Support Tools for community-supported sustainable land management. The digital approach is combined with hands-on, empirical assessments of outstanding examples of sustainable farms and foodscapes in all continents, which are brought together in a Global Network of Lighthouse Farms. Together with field experiments at the university farms, this network represents a global outdoor laboratory and classroom. Virtual Reality and Augmented Reality methods are developed to bring these farms inside classrooms and modelling platforms.
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Plant Sciences Group

Genetics (GEN)

Chair holder: Prof. Bastiaan Johannes Zwaan

<i>Name of the chair group (in English and Dutch).</i>	Genetics (GEN) / Erfelijkheidsleer
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The interrelationship between genetics, heredity, and evolution is the focus of research of the chair. Central is the study of genetic variation that ranges from the processes that produce it (mutation, recombination), the factors that have shaped its architecture in the past, to the factors and processes that determine its fate.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair group provides fundamental knowledge of the mechanisms of genetics and the more inclusive mechanisms of heredity, and how these affect and regulate phenotypic variation. This is done within the unifying framework of evolutionary theory and the focus is on fundamental questions and concepts rather than on specific phenotypes or organisms. This focus will contribute to understanding the generation, maintenance, and function of biological variation. This in turn fuels the mission of WUR on applying this knowledge to improve the quality of life.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Three research themes are defined that encompass crucial and well-defined areas of research in the area of Heredity, Genetics, and Evolution. (i) Organisation of heritable variation, (ii) Genetics and levels of selection, and, (iii) Genetics of adaptation. There are extensive cross-links between them and together they contribute to the long-term aim of the chair to not only unravel the genetics of evolutionary change and to investigate whether and to what extent evolution is predictable.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Horticulture and Product Physiology (HPP)

Chair holder: Prof. Leo Marcelis

<i>Name of the chair group (in English and Dutch).</i>	Horticulture and Product Physiology (HPP) / Tuinbouw en Productfysiologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The role of the Horticulture and Product Physiology chair is to foster the science of the production chain for crops produced under protected cultivation. The chair contributes to the education and training of future executives in the horticultural sector.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Physiology, production, and pre- and post-harvest quality of vegetables cut flowers and pot plants contribute to the sustainable production of high-quality horticultural products. The chair's contributes thereby directly to the field Food, Feed and Biobased Production, which is one of the three core field within the WUR domain of healthy food & living environment.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The focus of the chair is on greenhouse horticulture and the post-harvest quality of products produced in greenhouses and vertical farms as well as the post-harvest quality of tropical fruit. Responses of physiological processes to the environment are studied aiming to predict and control the phenotype of the plant and plant products. Growth and development of plants as well as product quality are studied as emergent properties of underlying physiological and genetic processes. Research fields such as phenotyping, (LED) light regulation of plant processes and functional-structural plant modelling are gaining increasing prominence. The research of the group is centred around three themes: • Photosynthesis Photosynthesis is the driving force for most trophic systems on Earth. Basic research is conducted into understanding the regulation and limitations of photosynthesis. • Morphogenesis The function and structure of a plant show strong interactions. These interactions are studied in an integrated way. • Product physiology The quality of a fruit, a flower, or a pot plant does not end when it leaves the grower.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Molecular Biology (MOB)

Chair holder: Prof. Ronald Pierik

<i>Name of the chair group (in English and Dutch).</i>	Molecular Biology (MOB) / Moleculaire Biologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The Molecular Biology chair studies the molecular mechanisms of plant development from tissue to organ formation and how it determines plant architecture including its interactions with the environment. The chair contributes fundamental knowledge and teaching on molecular and developmental biology.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The Molecular Biology chair is firmly embedded within WUR and is a core area in modern plant-related basic and applied research. Plant architecture and plasticity are major components for optimising crop yield. The group thereby contributes to the WUR domain.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair studies plant development from tissue to organ formation and how it determines plant architecture, including its interactions with the environment. A wide range of molecular genetic tools is developed and applied to unravel how the genetic code is used to generate form and function in a spatio-temporal manner. This is reflected in research as well as teaching. In addition to resolving the fundamental molecular processes of plant growth, development, and plasticity, the chair also intends to pioneer advancements in translational biology. The chair, therefore, focuses its research on model species, as well as a much wider range of crops. Research in the chair group focuses on developmental transitions and is centered around three themes -plant architecture and reproduction, developmental responses to mutualistic microbes, and photobiology- all in their own way deciphering novel molecular mechanisms and directions for crop improvements.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	2 December 2024.



Plant Sciences Group

Nematology (NEM)

Chair holder: Prof. Geert Smant

<i>Name of the chair group (in English and Dutch).</i>	Nematology (NEM) / Nematologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair studies the biology of nematodes and associated organisms to understand and predict their functioning in agricultural and natural ecosystems. This is accomplished by hypothesis-driven research on interactions between nematodes and (a)biotic environmental factors.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair's focus on nematodes as key factors in soil resilience and nutrient cycling, and as a persistent threat to animal, human and plant health therefore fits well within the mission of Wageningen University to excel in science for impact by generating knowledge to secure the production of food in coming years.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair's research objectives are to unravel: • the molecular and genetic basis of nematode-plant interactions with special attention to the role of nematode secretions, plant (immune) receptors and nematode-induced changes in plant development and growth. • the function and structure of secretory (glyco)proteins of parasitic nematodes and related helminths modulating immune responses in animals and humans. • the roles of nematodes and protists in their microbial context with regard to soil food web functioning with a main focus on plant health, growth and development. • the molecular and genetic mechanisms that underlie development, lifespan, plasticity and adaptation of the model organism <i>Caenorhabditis elegans</i> in a diverse range of abiotic and biotic environments. To contribute to science-informed policy making in the Netherlands and the EU, the chair actively engages with stakeholders within (inter)national consortia of research institutes, industry and governmental organisations. It achieves valorisation of fundamental knowledge via public-private partnerships with plant breeding and biotech companies and agricultural consultancy firms.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Plant Sciences Group

