

# **WUR & opportunities** The power of Wageningen University & Research (WUR) lies in its ability to respond to changing circumstances in research, education and value creation in the domain of food, agriculture and living environment. During the covid-19 pandemic, we used this ability to launch new methods of online collaboration and education. Moreover, we focused on diversity and inclusion, in combination with creating a pleasant, safe work and study environment.

# **Table of Contents**

	Sup	ervisory	Board	4			
	Exe	cutive Bo	pard	5			
	Pro	file and c	ore activities of Wageningen University & Research	6			
	Lett	er from t	the Executive Board	8			
1	Intr	oduction	1	10			
2	Wag	geningen University & Research Executive report					
	2.1	Superv	isory Board	11			
		2.1.1	Report of the Supervisory Board	11			
		2.1.2	Report of the Audit Committee	13			
		2.1.3	Report of the Appointments Committee	13			
		2.1.4	Report of the Education and Research Committee	14			
		2.1.5	Independence and compliance	14			
		2.1.6	Background of the Supervisory Board members	15			
	2.2	Key fig	ures	16			
		2.2.1	Wageningen University & Research	16			
		2.2.2	Wageningen University	17			
		2.2.3	Wageningen Research Foundation	18			
	2.3	Mission	, vision, and strategy	18			
		2.3.1	Mission and ambition	18			
		2.3.2	Strategic Plan 2019-2022	19			
		2.3.3	Attention for Corporate Social Responsibility	20			
	2.4	Educati	ion	21			
		2.4.1	Profile and policy	21			
		2.4.2	Highlights	23			
		2.4.3	Results and success rate	26			
		2.4.4	Quality assurance in education	26			
		2.4.5	Funding	27			
		2.4.6	Students	28			
		2.4.7	Alumni	32			
		2.4.8	Outlook	33			
	2.5	Resear	ch	33			
		2.5.1	Coronavirus	33			
		2.5.2	Policy and organisation (graduate schools), (LNV programmes),				
			(investment themes)	34			
		2.5.3	International	35			
		2.5.4	Results	38			
		2.5.5	Quality assurance in research	39			
		2.5.6	Open Science	40			
		2.5.7	Funding	41			
		2.5.8	Outlook	41			
	2.6	Value c		42			
		2.6.1	Collaboration, tech transfer, and co-creation with partners	43			
		2.6.2	The entrepreneurial use of knowledge	45			
		2.6.3	Sharing knowledge	48			
		2.6.4	Wageningen Campus, Ecosystem & Facilities	50			
		2.6.5	Wageningen alumni entering the labour market	53			
		2.6.6	Outlook	53			

	2.7	Employ	rees	53
		2.7.1	One Wageningen	54
		2.7.2	Recruitment, Onboarding, and Inclusion	54
		2.7.3	Leadership & Talent Development theme	55
		2.7.4	Organisational Development theme	56
		2.7.5	Vitality & Health theme	56
		2.7.6	HR Operational Excellence theme	57
		2.7.7	Employee participational structure	58
		2.7.8	Employment conditions	58
		2.7.9	Risk analyses and evaluations	58
		2.7.10	Integrity	59
	2.8	Operati	ional management	60
		2.8.1	Management of information provision and ICT developments	60
		2.8.2	Personal data protection act	62
		2.8.3	Corporate Social Responsibility	62
		2.8.4	Safety and Environment	64
		2.8.5	Procurement policy and supply chain responsibility	68
	2.9	Complia	ance	69
		2.9.1	Governance	69
		2.9.2	Independence	70
		2.9.3	Risk management	71
		2.9.4	Remuneration of executives	76
		2.9.5	Secondary employment activities of Supervisory Board members and	
			Executive Board members	80
	2.10	Econom	nic performance indicators	82
		2.10.1	Direct economic value	82
	2.11	Wageni	ingen University Continuity Section	84
		2.11.1	Principles of the financial policy	84
		2.11.2	Internal risk management	87
		2.11.3	Risks and uncertainties	87
	2.12	Report	criteria and scope	89
3	Spec	ific Mini	stry of Education, Culture and Science accountabilities	90
	3.1	Quality	Agreements report 2021	90
		-	Process	90
		3.1.2	Progress	90
		3.1.3	Budget	94
		3.1.4	Student Staff Council and Supervisory Board	97
		3.1.5	Reflections of the co-participation council of WUR the Student	
			Staff Council	97
	3.2	Nationa	al Program Education / Corona paragraph	98
		3.2.1	Impact of Covid	99
		3.2.2	Planning and monitoring process NPE	99
		3.2.3	Realisation progress Education	100
		3.2.4	NPE Research	105
		3.2.5	Regulation Corona jobs (extra help in the class 2021)	107
	3.3	Wageni	ingen University & Research Profiling Fund	107
	3.4	Clarifica	ations	108
	3.5	Treasur	ry Policy	109
4	Abrio	lged WL	JR Annual Financial Report	110
	4.1	Wageni	ingen University	110
		4.1.1	Result development	110
		4.1.2	Development of turnover and costs	111
		4.1.3	Development of balance sheet items	112
		4.1.4	Outlook for 2022	112
		4.1.5	Abridged Wageningen University Annual Financial Report	114

	4.1.6	Accounting Principles	117
	4.1.7	Auditor's report by the independent auditor	123
4.2	Wagenii	ngen Research Foundation	124
	4.2.1	Result Development	124
	4.2.2	Development of turnover and costs	124
	4.2.3	Outlook for 2022	125
	4.2.4	Abridged Wageningen Research Annual Financial Report	126
	4.2.5	Accounting Principles	129
	4.2.6	Auditor's report by the independent auditor	136
Appe	endix 1 E	ducation at Wageningen University	137
Appe	endix 2 K	nowledge valorisation indicators	142
Appe	endix 3 C	Corporate Social Responsibility Report	148
Арре	endix 4 G	Glossary	155

# Supervisory Board

At the end of 2021, the members of Wageningen University & Research's Supervisory Board were as follows.

Mr J.R.V.A. Dijsselbloem (Chair) Ms M.A. Verhoef (vice chair) Prof. E. Dijkgraaf<sup>1</sup> Mr B.C. Jansen<sup>2</sup> Ms T. Klimp

The members of the Supervisory Board for both institutions (Wageningen University and Wageningen Research) are the same.

Refer to 2.9.5.1 for an overview of the side activities of the members of the Supervisory Board.