Phytopathology (PHP)

Chair holder: vacant

<i>Name of the chair group (in English and Dutch).</i>	Phytopathology (PHP) / Fytopathologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	PHP investigates pathogenic and beneficial interactions between microbes, i.e. bacteria, fungi and oomycetes, and plants, ranging from epidemiology to molecular interactions, population dynamics and microbial ecology.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	PHP focusses on diseases caused by microbes, which have a huge impact on agriculture and society at large. Disease control is important for the WUR domain.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair's mission is to increase the fundamental understanding of the cellular, molecular and biochemical mechanisms underlying microbial infection and host defence responses, and the forces driving evolution of pathogens. The chair studies microbes with distinct lifestyles (biotrophs, necrotrophs, hemi-biotrophs) and with different infection strategies (colonising leaves, stems and/or roots). Research is performed in an integrated manner, involving both the microbe and the host plant at all levels. With the availability of ever larger numbers of genome sequences, in-depth comparative and functional genomics studies, understanding is deepened of (i) pathogen infection mechanisms, (ii) processes involved in pathogen evolution and speciation, (iii) host susceptibility and immunity, and (iv) mechanisms underlying microbial antagonism. Furthermore, applied aspects of the diagnosis and epidemiology of plant diseases are studied. Crop- and production systems-oriented research is performed in multidisciplinary collaborations with local, national and international partners. The overall aim of the research is to generate and disseminate knowledge that enables breeders and growers to develop novel strategies for crop protection.
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Plant Sciences Group

Plant Breeding (PBR)

Chair holder: Prof. Agnieszka Golicz

<i>Name of the chair group (in English and Dutch).</i>	Plant Breeding (PBR) / Plantenveredeling
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	Plant Breeding is responsible for research and education in the field of crop plant improvement. The main drivers are understanding fundamental processes in a broad range of relevant research fields which can be implemented to increase genetic improvement of crop plants.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Plant Breeding is indispensable to ensure food, feed and biobased products. In providing food security and food safety of high-quality products with low environmental impacts for a growing world population in a sustainable fashion it contributes to the mission of Wageningen University and Research.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Purpose of the research in plant breeding is to deploy efficient methodologies and well-chosen resources to reach optimal genetic improvement of crop plants. Since the field is extremely broad and characterised by its multi and transdisciplinary nature it requires education and research at different integration levels: from molecule to cell and plant and from individual plant to population. This requires, next to the general breeding and crop knowledge, knowledge of and interaction with bioinformatics, genomics, crop physiology, developmental biology, phytopathology, quantitative genetics and statistics. Inclusion of modern techniques including high throughput phenotyping and artificial intelligence will ensure a faster and more efficient development of appropriate varieties. By providing foundational and specialised education (courses, in house training, online courses) in the field of plant breeding the chair disseminates and transfers knowledge to companies and foreign research organisations who are involved in practical breeding.
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Plant Sciences Group

Plant Physiology (PPH)

Chair holder: Prof. Christa Testerink

<i>Name of the chair group (in English and Dutch).</i>	Plant Physiology (PPH) / Plantenfysiologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair Plant Physiology of Wageningen University aims to contribute to the understanding of how plants function. Interest is particularly in how plants respond to changes in their sometimes hostile environment. The chair has the mandate to secure a broad fundamental knowledge of plant physiology.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair links fundamental research on plants to various applications of plant sciences and thereby contributes to knowledge on plants and their interactions with the environment, a basis for smart climate agriculture, part of the domain of WUR.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research of the chair aims to provide fundamental mechanistic insight into how endogenous plant factors interact with environmental cues, which control plant fitness, growth, development, and reproduction. The goal of the chair is to create impact by understanding the functioning of plants in a dynamic natural environment through a strong core of fundamental research, but with a clear view to application. Therefore the work of the chair is not only focused on model species (Arabidopsis and tomato), but also on a wider range of global crop species. Environmental plant physiology is essential for the development of climate smart agriculture.
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Plant Sciences Group

Plant Production Systems (PPS)

Chair holder: Prof. Katrien Descheemaeker

<i>Name of the chair group (in English and Dutch).</i>	Plant Production Systems (PPS) / Plantaardige Productiesystemen
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair Plant Production Systems integrates biological knowledge to analyse and design sustainable production systems for crops (including integration with livestock), from field to farm to global scale, focused on resource use efficiency and sustainable management of natural resources.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair group provides grounded, quantitative analysis to underpin responses to urgent societal issues such as global food security, agricultural and environmental policies, competition for natural resources, food-feed-fuel interactions and global environmental change.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The group's approach to research and teaching combines empirical knowledge and production ecological theory with understanding of agricultural systems in their local context. Various modelling approaches are used based on simulation of crop and animal production, bio-economic optimisation and statistical techniques. Empirical knowledge is derived from experiments, surveys and databases. A key research issue is scaling from the field to farm, farming systems, region and the global level. The chair also works on analytical and explorative methods to assess the scope for sustainably intensifying or improving current systems. An interdisciplinary approach is central, as the issues deal with complex human systems. The focus lies firmly in the natural sciences but close collaboration with groups from social sciences (e.g. economics, rural sociology, communication science) furthers integrated assessment.
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Plant Sciences Group

Virology (VIR)

Chair holder: Prof. Monique van Oers

<i>Name of the chair group (in English and Dutch).</i>	Virology (VIR) / Virologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair studies and teaches the interaction of arboviruses, insect and plant viruses with their hosts and vectors, from fundamental and applied angles, emphasising ecological, molecular and biotechnological aspects.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair aims to unravel the determinants for disease, virus transmission, as well as vector competence. Acquired knowledge is used for durable disease management via molecular plant breeding, vaccines, biological control and in insect mass rearing. This fits in the general WUR domain.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair's mission is to expand knowledge on insect-vector and insect-infecting viruses. Viruses are obligate intracellular parasites with intimate relationships with specific host species to replicate. Many viruses either infect insects or rely on insect vectors for their spread to new hosts. The latter category includes important plant viruses as well as so-called arboviruses, that infect animals including humans. In light of climate changes, insect-transmitted viruses are predicted to spread further into temperate climate zones, posing major threats to yet unexposed regions. The main research topics are: A the mechanism(s) of host defence and viral counter defence, B determinants of vector competence, C viruses-triggered changes in insect behaviour, D mechanism behind covert virus infections and associated disease outbreaks. The gained knowledge is being applied to develop mitigation/prevention strategies against emerging (zoonotic) arboviruses, plant viruses and insect viruses.
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Social Sciences Group

Business Sciences

Business Economics (BEC)

Business Management and Organisation (BMO)

Information Technology (INF)

Marketing and Consumer Behaviour (MCB)

Operations Research and Logistics (ORL)

Communication, Philosophy, Technology and Education

Knowledge, Technology and Innovation (KTI)

Philosophy (PHI)

Education and Learning Sciences (ELS)

Strategic Communication (COM)

Economics

Agricultural Economics and Rural Policy (AEP)

Development Economics (DEC)

Environmental Economics and Natural Resources (ENR)

Economic and Environmental History (RHI)

Urban Economics (UEC)

Space, Place and Society

Health and Society (HSO)

Rural Sociology (RSO)

Sociology of Development and Change (SDC)

Consumption and Healthy Lifestyles (CHL)

Sustainability Governance

Environmental Policy (ENP)

Law (LAW)

Public Administration and Policy (PAP)



Social Sciences Group

Business Economics (BEC)

Chair holder: Prof. Alfons Oude Lansink

Business Sciences

<i>Name of the chair group (in English and Dutch).</i>	Business Economics (BEC) / Bedrijfseconomie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair analyses and supports decision-making by farms, businesses, and policy agencies in agri-food supply chains through the analysis of risk and resilience, the behaviour of decision-makers and their integrated economic and sustainability performance.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair contributes to the mission of Wageningen University through its three themes: (1) Risk and Resilience, (2) Benchmarking Economic, Environmental, and Social Sustainability Performance, and (3) Economics of Animal Health, Plant Health, and Food Safety.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair conducts research that focuses on economic and management problems of farms, agri-businesses, and policymakers within agri-food supply chains. The research is disciplinary, interdisciplinary, and transdisciplinary in nature, requiring scientific expertise from business economics, other social sciences, and natural sciences. The main scientific objectives of the research programme are to: • Analyse and evaluate economic performance, and the integrated economic, environmental, and social sustainability performance of farms, agri-businesses, and food supply chains. • Analyse, evaluate, and support economic decision-making under uncertainty by actors in food supply chains. • Improve and design decision-support tools using analytical techniques and data. Stakeholders in agri-food supply chains are actively engaged in the chair group's research using transdisciplinary approaches. The chair disseminates its decision support tools and other research outputs to stakeholders.
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Social Sciences Group

Social Sciences Group

Business Management and Organisation (BMO)

Chair holder: Prof. Wilfred Dolfsma

Business Sciences

<i>Name of the chair group (in English and Dutch).</i>	Business Management and Organisation (BMO)
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	BMO studies innovation and entrepreneurship in chains and networks, focusing on the agri-food industry. BMO provides knowledge and insights needed for firms to internally organise and govern, as well as to strategically collaborate with partners.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	BMO focuses the business, innovation management, and entrepreneurship aspects of the life sciences at large and agri-food industry in particular. At WUR, BMO leads research on 'living lab' entrepreneurship-oriented activities.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	BMO focuses on the strategy and organisation of firms in the agri-food industry embedded in the value chains and influenced by the broader network of public and private stakeholders. BMO particularly focuses on the sustainability oriented innovation and entrepreneurial processes and start-up formation. Strategic management and the internal organisation in the agri-food domain are core concepts for the BMO Group. Central is the quest for understanding and managing the rapidly developing international chains and networks, with a special focus on innovation, governance and sustainability. Business Model Innovation in support of the transition towards a sustainable, circular business is one example of the research undertaken at BMO. Another example is study of the contribution of entrepreneurs to overall economic development particularly in emerging economies, and for women entrepreneurs in particular. A third example is study of the way in which firms both collaborate (e.g., cooperatives) and compete in agri-food supply chains.
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Social Sciences Group

Information Technology (INF)