 $<sup>^{1}\,</sup>$  Prof. E. Dijkgraaf was appointed as a member of the Supervisory Board with effect from 1 March 2021.

<sup>&</sup>lt;sup>2</sup> B.C. Jansen was appointed as a member of the Supervisory Board with effect from 1 March 2021.

# **Executive Board**

At the end of 2021, the members of Wageningen University & Research's Executive Board were as follows:

Prof. L.O. Fresco (President)

Prof. A.P.J. Mol (Vice-President, Rector Magnificus of Wageningen University)

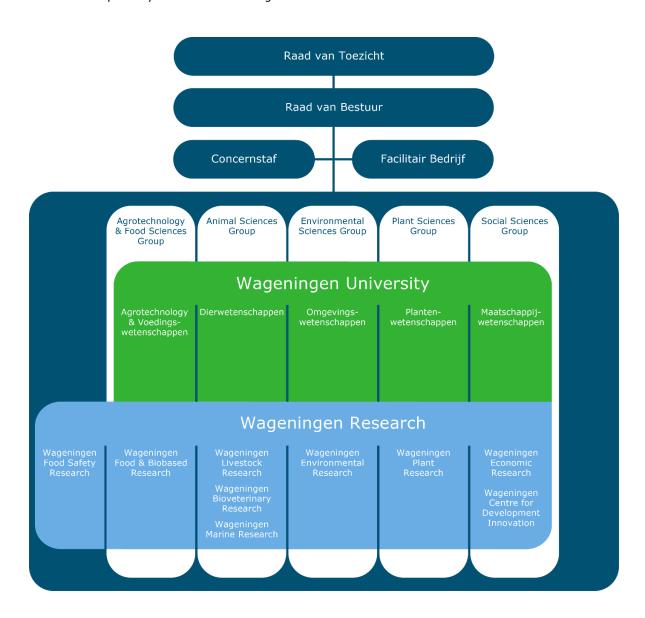
Mr L.A.C. Buchwaldt, MBA

The members of the Executive Board are the same for both institutions (Wageningen University and Wageningen Research).

Refer to 2.9.5.2 for an overview of the side activities of the members of the Executive Board.

# Profile and core activities of Wageningen University & Research

Wageningen University & Research (WUR) is a partnership between Wageningen University (WU) and Wageningen Research (WR). The association is organised into five sciences groups. This collaboration is the organisational, functional and administrative tool which, through combining forces, helps achieve greater effectiveness and quality of research and education. Each sciences group consists of a Wageningen University department that is organisationally integrated with one or more applicationoriented research institutes of WR. However, the organisations are separate administrative and legal entities. The matrix of the sciences groups together with the board of education, the research institutes and the programme directors that operate across Wageningen University & Research, ensure that interdisciplinarity and demand management are achieved.



One research institute, Wageningen Food Safety Research (WFSR), was not organisationally integrated into a science group in 2021. Among other things, WFSR carries out Statutory Research Tasks (WOT) in the area of food safety.

In terms of content, the objectives and activities of these separate legal entities are aligned both at the strategic and tactical levels within the Wageningen University & Research partnership.

Collaboration occurs in the operational management of some components. However, the relationship between these components is neither determined by nor dependent on policy. Individual organisational resources may not be used for any other purpose than to realise the objectives and perform the primary tasks of the individual organisation. For this reason, the separate legal entities publish a consolidated financial report for their group. WUR as a whole does not publish a consolidated annual report.

# Letter from the Executive Board

Just like 2020, 2021 was largely dominated by the coronavirus pandemic. The number of infections fell dramatically shortly before the summer, but unfortunately it became clear in the autumn that many of the freedoms that had been regained had to be relinquished. Relaxed restrictions, such as social distancing and wearing face masks, became the standard again. Wageningen University & Research demonstrated its ability to deal with the coronavirus impact on research, education, and value creation in a flexible and solution-oriented manner, for example by working from home and providing digital education. Thanks to the tireless efforts of employees and additional (financial) support, we were able to continue making an impact and the insights and lessons learned will lead to a new way of working.

An inclusive, diverse, and safe learning and working environment, in which everyone can develop, guarantees high quality education and research. That is why diversity and inclusiveness have been further promoted, together with the creation of a safe working and studying environment.

# **Education: making a connection**

2021 was another demanding year for our lecturers and students. The enormous efforts of lecturers ensured that the educational quality remained high even during the coronavirus pandemic and that learning outcomes were generally met.

At the same time, many students experienced more stress and difficulty in continuing their studies. For that reason, we paid even more attention to the wellbeing of students last year, for example by focusing on stress prevention and by increasing the number of study advisers and psychologists.

We also worked on the further development of our education in other areas in 2021. Many new, young lecturers were appointed. WUR invested in additional data science subjects and in teaching skills such as presenting, debating, and self-reflection for all study programmes. Aurora, the newest sustainable education building on Wageningen Campus, was also officially opened.

We are proud of how lecturers, students, and support staff have dealt with all the uncertainties and changes.

# Research: unique developments

The ongoing coronavirus pandemic delayed many PhD students and postdoctoral researchers. For that reason, WUR compensated more than 150 researchers by extending their contracts or providing financial support.

WUR has a leading role in research into the major challenges of our time, including climate change, health, and biodiversity. We launched the Wageningen Biodiversity Initiative (WBI) in June, which brings together knowledge from the entire range of Wageningen disciplines. As in the previous year, several scientists from Wageningen were engaged in interdisciplinary research — united in the ERRAZE programme — into zoonoses and solutions to the coronavirus pandemic. This was the focus of our Dies Natalis. WUR has a leading position in the national nitrogen issue. For example, WUR advised the Dutch Ministry of Agriculture, Nature and Food Quality (LNV) to take an integrated and area-specific approach to the challenges posed by nitrogen, climate, and water.

WUR also started a new two-year Post-Master's researcher programme; the Engineering Doctorate programme Design for Agrifood and Ecological Systems.

Researchers from Wageningen participated in the Climate Adaptation Summit 2021 and the COP26 climate summit in Glasgow. In the context of this summit, WUR and NOS organised a live television broadcast on climate change from the campus.

During the Food Systems Summit of the United Nations, WUR's expertise in the field of food systems was applied to dialogues and other events. Combating hunger was high on the agenda at this summit. CRISPR-Cas technology can play a role in this. During the Opening of the Academic Year, WUR announced that free licences of five CRISPR-Cas9 patents will be made available to potential partners in poorer countries.