Chair holder: Prof. Bedir Tekinerdogan

Business Sciences

<i>Name of the chair group (in English and Dutch).</i>	Information Technology (INF) / Toegepaste Informatiekunde
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	INF aims to advance the state-of-the-art of smart systems, and system of systems engineering to support innovations in the life sciences application domains.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The holistic multidisciplinary approach and the aim to advance the state of the art systems within the organisational, institutional and societal context fits in the WUR strategy and domain.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	INF adopts primarily a design science research approach to develop the necessary information systems. Further, the research programme contains a systems thinking and systems engineering approach necessary for the analysis, design, testing, and management of complex smart systems in the life sciences application domains. This implies a holistic multidisciplinary approach that aims to integrate data, software, hardware, people and processes within the organisational, institutional and societal context. Taking an interdisciplinary approach to smart systems engineering is inherently complex since the behaviour of and interaction among system components in their environment is not always understood. To carry out a smart systems engineering approach to the life cycle application domains the following important sub-themes are addressed: • Software Engineering: For engineering smart systems, and system of systems, it is essential to design, implement, test and maintain the software that controls the system. • Data Science and Artificial Intelligence: Smart systems usually have to deal with large data sets that are captured, pre-processed and used to extract relevant information and knowledge using AI techniques to support the overall smart decision making process. • Socio-Technical Systems Engineering: Smart systems usually include, are operated by, and impact humans following implicit or explicit social processes.
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Social Sciences Group

Marketing and Consumer Behaviour (MCB)

Chair holder: Prof. Ilona de Hooge

Business Sciences

*Name of the chair group
(in English and Dutch).*

Marketing and Consumer Behaviour (MCB) / Marktkunde en consumentengedrag

*Brief summary of the (teaching and
research) remit in max 35 words.*

MCB carries out research focusing on marketing (management) and consumer behaviour issues related to food and agribusiness, and institutions part of or interested in food and agriculture.

*Brief description of the way the domain
of the chair fits in the domain and
mission of Wageningen University and
the societal importance of the chair in
max 35 words.*

MCB adds to the WUR domain and mission via understanding on how to exploit the potential of nature for the quality of life of end users. The fields of marketing and consumer behaviour are treated as (interrelated) basic scientific fields, with new insights emerging at the interface with the Wageningen domains of food and agribusiness.

*Concise description of the remit
regarding teaching, research and
value creation, max 150-200 words.*

Many of today's societal problems relate directly to behaviour of end-consumers in the context that marketing shapes for them. Transitions and valorisation often find their basis in (changes in) the fields of Marketing and Consumer Behaviour.

MCB researches and teaches courses on the fundamentals of marketing and consumer behaviour theory, including on methodology of marketing and consumer behaviour research and specifically for Sensory Science. Much of this happens at the interface of WUR domains, particularly in food and agribusiness. Within MCB's domain, fundamentals of social psychology are relevant to consumer behaviour understanding. MCB considers marketing and consumer behaviour as two flip sides of the same coin (marketing affecting consumer behaviour, and consumer behaviour information marketing decisions and strategy). As a result, research often has a design focus, relating to science based and empirically validated advice for key users in industry and policy.

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8 November 2021.



Social Sciences Group

Operations Research and Logistics (ORL)

Chair holder: Prof. Sander de Leeuw

Business Sciences

<i>Name of the chair group (in English and Dutch).</i>	Operations Research and Logistics (ORL) / Operationele Research en Logistiek
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	ORL conducts research and develops innovative logistics concepts, decision support models and solution approaches within the domain of agri-food and bio-based supply chains.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	By improving decision making in the agri-food domain and by building upon innovative management science concepts, integrating theories, models and methods from e.g. environmental and food sciences, ORL acts as a bridging science area between the natural and social sciences within Wageningen University.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	ORL's three key research objectives are: • to identify, analyse and understand developments in the agri-food and life sciences (with emphasis on sustainability, technology and quality management) that put new requirements on logistics concepts and decision support models in the specific domains; • to contribute to further developing innovative and sustainable logistics concepts given the continuous changes in the environment; • to develop dedicated decision support models and tools that are able to deal with the specific characteristics and the increased complexity and uncertainty of the given domains, and enable the assessment and application of the newly developed concepts. The current strategic research themes of ORL are: (i) sustainable supply chains, (ii) quality and waste within agri-food supply chains, (iii) sustainable diet modelling, (iv) metropolitan logistics and (v) logistics in a circular (bio-based) economy.
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Social Sciences Group

Knowledge, Technology and Innovation (KTI)

Chair holder: Prof. Anita Hardon

Communication, Philosophy, Technology & Education

<i>Name of the chair group (in English and Dutch).</i>	Knowledge, Technology and Innovation (KTI) / Kennis, Technologie en Innovatie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The aim of KTI is to understand, support and intervene in processes of socio-technical innovation and transformation, with special attention to the production, integration and use of scientific and other knowledge.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	KTI develops insights supportive to WUR's ambition to improve quality of life. The chair focuses on local and global questions of sustainable development, and the role of science and technology for development.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	KTI studies the organisation of innovation, the different organisations and intermediaries involved in innovation processes, and innovation policies. KTI works on three research themes: • Making knowledge work: Knowledge about socio-environmental processes is produced by heterogenous stakeholders and linked to competing values, identities and worldviews. KTI addresses the challenges, opportunities, and processes of negotiating knowledge in inclusive development and innovation. • Configuring technology and society: Technology is a human capacity for making. KTI generates descriptive accounts of socio-material practices grounded in the use of tools, skills, techniques and knowledge. The chair studies why practices remain durable over time and how actors agree to cooperate despite a range of unknowns and risks. • Co-designing responsible and sustainable innovations: KTI develops systemic approaches to innovation processes that bring social, organisational and technical components together, promote knowledge exchange and learning between stakeholders, and enables interaction between natural scientists, social scientists and practitioners in transdisciplinary research.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	–



Social Sciences Group

Philosophy (PHI)

Chair holder: Prof. Rachel Ankeny

Communication, Philosophy, Technology & Education

<i>Name of the chair group (in English and Dutch).</i>	Philosophy (PHI) / Filosofie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	PHI focuses on ethical and epistemic issues involved in the relationship of humans with nature, animals, food and agriculture and aims to understand processes of ethical deliberation around science and technology in different societal and cultural settings.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The research strategy is pluralist, pragmatic, and often interdisciplinary, combining normative, conceptual and empirical questions. The insights gained contribute to the strategic goals of WUR.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair offers education and does research aiming at critical reflection on fundamental assumptions in science and technology and notably on ethical choices in professional, scientific corporate and political practices in the Wageningen domains. The research focuses on core concepts and principles that are often taken for granted in research, policy and practice. For example: How should 'risk', 'health' and 'safety' be understood in various policy contexts, e.g. food production and public health? Is it possible to develop a coherent understanding of what is 'natural', e.g. in relation to food production, agriculture, or nature development? How to evaluate the debates on intensive versus extensive livestock farming from an ethical perspective? What are the moral limits and justifications of patent regulation in the life sciences? Research and teaching activities involve ethical reflection on practical problems and analysis of the role and status of scientific knowledge in our modern globalised world. The research programme consists of 3 broad themes: • Ethics of public health • Animal ethics and environmental philosophy • Philosophy and ethics of technology
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Social Sciences Group

Education and Learning Sciences (ELS)

Chair holder: Prof. Perry den Brok

Communication, Philosophy, Technology & Education

<i>Name of the chair group (in English and Dutch).</i>	Education and Learning Sciences (ELS) / Onderwijs- en Leerwetenschappen
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	ELS fits in the WU domain by providing academic education and conducting scientific research on learning in different contexts (especially higher education and learning in and for professions) in the domain of life sciences (including natural, engineering, and social sciences).
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	ELS aims to understand and facilitate the unfolding and development of human potential in response to global challenges in general and challenges in the domain of life sciences specifically.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	In teaching, ELS offers three types of courses: (1) domain-specific courses on entrepreneurship education and sustainability teaching/ learning, (2) teacher education, and (3) skills/competence courses. The research focuses on learning and development at the interface of and transitions between education and work and includes the various actors (teachers, learners, professionals, management, etc.) in the design, implementation, and evaluation of learning pathways and scenarios in the framework of the grand challenges. In addition, ELS investigates how learning can be supported by materials, tools, artefacts, ICT or other sources, such as teachers, supervisors, coaches or peers. ELS particularly focuses on higher education (with a specific lens on Wageningen University and the 4TU, the cooperation of Dutch technical universities), secondary education, vocational education and professional development.
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Social Sciences Group

Strategic Communication (COM)

Chair holder: Prof. Rens Vliegthart

Communication, Philosophy, Technology & Education

<i>Name of the chair group (in English and Dutch).</i>	Strategic Communication (COM)/ Strategische Communicatie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	COM analyses how strategic communication shapes understandings and processes around key societal issues of our time, and on ways in which communication can contribute to innovation and change.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	COM analyses strategic communication around key societal issues of the general WUR domain: healthy lifestyles; sustainable food and food production; and sustainable co-evolution between societies and the living environment.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair addresses communication within three themes: • Communication, organisation and change: in this theme the interplay between the construction of meaning is studied in interaction in situated practices- including discourses, conversations, stories, dialogues and frames - and the social networks that emerge out of these interactions; • Communication and behaviour: in this theme strategic communications are developed, evaluated and implemented to foster change in nutrition and environmental behaviour, health, land use and agricultural practices, often under conditions of uncertainty and risks. • Communication, contestation and cooperation: in this theme the way conflicts get to be articulated, contestation around issues and conditions for this contestation, and the way pluralism shapes the nature of cooperation is studied. The ambition of COM is to develop high-quality theoretical and methodological insights and innovations leading to policy and practical recommendations on ways in which societal actors can make use of communicative processes and overcome communication barriers.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Social Sciences Group

Agricultural Economics and Rural Policy (AEP)

Chair holder: Prof Justus Wesseler

Economics

*Name of the chair group
(in English and Dutch).*

Agricultural Economics and Rural Policy (AEP) /
Agrarische Economie en Plattelandsbeleid

*Brief summary of the (teaching and
research) remit in max 35 words.*

Research is focusing on economic and institutional issues within the bio-economy, and teaching is across a wide range of aspects related to the contribution of the bio-economy and the agricultural sector in particular to sustainable development.

*Brief description of the way the domain
of the chair fits in the domain and
mission of Wageningen University and
the societal importance of the chair in
max 35 words.*

Contributions to the core areas food, feed and biobased production and natural resources and living environment stem from analysing multiple aspects of sustainable development and impacting on societal debates, policy agendas and economic outcomes.

*Concise description of the remit
regarding teaching, research and
value creation, max 150-200 words.*

AEP conducts research and provides training in the area of economics and policies related to the bioeconomy including rural and regional development, institutional and organisational aspects, and quantitative economics. The regional focus is the European Union, but the research is embedded in an international perspective. The research is directly linked with the education. In the education strong emphasis is put on combining insights from macro-economic, micro-economic and institutional economics theory with quantitative methods such as econometric and simulation tools. The behaviour of economic agents in all stages of agricultural supply chains, as well as policies and the institutional framework that govern these supply chains are taught. To meet the objective of impact in science, AEP 's general research strategy is to excel in disciplinary research in the three research themes:

- Markets and policies: focuses among others on the impact of reforms of the EU Common Agricultural Policy and the effects of increased price volatility on farmers' incomes.
- Spatial structures: includes research on the provision of green services, landscape valuation, rural policy modelling and land use analysis.
- Institutional and organisational aspects: organisational economic aspects of, for example, agri-food value.