# **Impact and partners**

The 2019 Strategic Plan was extended by two years until the end of 2024, and the content was updated.

WUR also collaborated extensively with organisations in our field of healthy food and living in 2021. WUR welcomed the World Economic Forum's European Food Innovation Hub to its campus and announced that the global secretariat for all regional hubs will be based in Wageningen. WUR also accelerated and further embedded the collaboration within EWUU, with the universities of Eindhoven, Utrecht, and the UMC, into our organisation and led the renewal and strengthening of the European Association of Life Science Universities ICA. WUR also worked on the new interactive Groen Kennisnet within Groenpact. Finally, Plus Ultra II was officially opened on 18 November. This new campus building accommodates a large group of businesses and startups.

During the national election year, we organised an election debate on agriculture, food, and nature between candidate MPs. And as Wageningen's largest employer, we are proud of the social contribution we make at the local level, including within the Food Valley region.

## **Finances**

From a financial point of view, 2021 was once again a good year. The result exceeded expectations by a wide margin, partly due to one-off windfalls and partly due to high productivity, although this involved an excessive workload.

The continued growth of direct government funding at WU and of LNV assignments at WR led to a further expansion of staff capacity. The planned growth in personnel capacity was reasonably on target at the end of the year, but was to a large extent only realised with a delay in the second half of the year. As a result, not all plans could be implemented and some of the funds were carried over to future years. WUR was able to cope well with the impact of the coronavirus pandemic on our operations in 2022. The additional funds from the Nationaal Programma Onderwijs (national education programme) helped to mitigate the effects of the coronavirus pandemic on our students and researchers.

The experiences from the coronavirus pandemic taught us that other ways of working together, such as hybrid work, can also be productive. In the coming year, we will investigate how to adapt our buildings to these new ways of working so that we can provide a suitable working environment for the growing numbers of employees.

Prof. L.O. Fresco (President of the Executive Board) Prof. A.P.J. Mol (Vice President of the Executive Board / Rector Magnificus) Mr L.A.C. Buchwaldt, MBA

### Introduction 1

This annual report covers the 2021 financial year of Wageningen University & Research (WUR), the partnership between Wageningen University (WU) and Wageningen Research (WR). This encompasses both the joint executive report and the individual annual financial report of the separate legal entities.

In the annual report, the performance of WUR will be presented along with the social aspects of this performance. Holding both internal and external stakeholders accountable, extends across the economic, environmental and societal impact of this performance. The annual report has been prepared in accordance with internationally accepted guidelines of the Global Reporting Initiative (GRI). The elements of the Corporate Social Responsibility Report, such as the implemented personnel policies and personnel indicators, are a part of this annual report.

Both WU and WR have a social function. How both organizations have implemented this in 2021 is made clear in this annual report

The following chapters offer the reader an overview of the key developments that occurred in 2021.

Chapter 2 contains the reports from the Executive Board and the Supervisory Board (2.1). Section 2.2 gives key figures; section 2.3 discusses WUR's ambition and the strategic plan to follow up on the results achieved for education (2.4), research (2.5), and value creation (2.6). In addition to the Corporate Social Responsibility Report (Appendix 3), the developments in terms of human resources (2.7) and business operations (2.8) are also covered. Section 2.9 offers insight into how the organisation is managed, reporting on the remuneration of executives (2.9.4). Section 2.10 deals with the Economic Performance Indicators and section 2.11 is the Continuity paragraph Wageningen University. Section 2.12 offers insight into the reporting criteria for this annual report.

The decision was made to provide insight into the use of specific Ministry of Education, Culture and Science (OCW) funded programmes, specifically the Quality Agreements, the NPO resources, and the Profiling Fund, in a separate chapter (3) for the year 2021.

Chapter 4 includes the condensed financial statements of WU (4.1) and WR (4.2), as well as the auditor's report on the condensed financial statements. The abridged annual financial reports are directly derived from the full Annual Financial Reports, which are published separately on the WUR website.

The Wageningen University & Research Annual Report 2021 was prepared and validated by the Executive Board on 25 April 2022 and approved by the Supervisory Board on 18 May 2022.

# 2 Wageningen University & Research Executive report

#### 2.1 Supervisory Board

#### 2.1.1 Report of the Supervisory Board

A year greatly impacted by the coronavirus pandemic was followed by a lockdown in 2021. The trend of studying and working online continued, and additional measures such as curfews and vaccinations were introduced. Most of the Supervisory Board's meetings and interactions also took place online in 2021. The Supervisory Board convened for six regular meetings and one additional meeting with the Executive Board in 2021. Only one of these meetings took place in person. The Board met eight times in closed session, one of which was an informal meeting.

# Supervisor

The Supervisory Board met frequently with the Executive Board in 2021 to discuss various issues related to the coronavirus pandemic, this time in less of a crisis management situation and more to remain closely involved with the now long-lasting consequences for education (online and blended education), the development of student numbers, research, and the welfare of employees and students. The Board also spoke with the Executive Board about the renewal and expansion of the Strategic Plan (2019-2024) and, in conjunction, Wageningen Research's new Strategic Agenda (2022-2025). Both documents were approved by the Board. Other strategic topics that were discussed were campus development, the image of WUR, the Strategic Housing Plan, and opportunities for WUR in Europe.

The Supervisory Board frequently discussed the Quality Agreements in 2021. For example, the 2020 Annual Report and the progress of the Quality Agreements were discussed with the Board using information from the dashboard; these progress reports were provided several times. The Board is very satisfied with the progress of the Quality Agreements and the way the Board is being informed about them. The Board approved a budget amendment and had separate discussions with the participational structure (WU students and employees) about the role and involvement of the Supervisory Board and the participational structure in the progress of the Quality Agreements. During these meetings, the Board ascertained that the participational structure is able to perform its role properly. The time and effort spent on keeping the participational structure informed of progress was discussed. The Board itself monitored progress via the dashboard and also kept track of the proper spending of funds. The Board considers it important to continue these discussions with the participational structure. The extensive report on the Quality Agreements is included in Chapter 3 of this Annual Report.

The Board was informed in 2021 about the cabinet's Nationaal Programma Onderwijs initiative, which is intended as a coronavirus support for education. WUR drew up a plan to use these resources in the right places. The report can be found in Chapter 3 of this Annual Report.