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8 November 2021.



Social Sciences Group

Social Sciences Group

Development Economics (DEC)

Chair holder: Prof. Erwin Bulte

Economics

<i>Name of the chair group (in English and Dutch).</i>	Development Economics (DEC) / Ontwikkelingseconomie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	DEC contributes to an improved understanding of economic growth, sustainable development and poverty alleviation, with a special focus on interrelationships between institutional change and economic development.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair contributes to an improved understanding of interrelated processes of poverty alleviation, economic growth, and sustainable development, and designs and implements innovative and relevant research in low-income countries.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The main focus of the research of DEC is on the co-evolution of economic development and institutional change. DEC's work tends to be empirically-driven, and is based on randomised controlled trials and field experiments designed in collaboration with stakeholders, including governments, NGOs and firms. Key themes are: • Impact assessment and policy evaluation • Agricultural development and value chains, technology diffusion among smallholders • Gender, intrahousehold dynamics • Health The geographical focus is on sub-Saharan Africa and China, although occasionally research is done in other Asian countries and in Latin America as well.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	8 November 2021.



Social Sciences Group

Environmental Economics and Natural Resources (ENR)

Chair holder: Prof. Francisco Alpizar Rodriquez

Economics

*Name of the chair group
(in English and Dutch).*

Environmental Economics and Natural Resources (ENR) / Milieu-economie en Natuurlijke Hulpbronnen

Brief summary of the (teaching and research) remit in max 35 words.

ENR aims to improve understanding of local and global environmental problems, contributing from the environmental economics discipline to the construction of sustainable and circular economies, and low-carbon, climate resilient socioecological systems.

Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.

WUR's emphasis in multidisciplinary, solution-oriented research is the perfect background for ENR's quest for societal relevance. ENR methods and tools provide an in-depth understanding of what drives decision-making at multiple levels, offering key insights into the inevitable trade-offs faced by every decision or policy.

Concise description of the remit regarding teaching, research and value creation, max 150-200 words.

Three broad themes are developed:

- The economics of energy transitions, climate policy and the cost of action/inaction: This theme aims to contribute to a better understanding of the economic problems related to reducing greenhouse gas emissions, and the economic trade-offs implicit in the pathway towards low-carbon and well-adapted societies.
- Human behaviour, technological progress and the role of economic policy instruments in the transition to sustainable and healthy production and consumption. This contributes to a better understanding of decision-making by economic agents, exploring how their preferences interact with technological progress, and the choice infrastructure (policies and institutions).
- The economics of resilient and sustainable socioecological systems (SES): This contributes to a better understanding of the economic drivers affecting SES. Furthermore, the normative dimension is explored, studying how SES should be managed towards sustainability. This typically requires balancing ecological goals, such as sustainable use of ecosystem services and maintaining resilient ecosystems, with socioeconomic goals, such as providing income and maintaining livelihoods.

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8 November 2021.



Social Sciences Group

Economic and Environmental History (RHI)

Chair holder: Prof. Ewout Frankema

Economics

<i>Name of the chair group (in English and Dutch).</i>	Economic & Environmental History (RHI) / Economische en Milieugeschiedenis
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	RHI offers <i>temporal depth</i> to social theories and societal debates on global inequality and sustainable and equitable welfare development.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Knowledge of the dynamics and historical context of <i>long-term processes</i> of social and environmental transition are key to the WUR domains of food, livelihoods and the living environment.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	RHI addresses questions on the origins and nature of global inequality, on long-term economic and institutional development, on hunger, poverty, health, sustainability, agrarian change and food systems. To explore themes of inequality and sustainable welfare development from a historical perspective RHI relies on archival sources. RHI constructs large time-series and panel data sets and combines quantitative, qualitative and comparative research methods to explore historical sources. RHI's research contributes to a broader comprehension of historical legacies and global relations among wide public audiences. Some of RHI's results serve as input into the formulation of development policy goals. Historical insights help to reflect on the temporality of social and environmental transitions, the validity of social science theories and the feasibility of development policies and interventions. Historical perspectives on contemporary societal challenges are important for the development of analytical capacities, and especially the role of time and the dynamics of change.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	29 March 2022.



Social Sciences Group

Urban Economics (UEC)

Chair holder: Prof. Eveline van Leeuwen

Economics

*Name of the chair group
(in English and Dutch).*

Urban Economics (UEC)

*Brief summary of the (teaching and
research) remit in max 35 words.*

UEC contributes to more resilient cities & regions in terms of social equality, economic advantages and environmental quality.

*Brief description of the way the domain
of the chair fits in the domain and
mission of Wageningen University and
the societal importance of the chair in
max 35 words.*

The research topics such as economic behaviour, the economics of sustainable consumption, regional food systems, energy transition and urban-rural interactions fit in the heart of the domain and strategy of WU.

*Concise description of the remit
regarding teaching, research and
value creation, max 150-200 words.*

The number of people living in urban environments is increasing rapidly. The mission of the Urban Economics (UEC) chair is to contribute to more resilient cities in terms of social equality, economic advantages and environmental quality. Therefore, UEC focusses on two main themes: sustainable (energy & food) consumption and urban-rural interactions.

The research of UEC concentrates on the economic behaviour, institutions, and the incentives that can contribute to more sustainable urban consumption and healthy lifestyles, focusing on the role and participation of consumers and households, municipal authorities and institutions, firms and NGO's and the interactions between them. There is collaboration with several societal partners, such as the AMS institute, the Student hotel and provinces of Overijssel and Gelderland.