The Supervisory Board has approved the 2020 WUR Management Report and the 2020 Annual Financial Reports of WU and WR.

Based on the positive recommendation of the Audit Committee, the Supervisory Board approved the 2022 budget of WU and WR.

The Supervisory Board monitored the effective spending of resources, including the government grant and the TO2 subsidy. The Board did this primarily by assessing the intended expenditures as stated in the budgets and multi-year projections and performing a general check on them to see whether they are on track with the Strategic Plan. The Supervisory Board also assessed whether the ratios and key

figures are in line with other organisations in the sector. Finally, the Supervisory Board assesses all investments and divestments larger than €5 million. This was addressed in 2021 with regard to renovation of facilities and property sales.

The Supervisory Board and the Audit Committee consulted with the external auditor regarding the annual accounts, the Management Report, the 2020 Annual Financial Reports, and the 2021 Management Letter. The Supervisory Board requested that the Executive Board adopt the auditor's recommendations. Furthermore, the Board regularly discussed the financial reports and investments.

In addition to a property report, a property project report is also issued at the request of the Board, informing them of the progress of major property projects.

# Employer

The Code of Good Governance for Universities as applied at Wageningen University & Research, came into force in 2020 (see Section 2.9.1). An important principle of this code concerns the responsibility of the Supervisory Board for the internal supervision of the Executive Board. Principle 5.15 of this code states that the Supervisory Board and the Executive Board shall agree on how to deal with a situation in which a dispute arises between the two bodies. To this end, the Supervisory Board and the Executive Board have drawn up a dispute settlement procedure which was jointly adopted on 13 September 2021.

A modified guideline for "secondary employment activities" was adopted by the Supervisory Board. The Supervisory Board also approved the six-month overviews of personal expenses by Executive Board members. The board also granted its approval for the (new) secondary employment activities and external activities of members of the Executive Board. The Supervisory Board completed performance reviews with the members of the Executive Board in 2021.

# Relationship with stakeholders

In March 2021, the Supervisory Board attended the internal meeting with the WUR Council. The council also attended the consultation meeting between the Executive Board and the participational structure in June 2021. Additionally, an informal consultation was conducted between the Supervisory Board and the participational structure in December 2021.

Normally, the Supervisory Board visits a WUR division after each meeting to meet employees and be updated on the research that is being conducted and the education that is being provided. The Board also meets key employees, such as management, lecturers, and researchers who make an important contribution to social issues and groundbreaking research. In-person visits to organisational units have not been possible since March 2020 due to the coronavirus pandemic. However, several key officials have made online presentations on important developments such as nitrogen, forestation, and water. The Board attended the Dies Natalis, the online opening of the academic year and online dialogues on content-related topics such as biodiversity and "the impact of collaboration".

Individual members of the Board spoke with various WUR employees and students and online meetings were organised. This way the Board remains well informed about what is happening in the organisation and about employee and student concerns. This also offers new Board members an opportunity of getting to know the organisation better. There were also consultations with the ombudsperson appointed in 2021.

The Board also maintained contact with external stakeholders. Twice a year, the chairs of the Supervisory Boards of Dutch universities meet with the Dutch Ministry of Education, Culture and Science. The Board members' personal networks are in contact with environment around WUR, such as the top sectors, the Wageningen Ambassadors, WUR clients, etc.

# Development

In the autumn of 2021, the Board carried out an informal self-evaluation. Due to the addition of two new members, this was the method chosen for this year. Team formation, role distribution within the Board, and collaboration with the Executive Board were the topics of discussion.

The Board discussed the committee composition and adapted it to the changes in the Supervisory Board. After seeking the advice of the participational structure, the Board decided to adjust its own remuneration and gradually increase it to the average of a peer group, within the WNT preconditions.

#### 2.1.2 Report of the Audit Committee

The Audit Committee convened for three regular meetings, one additional meeting, and one closed session with the auditor in 2021.

The Audit Committee discussed WUR's 2020 annual report and WU and WR's 2020 annual accounts. The auditor's report was reviewed in the presence of the auditor. Some points of attention were the project control of research projects and the amount of research projects still to be completed (called "NAPRO"). Issues that have been commented on in the past, such as procurement, have been improved and no longer require the Board's attention. The Audit Committee advised the Supervisory Board to approve WU and WR's 2020 financial statements and to adopt the auditor's recommendations. Other topics of discussion were the financial management reports, the state of affairs of the property portfolio, the AVG report, the adjustment of an investment in the Dialogue Centre, and the investment request for a new process hall.

The EY audit plan and the points for attention it revealed were discussed with the accountant in the late summer, including the transition to a system-oriented audit by the accountant and, by extension, WUR's IT processes and management environment. The subject of cyber security was also discussed, as well as the actions taken by WUR in this respect. This was discussed again in the autumn, with the Audit Committee requesting that this topic be revisited on a regular basis.

The status of the 2021 internal control plan, the internal reviews, and performed audits, and the internal control plan for 2022 were also discussed in the presence of the internal auditor.

Consultations were held with the auditor in the autumn on the 2021 management letter, more specifically on the steps to be taken by the organisation in the growth path towards a system-oriented audit approach by the auditor. IT plays an important role in this. The auditor's ambitions and recommendations were discussed with the committee.

The Audit Committee discussed the financial framework of the Strategic Housing Plan and advised the Supervisory Board in November to approve the plan.

The Audit Committee discussed the 2022 budgets of WU and WR and the multi-year projections at the end of 2021. Topics of discussion included the limits to feasible capacity expansion in relation to high work pressure and productivity, the establishment of the rates at WR, the allocation of incidental resources to the university, and the number of NAPRO. With regard to the long-term projection, the development of student numbers and the development of liquid assets were discussed, among other things. The Audit Committee issued a positive recommendation to the Supervisory Board on the 2022 budgets of WU and WR.

#### 2.1.3 Report of the Appointments Committee

The Appointments Committee met four times in 2021 in regular consultations and four times in additional meetings. There were five Selection Committee meetings, of which the appointments committee forms an integral part.

The Appointments Committee prepared and conducted the annual performance appraisals with the members of the Executive Board. The meetings were prepared by the Committee, in part on the basis of input provided by various employees in the organisation, including the Central Participational Body. The results of the performance interviews were reported to the Board.

The Appointments Committee advised the Supervisory Board to reappoint Mr L.A.C. Buchwaldt in 2021. The participational structure advised the Board on this. Mr Buchwaldt was reappointed for a period of four years on 1 September 2021.

The appointment periods of Prof. S.J. Korver and R.P. Smith ended on 1 January 2021. At the recommendation of the board, Prof. E. Dijkgraaf and B.C. Jansen were appointed by the Ministers of OCW and LNV as new members of the Supervisory Board as of 1 March 2021. Prof. P.M. Herder stepped down as a member of the Board on 20 January 2021 as a result of accepting another position. The Board, in consultation with the participational structure, has drawn up a profile for Ms Herder's replacement. Interviews were held with candidates in mid-2021; this did not lead to a nomination to the ministers. This recruitment process was resumed in early 2022.

Following the recommendations of the Appointments Committee, the recruitment procedure for the Chair of the Executive Board was started in the autumn of 2021, in view of Prof. L.O. Fresco's term of office ending on 1 July 2022. Discussions were held with some recruitment agencies, on the basis of which the Appointments Committee chose to be assisted by one of these agencies.

Pursuant to Article 9 of the Supervisory Board Regulations, the Board decided to appoint Ms M.A. Verhoef as vice chair of the Board.

The composition of the Supervisory Board at the beginning of January 2021 consisted of three women (75%) and one man (25%). Following Ms Herder's retirement and the appointment of Mr Dijkgraaf and Mr Jansen as of 1 March 2021, this changed to two women (40%) and three men (60%).

Details of the remuneration for the members of the Executive Board and Supervisory Board for 2021 are provided in 2.9.4 of this annual report.

#### 2.1.4 Report of the Education and Research Committee

The Education and Research Committee met three times in 2021.

Fixed topics that were discussed at the meeting were the progress of the Quality Agreements and quality assurance of WU, the early registrations of students, the WOT report, and relevant matters related to integrity. With regard to education, the committee also discussed the effects of the coronavirus pandemic on lecturers and students, the development of student numbers, and the NPO plan. Another important topic of discussion was the interim evaluation of the Institutional Audit for Quality Assurance (ITK), which takes place halfway through the six-year cycle and in which the role of the Supervisory Board is also discussed. The frequency of meetings of the Education and Research Committee has been increased from two to three per year, in order to strengthen its role as quality monitor.

With regard to research, the programming of knowledge-based research and the mid-term evaluations carried out in relation to the KB and investment themes were discussed. Various RD and investment themes were also presented to the committee in terms of content.

#### 2.1.5 Independence and compliance

The Supervisory Board ensures that board members are independent. In the Supervisory Board's opinion, this is indeed the case in accordance with the Wageningen University & Research's Corporate Governance Code. The Executive Board is responsible for compliance with all relevant legislation and regulatory requirements and for managing the risks associated with the activities of the institution. The Executive Board reports on and discusses internal risk management and control systems with the Supervisory Board and the Audit Committee. The WUR Regulations (in Dutch) apply to the Supervisory Board.

#### 2.1.6 Background of the Supervisory Board members

Mr J.R.V.A. Dijsselbloem (1966) has been chair of the Supervisory Board since 1 April 2019, and is chairman of the Appointments Committee and a member of the Audit Committee. As of January 2021, he has also been a member of the Education and Research Committee. His first term of office will expire on 1 April 2023. Mr Dijsselbloem is Chairman of the Dutch Safety Board.

Ms M.A. Verhoef (1959) is the current vice chair of the Supervisory Board and has been a member since 1 January 2017. She is also chair of the Education and Research Committee and a member of the Appointments Committee. Her first term of office ended on 1 January 2021. She has been reappointed for a second term until 1 January 2025. Ms Verhoef is chair of the Executive Board of Levvel.

Professor E. Dijkgraaf (1970) has been a member of the Supervisory Board since 1 March 2021 and is also a member of the Education and Research Committee. His first term of office will expire on 1 March 2025. Mr Dijkgraaf is Professor of Empirical Economics of the Public Sector at Erasmus University Rotterdam.

Mr B.C. Jansen (1959) has been a member of the Supervisory Board since 1 March 2021 and is also a member of the Audit Committee. His first term of office will expire on 1 March 2025. Mr Jansen was chair and CEO of Avebe until 1 October 2021.

Ms T. Klimp (1972) has been a member of the Board since 1 September 2018, and chair of the Audit Committee since 1 January 2021 as well as a member of the Appointments Committee. Her first term of office will expire on 1 September 2022. At this point she will be eligible for reappointment due to the provisions of the Board's rotation schedule. Ms Klimp is CFO of Vion Food Group as of 1 November 2021; prior to that she was SVP of strategy at Corbion N.V.

## Key figures 2.2

#### 2.2.1 Wageningen University & Research

Table 2.1 Education

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Bachelor's programmes	19	19	19	19	19
Master's programmes	29	30	30	30	30

Table 2.2 Research

	2017	2018	2019	2020	2021
Number of scientific publications	4,826	5,305	5,142	5,411	5,663
Wageningen University	4,064	4,614	4,415	4,661	4,907
Wageningen Research Foundation	1,356	1,517	1,475	1,422	1,488
Number of PhD degrees obtained	295	286	293	283	294

<sup>•</sup> Data from Pure (dated 02/03/2021).

Table 2.3 Students

	2017-2018	2018-2019	2019-2020	2020-2021	2021-2022
Number of enrolled students	12,000	12,439	12,847	13,275	13,676
Bachelor's students (including Pre-MSc)	5,655	5,902	5,928	6,037	5,904
Master's students	5,822	6,105	6,409	6,936	7,249
Other enrolments	523	432	510	302	523
Influx of first-year students	2,977	3,003	2,923	3,032	2,982
Bachelor's (including Pre-MSc)	1,711	1,744	1,629	1,745	1,557
Master's	1,266	1,259	1,294	1,287	1,425
Number of diplomas <sup>3</sup>	3,190	3,323	3,239	3,663	
Bachelor's	1,162	1,268	1,295	1,345	
Master's	2,028	2,055	1,944	2,318	
Number of student nationalities	106	106	102	106	111
Percentage of international students					
Bachelor's students	3	3	5	6	7
Master's students	40	38	36	34	35
Course 2021, Ocivia Course provious venus AID					

Source 2021: Osiris, Source previous years: AIR.