Insights are used from general-, urban- and behavioural economics to improve the understanding of consumer and household decision making concerning sustainability, health and well-being and the impacts at the individual, urban and regional level.

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8 November 2021.



Social Sciences Group

Health and Society (HSO)

Chair holder: Prof. Spencer Moore Jr

Space, Place and Society

<i>Name of the chair group (in English and Dutch).</i>	Health and Society (HSO) / Gezondheid en Maatschappij
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	HSO operates at the centre of societal and community changes with a dynamic approach to health and aims to contribute to reducing health inequalities.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	HSO focuses on the sociological study of public health, health promotion and health protection, in resource poor and research rich contexts, with emphasis on (1) the social, natural and built environment, and (2) the role of actors and social institutions in advancing health and wellbeing.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research builds on a variety of social sciences disciplines by using a holistic view to health, considering physical, social, mental and spiritual well-being. HSO applies a mixed methods approach, i.e. a combination of qualitative and quantitative research methods and is organised in three themes: • Understanding health practices: The mechanisms underlying health development through people – environment (social, natural, built) interaction, and the influence thereof on sustainable health development; • Supportive environments: Settings where people live their everyday life - such as families, schools, workplaces, communities, cities, and health care settings - which offer protection from factors that threaten good health. Special attention is paid to social-spatial and environmental (in)justice and (in)equalities; • Facilitation of health development processes: The design, implementation and evaluation of health promoting strategies. This includes developing frameworks for coordinated (multi-inter- and trans-disciplinary) action, citizen participation and citizen science.
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Social Sciences Group

Rural Sociology (RSO)

Chair holder: Prof. Han Wiskerke

Space, Place and Society

<i>Name of the chair group (in English and Dutch).</i>	Rural Sociology (RSO) / Rurale Sociologie
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The Rural Sociology Group (RSO) contributes to an improved sociological understanding of transformations in agriculture, food provisioning, and rural development. In particular, RSO develops a relational, place-based, and international comparative perspective.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	RSO contributes to the rethinking of possible alternative futures for a more sustainable, just, and inclusive society. It therefore develops knowledge about the role of meaningful diversity in practices, relationships, types of power and imaginaries.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	RSO recombines different sociological theories and interdisciplinary approaches to study the many forms of power, inequality, and unevenness. It starts from the everyday life of people to understand transformation processes and the dynamics of relationships between the different involved actors and institutions. The research provides a theoretically informed understanding of issues of equity, governance, oppression, resistance, and hope. The research programme includes three themes: • Agrarian change: RSO researches the dynamics of agriculture, including meaningful diversity in farming, the (gendered) organisation of work and labour, the politics of nature-society interaction, land rights and struggles, markets, conflicts around knowledge and technology, and questions of dependency and autonomy. • Food provisioning: RSO studies diverse forms of food provisioning and alternative food economies in rural and urban settings, and the role of hopeful critiques of the modernisation, globalisation, and industrialisation of food systems. • Rural development: RSO studies ongoing transformations of rural areas and underlying power dynamics, contributing to making rural futures more fair and just. RSO therefore explores newly emerging modes of food provisioning, non-food goods and services, and belonging as well as changing social interactions between social movements, scientists, local people, and state and business actors.
<i>Date of adoption of this description (decision of the EB) (only for filing purposes).</i>	2 December 2024.



Social Sciences Group

Sociology of Development and Change (SDC)

Chair holder: Prof. Bram Büscher

Space, Place and Society

<i>Name of the chair group (in English and Dutch).</i>	Sociology of Development and Change (SDC) / Sociologie van Ontwikkeling en Verandering
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	SDC investigates the structures and practices of international development with a particular focus on how inequality, poverty, and injustices relate to diverse possibilities for positive social-environmental action and change.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	By investigating diverse engagements with (the potential of) nature and how this translates into different ideas about quality of life across time and space, SDC contributes to the domain and strategy of WU.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	SDC's expertise is grounded in the interdisciplinary fields of development studies, political ecology, and crisis and disaster studies. In these fields, the critical-constructive SDC approach to research and teaching investigates and analyses the deeper meanings, structures, and mechanisms behind socioecological development and change dynamics. The chair connects this knowledge to lived realities and actions of people across the world. The mission of SDC is to gain and communicate a deeper understanding of global and local structures of power and political economy, as well as how different actors generate forms of agency and practices that enable them to creatively engage with these dynamics and create new opportunities. The SDC research programme focuses on three interrelated core themes: • Nature, conversation and development; • Disaster and conflict in times of crisis; • Inequality and socio-ecological justice.
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Social Sciences Group

Consumption and Healthy Lifestyles (CHL)

Chair holder: Prof. Harm Veling

Space, Place and Society

<i>Name of the chair group (in English and Dutch).</i>	Consumption and Healthy Lifestyles (CHL) / Consumptie en gezonde leefstijl
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	CHL studies the origins of consumption and lifestyles of individuals and groups. These behavioural insights are embedded in the design, evaluation and implementation of interventions to enable healthy and sustainable consumption patterns and lifestyles.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	Consumption and lifestyles are studied in relation to food, health and the living environment. Specific attention is paid to interventions addressing consumption practices and lifestyles that promote human and environmental health and wellbeing.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research programme adopts a socio-ecological perspective embracing the view that individuals do not make decisions in isolation. Instead, healthy and sustainable consumption and lifestyles are shaped by interactions with the social and material world of individuals. To study consumption and lifestyles from a socioecological perspective, insights from different disciplines (e.g. psychology, sociology, geography and epidemiology) are integrated. The research is built along two lines: • Advancing the understanding of why particular consumption and lifestyle patterns emerge in specific social groups, times and places (e.g. patient groups, youth, elderly, low income neighbourhoods); • Designing, evaluating and implementing interventions to enable healthy and sustainable consumption and lifestyles. These interventions include (personalised and integrated) lifestyle interventions for high-risk and patient populations, preventive digital and e-health interventions, as well as educational, spatial and choice architecture strategies aimed at a more general population. The intervention research takes place in collaboration with practice and policy partners to optimise societal impact. The chair adopts a multi-method research approach including quantitative and qualitative research methods, ranging from data science and experimental behavioural studies to participatory action research.
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Social Sciences Group