<sup>• (</sup>Number of scientific publications (articles in academic journals (refereed/non-refereed, books, book chapters, conference proceedings and

This number includes the academic articles with the status e-pub ahead of print. These articles were published online in 2020, but have not yet received a publication year, volume, and issue from the publisher at the time of reporting.

 $<sup>^{3}</sup>$  The number of diplomas for the 2021-2022 academic year will only be known after the summer of 2022. These figures will be included in the 2022 Annual Report.

Table 2.4 Employees

	2017	2018	2019	2020	2021
Average number of employees (in FTE)	4,852	5,040	5,400	5,880	6,256
Distribution on the basis of appointment:					
Wageningen University	2,492	2,590	2,743	2,951	3,179
Wageningen Research Foundation	2,360	2,450	2,657	2,929	3,080

Relates to staff with a regular employment contract.

Table 2.5Sustainability

	2017	2018	2019	2020	2021
Reduction of CO <sub>2</sub> emissions by % compared to 2010 <sup>4</sup>	51	48	50	63	64
Annual decrease/increase in energy in %	-6.0	-2.2	-1.1	-6.5	+6.6

The annual CO2 emissions as a percentage of the total CO2 emissions for the reference year 2010 (100%). For further explanation see section 2.8.4.2.

#### 2.2.2 Wageningen University

Table 2.6 Key financial figures for Wageningen University (x €1 million)

	2017	2018	2019	2020	2021
Government funding excluding targeted grants	189.9	202.5	226.4	241.9	269.8
Tuition and tuition fees <sup>5</sup>	36.9	37.8	38.1	39.2	35.7
2e Research funding and targeted grants	28.6	32.2	34.3	33.7	36.4
Matching market and contract research	59.1	60.0	64.1	59.3	68.0
Investments in buildings and land	3.7	6.4	17.7	48.4	44.3
Investments in other fixed assets	9.5	11.3	15.4	24.7	20.9
Net result	13.2	27.6	20.0	20.5	11.6
Wageningen University capital					
Capital in fixed assets	247.4	238.0	248.1	285.1	319.9
Equity capital	164.4	192.0	212.0	232.5	244.2
TOTAL LIABILITIES	348.0	369.6	405.3	437.6	458.6
Accommodation ratio (%) <sup>6</sup>	10.4%	10.1%	8.2%	9.2%	9.2%
Solvency ratio 1 (%) <sup>7</sup>	47.3%	51.9%	52.3%	53.1%	53.2%
Solvency ratio 2 (%) <sup>8</sup>	52.1%	55.3%	55.2%	56.0%	55.8%
Identification value of excess equity <sup>9</sup>				0.74	0.70
Wageningen University liquidity					
Liquid assets	53.9	88.9	114.2	104.2	83.3
Current ratio	0.6	0.8	0.9	0.8	0.7

 $<sup>^4\,</sup>$  The annual CO $_2$  emissions as a percentage of the total CO $_2$  emissions for the reference year 2010 (100%). For further explanation see section 2.8.4.2.

 $<sup>^{5}\,</sup>$  Excluding course fees.

<sup>&</sup>lt;sup>6</sup> Accommodation ratio: (depreciation of buildings and land + accommodation costs - / - rental income) / total costs.

 $<sup>^{\</sup>rm 7}\,$  Solvency ratio 1: equity capital / total liabilities.

<sup>&</sup>lt;sup>8</sup> Solvency ratio 2: (equity capital + provisions)/ total liabilities.

<sup>&</sup>lt;sup>9</sup> Identification value in accordance with the Reporting Guidelines for Educational Institutions model. With a value greater than 1, there may be excessive equity capital.

#### 2.2.3 Wageningen Research Foundation

Table 2.7 Key financial figures for Wageningen Research foundation (x €1 million)

	2017	2018	2019	2020	2021
Turnover	299.4	321.9	344.0	355.1	372.1
LNV proportion in total revenue (%)	38	42	43	43	44
Investments in company buildings and land	16.6	17.7	9.8	19.0	11.4
Investments in other tangible fixed assets	5.5	7.2	13.7	7.2	7.7
Net result	4.2	10.4	14.9	17.0	9.4
Wageningen Research capital					
Capital in fixed assets	336.1	339.5	339.0	344.2	342.7
Equity capital	308.7	319.1	334.0	351.0	360.3
TOTAL LIABILITIES	525.1	547.9	555.8	579.3	576.0
Solvency ratio (%)	58.8	58.2	60.1	60.6	62.6
Wageningen Research liquidity					
Liquid assets	93.8	117.7	129.2	143.7	135.8
Current ratio	1.4	1.3	1.4	1.3	1.3

#### 2.3 Mission, vision, and strategy

#### 2.3.1 Mission and ambition

WUR is an internationally renowned university and research organisation in the field of agriculture, healthy nutrition and quality of life. Our mission is 'to explore the potential of nature to improve the quality of life'. Located in the Netherlands, we work together with academic partners, companies, government organisations and NGOs on global, regional and local challenges and transitions.

The 21st century is characterised by major global challenges that transcend countries and sectors. Humans are exhausting our planet's natural resources, malnutrition remains a global problem, cities are becoming overcrowded, and the climate is changing rapidly. Current national and global developments — such as the coronavirus pandemic, the nitrogen crisis, and the ever-changing geopolitical circumstances — require new knowledge and solutions in order to react and anticipate properly.

With knowledge, education and research of the highest possible standard, WUR aims to tackle global challenges and shape and accelerate the required transitions. In doing so, we contribute by developing innovative technological, social, and nature-based solutions for building bio-circular agri-food systems. These solutions also contribute to protecting nature, improving biodiverse ecosystems, and supporting the quality of life in urban and rural communities.

At the same time, we focus on continuous internal innovation, change and further development of our education and research in order to retain and strengthen our quality, social impact and global position. WUR's domain of healthy food and living environment consists of three interrelated core areas with partial overlap:

- Society and well-being
- Food, feed and biobased production
- Natural resources and living environment

#### 2.3.2 Strategic Plan 2019-2022

The 2019-2022 Strategic Plan Finding Answers Together is a call to new and existing partners, students, alumni, and citizens to join us in exploring nature's potential, understanding the challenges we face and discussing — and navigating between — conflicting interests. We want to work together on evidence-based and socially inclusive responses that can help shape the necessary transitions.