Environmental Policy (ENP)

Chair holder: Prof. Simon Bush

Sustainability Governance

<i>Name of the chair group (in English and Dutch).</i>	Environmental Policy (ENP) / Milieubeleid
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	The chair advances knowledge on the sociology and political science of environmental transformations that both affect and are shaped by globally connected practices, technologies, mobilities, and regimes extending across multiple spatial and temporal scales.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	By providing social scientific knowledge on governing environmental transformations, the chair contributes to knowledge on the design of regimes, technologies, and practices that improve the quality of human and non-human life on land and at sea.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The research aims of the chair are to: • Understand transformations in local, national and global environmental practice, technologies, mobilities, and governance regimes, against the background of a rapidly changing cultural, political, and economic global order; • Analyse the ways individuals, civil society, private sector, and the state enable sustainable (and where relevant circular) responses to food, climate and energy use, and biodiversity decline, across terrestrial, marine, and atmospheric environments; • Contribute to the institutionalisation of environmental rules, standards, technologies, infrastructures, knowledge, and organisations that shape sustainable mobilities, production, and consumption. To achieve these aims the chair's research programme is organised around five empirical domains – (1) food, (2) climate, (3) energy, (4) biodiversity, and (5) circularity – and around four conceptual research interests– (1) everyday sustainable practices, (2) technologies for environmental sustainability, (3) environmental mobilities, and (4) environmental regimes. Each of these dimensions enables ENP researchers to collaborate and deepen established theoretical lines of sociological and political science related inquiry.
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Social Sciences Group

Law (LAW)

Chair holder: Prof. Louis Kotzé

Sustainability Governance

<i>Name of the chair group (in English and Dutch).</i>	Law (LAW) / Recht
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	LAW studies the influence of law on the rules and institutions needed to facilitate transitions to a sustainable living environment.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	LAW identifies the ways that law can act as a catalyst for social change in WUR domains and identifies how scientific solutions to social challenges can be accommodated, practically and normatively, within our legal systems, combining disciplinary and interdisciplinary approaches beyond traditional law.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	The chair group's research and teaching focuses on law for the living environment, spread over three main pillars: environment, food (systems), and business and human rights. Across these three pillars, LAW's research and teaching connect through a shared focus on: • Transnational regulation: The scope of LAW research and education extends to public and private legal mechanisms for positive outcomes for sustainability at the local, national, EU, and international level. • Systemic change: LAW research and education agenda focuses on the law's role in achieving transformative change and just transitions. • Transdisciplinary methodologies: LAW's research and teaching is methodologically innovative by engaging with other social and life science methodologies in addition to being grounded in legal methods. This is also reflected in its teaching, which provides students with important professional skills as well as an understanding of doctrinal legal work.
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Social Sciences Group

Public Administration and Policy (PAP)

Chair holder: Prof. Dave Huitema

Sustainability Governance

<i>Name of the chair group (in English and Dutch).</i>	Public Administration and Policy (PAP) / Bestuurskunde
<i>Brief summary of the (teaching and research) remit in max 35 words.</i>	PAP develops, applies, and improves theories on the ways governments -in interaction with societal actors -attempt to govern sustainable transformations. The group uses the generated insights to help governments develop or co-design public governance interventions and to instruct students in the same.
<i>Brief description of the way the domain of the chair fits in the domain and mission of Wageningen University and the societal importance of the chair in max 35 words.</i>	The chair group's objective is to make world-leading contributions to the scientific, practical, and societal debates on the public governance of sustainability transformations in water, climate, environment, food, and agriculture, in line with the WUR strategic plan.
<i>Concise description of the remit regarding teaching, research and value creation, max 150-200 words.</i>	Although sustainability transformations are taking place in different sectors of society, they are often not sufficiently supported by public governance: instruments and tools to trigger or invoke transformations are not used, unsustainable incentives are maintained, and institutional and political obstacles within government continue to exist. PAP's research programme "Changing Governance and Governing Change" is meant to better understand and address this. The chair group studies whether, when, and how innovative public governance strategies and arrangements can be introduced that help realise the necessary sustainability transformations. In its work, the chair group draws first and foremost on public administration and public policy concepts and theories. It has three distinct research lines, each exploring an aspect of public governance in sustainability transformations: i) Dynamics and directions of change in governance; ii). Between fragmentation and connectivity; iii) Conflict and contestation. These lines draw upon foundational concepts from the field of Public Administration and Policy and develop these further, but also form the basis for the teachings of the group across the educational programmes of WUR, including those for professionals. The group is strong in the application of/ teaching on research methods such as qualitative comparative analysis (QCA), serious gaming, transdisciplinary research in living labs, and the use of artificial intelligence and big data (which offer the means to get insights into policy development and implementation at previously impossible scales). and consultancy.
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Social Sciences Group

Colophon

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