Twelve Change Performance Indicators (CPIs) were identified in the strategic plan. These CPIs serve as a quide for the implementation: We also implement the strategic plan by including the ambitions and objectives in the core programme as much as possible. We use existing processes and tools, such as the Planning & Control cycle, the budget, existing boards and councils, and meetings. A team for each CPI is active to facilitate the realisation in the organisation using a Theory of Change that was created. The Theories of Change detail the intended outcomes and impact of each CPI and how we intend to achieve them through concrete actions, policies, instruments, and programmes. The sciences groups have also developed the CPIs in their long-term plans and are fully implementing them.

There was regular communication about the plans and the results achieved through stories of notable milestones or developments that touched on the work of WUR colleagues. Open meetings were again organised in 2021 with the aim of "finding answers together" (FAT sessions) to various ambitions in the Strategic Plan. The FAT sessions were delivered online because of coronavirus restrictions and also because attendance was higher than when the sessions were held on campus. Online participation appears to be more easily accessible.

# Realisation Review

WUR organised a Realisation Review in June 2021. During the Realisation Review, the teams working on the CPIs looked at progress over the past two years and what would be needed to further realise the ambitions. They did this together with members of the board, directors, and other critical friends. It also looked at the connections between the CPIs and between the plans of the sciences groups and the CPIs, and at the opportunities for greater synergy. A review of the realisation and an external environment analysis contributed to the discussions and reflections.

A key conclusion of the Realisation Review is that each CPI has made good progress and achieved results. Concrete actions and plans have been formulated and implemented in the CPIs. Digitalisation ambitions have even been accelerated, partly as a result of the coronavirus pandemic. In the next phase of the Strategic Plan's realisation, we will focus on further consolidating the actions and progress, securing the change capacity, strengthening connections, and the integral design of the CPIs. Monitoring in 2022 will focus on the effects of the initiated actions and whether we are achieving the impact we had in mind.

# Extension & Update 2022-2024

The Executive Board decided to extend the term of the Strategic Plan in 2021 by a period of two years, so that the term will run through 2024. An important aim of this extension is to gradually align the planning periods of WUR's Strategic Plan and WR's Strategic Agenda as soon as possible. At the same time, we used the extension to update our strategy together with internal and external stakeholders in response to recent external developments and results of several interim evaluations. The choice to extend our Strategic Plan was made in consultation with the participational structure, the Supervisory Board, and the Dutch Ministry of Agriculture, Nature and Food Quality.

To further strengthen our social impact through education, research, and value creation, we have added a number of additional ambitions and strategies to the current Strategic Plan. The Extension & Update complements — and is an integral part of — the current WUR 2019-2022 Strategic Plan Finding Answers Together.

In addition to completing the current investment themes, we will launch three new investment themes in 2022: Biodiversity-Positive Food Systems, Transformative Bioeconomies, and Data Driven Discovery in a Changing Climate. Wageningen Research (knowledge base) research programmes will be reviewed and extended until the end of 2024, based on new external developments and the internal

evaluation of the programmes. In our research, we continue to give shape to Open Science and the Recognition & Reward programme. We are also launching the first two-year Engineering doctorate programme.

Our education focuses even more on the expansion and further improvement of blended education (combination of on-campus and online education), making optimal use of the lessons learned during the coronavirus pandemic. The realisation of our ambitions for blended education has been accelerated as a result of the restrictive measures related to the coronavirus pandemic. By offering more blended education, the campus remains the centre of our education. At the same time, we want to strengthen our unique educational portfolio and profile and expand our education for professionals (Lifelong Development).

Strengthening our impact is a key ambition in our current Strategic Plan. We look for answers to important social questions together with partners. In the next three years, we will pay even more specific attention to aligning our research with social needs and the UN Sustainable Development

A number of additional objectives have also been set for operational management. In the next three years, we will focus on Working@WUR, exploring and shaping hybrid forms of working that contribute to our ambition to make an impact. The new Strategic Housing Plan facilitates hybrid forms of collaboration, incorporating the lessons learned from the coronavirus pandemic. To promote internal collaboration, we are also strengthening our integrated management and making substantial choices based on priorities. Easy Service Management aims to reduce administrative burdens for lecturers and researchers.

In the coming years, we will realise these additional ambitions, integrated into the realisation strategy of the current Strategic Plan. The emphasis in the realisation strategy will be even more on managing and facilitating the realisation through the line.

# Wageningen Research Strategic Agenda

Following the review of WR in 2020, a Strategic Agenda for WR was drafted in 2021, which will come into effect in 2022. In terms of content, this fits seamlessly into WUR's extended Strategic Plan and offers a number of elements for further elaboration for Wageningen Research. Core elements are the retention and development of researchers, the strengthening of the knowledge base, the development of a roadmap for research infrastructure, and national and international collaboration.

#### 2.3.3 Attention for Corporate Social Responsibility

"One Wageningen" is central to our Corporate Social Responsibility (CSR) strategy. We strive for sustainability on all fronts: education, research, value creation, and business operations. In everything we do, we are aware of the social effects and we take our social impact into account in our decisionmaking. This way "Science for Impact" continues to be the basic principle underlying our research and education. Through research and education, we contribute to the global social challenges relating to food security, safety, health, liveable cities, and sustainable land use.

The WUR 2019-2022 Strategic Plan gives priority in the area of CSR to "promoting the vitality of our employees and students, to a healthier and more sustainably produced food supply in our cafeterias, and to reducing food waste." We apply a "Living Lab" concept in making our organisation sustainable: an approach that provides opportunities for research and educational experiments. In our procurement policy, we put pressure on chains to work on a transparent, sustainable and circular basis, free of modern slavery.

The ambitions and goals from the strategic plan, which affect CSR and sustainability, are included in our CSR agenda: a list of 17 social themes that are important to our organisation and stakeholders (see 2.1). Research and education feature prominently in this agenda; it is precisely via these core activities that WUR has a social impact. Innovative challenges are sought out, and sharing and disseminating knowledge is key. Vitality, aimed at the health and wellbeing of our employees and students, and diversity are important focus areas when it comes to social responsibility. Research

must be ethical; employees are expected to act with respect towards people and animals and with an eye for nature and the environment. This is stated in our integrity code. More information on the CSR agenda can be found in Section 2.8.3.

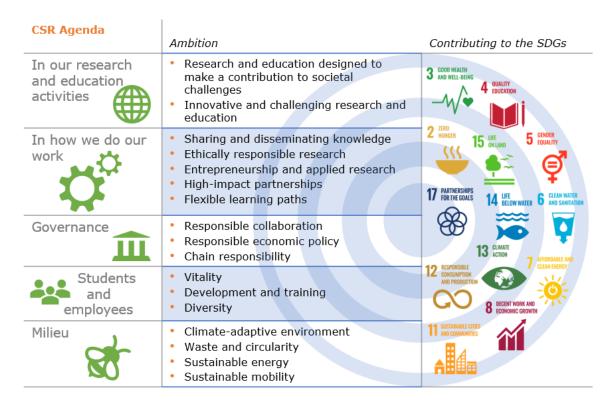


Figure 2.1 CSR agenda

#### 2.4 Education

#### 2.4.1 Profile and policy

As an international university, we contribute to the development of solutions for urgent and relevant challenges. The power of WUR lies in its potential to combine the expertise of WU with that of the specialised research institutes of WR. The interdisciplinary nature of WU enables us to integrate our efforts and insights from various scientific, social, scientific and technical academic fields. Bringing this expertise together leads to scientific breakthroughs that can quickly be implemented in practice. This multidisciplinary approach is also central to education. In education, attention is also paid to entrepreneurship, both through the education curriculum and through extra-curricular initiatives (e.g. in the 4TU partnership, see also 2.6.2.1).

Companies, government bodies and social organisations, and research institutions can visit the "Society Based Education" window to connect their questions to courses for students who are learning to use their academic skills to resolve concrete issues (see also 2.6.3.4). The Science Shop is also available for non-profit organisations (see 2.6.3.7).

Our education and research is aimed at the domain of healthy food and living environment (see 2.3.1). In the 2020/2021 academic year, the range of programmes for the more than 13,000 campus students consisted of 13 Dutch Bachelor's programmes, 6 English Bachelor's programmes, and 30 English Master's programmes in the fields of Agro Technology and Food Sciences, Animal Sciences, Environmental Sciences, Plant Sciences, and Social Sciences (Appendix 1, Table B1.1).

Three of these study programmes are jointly provided with other institutions of higher education: the Tourism Bachelor's programme with the Breda University of Applied Sciences (BUAS) and the Water Technology Master's programme (MWT) with the University of Groningen, Twente University, and

Wetsus in Leeuwarden. The Metropolitan Analysis, Design, and Engineering (MADE) Master's programme is offered along with the Delft University of Technology, under the umbrella of the Amsterdam Institute for Advanced Metropolitan Solutions (AMS).

Three Master's programmes offer an online part-time specialisation, which provides students across the world with the opportunity to obtain a full Master's and to combine study and work. In addition to these degree programmes which are accredited by the Accreditation Organisation of the Netherlands and Flanders (NVAO) and are publicly funded, WU offers open and online education, such as Massive Open Online Courses (MOOCs) and professional online courses. Through Wageningen Academy and the Centre for Development Innovation (CDI), WUR organises professional online and in-person training programmes, postgraduate courses for professionals in the business community and public or semi-public sector (see 2.6.3.6 and (2.4.2)).

Wageningen education is multidisciplinary, sometimes even interdisciplinary and transdisciplinary, and the Master's programmes, in particular, are strongly international in character, both with regard to the curriculum and the composition of the campus student population. The International Classroom is the instrument used to educate students about working in an international and multicultural context and to further enhance the educational quality.

The form and content of education in the Bachelor's and Master's programmes is updated and reviewed annually in the "education change cycle". The Board of Education, the degree programme board of all NVAO-accredited programmes at WU, determines the curriculum of the study programmes and is responsible to ensure the quality and study feasibility of the programmes.

In 2018, a start was made with the implementation of the "Vision for Education" (2017) with the following education mission for Wageningen: "We educate students to become academic professionals, who can contribute to sustainable solutions for existing and future complex issues in the domain of healthy food and living environment all over the world, and who take their social, personal and ethical responsibilities seriously."

The implementation was continued in 2021. In it, three important pillars for the development of education are defined:

- 1. high-quality scientific knowledge;
- 2. a rich learning environment is offered, in which the development of knowledge, skills, and approaches are combined;
- 3. flexible and personal learning paths.

To ensure a permanent focus on the further development of education and our study programmes, WU collaborates with (or is a member of) many umbrella associations and organisations relevant to its domain (in alphabetic order):

- 4TU.Federation (the four universities of technology: Wageningen University, University of Twente, TU Delft and Eindhoven University of Technology)
- A5 (the alliance of top five agri-food universities in the world: University of California Davis, Cornell University, China Agricultural University, University of Sao Paulo, and Wageningen University & Research)
- Association for European Life Science Universities (ICA)
- · Comenius network
- Euroleague for Life Sciences (ELLS)
- European Bioeconomy University (EBU)
- European University Association (EUA)
- Groenpact, the framework of partnership between green education (WO, HBO, MBO), business, and government
- Knowledge alliance between Eindhoven University of Technology, WUR, Utrecht University, and the University Medical Centre Utrecht (EWUU)
- Netherlands Universities' Foundation for International Cooperation (NUFFIC)
- Platform EdX (MOOC provider and online learning platform)
- SURF (the ICT collaboration of education and research)

- Universities of the Netherlands (UNL, formerly Vereniging Samenwerkende Universiteiten Nederland, VSNU)
- Acceleration agenda for educational innovation with ICT (joint venture between UNL and the Association of Universities of Applied Sciences VH)

#### 2.4.2 Highlights

# **Education during the coronavirus**

Similar to 2020, the coronavirus pandemic had a major impact on education in 2021. Although practicals, exams, and self-study could take place on the campus, adapting to the coronavirus measures for higher education was very demanding for both students and lecturers. Creative solutions to shape education and the use of digital tools meant that the students were still able to achieve their learning outcomes.

Due to the travel advisories, there were little to no options for international study activities such as field trips, internships, exchange, and thesis outside of Europe in 2021. These activities were replaced by online activities and activities in the Netherlands/Europe as much as possible.

In order to handle the effects of the coronavirus with regard to student wellbeing, the reception of new students, social interaction, and learning disadvantages, the Dutch government made funds available in 2021 under the heading "Nationaal Programma Onderwijs". For this purpose, WU has also developed a plan in close consultation with the participational structure in 2021. In this plan, all four themes are addressed, in which WU uses the resources in addition to measures already taken and the Quality Agreements. A significant part of the resources will be devoted to making sufficient thesis assignments available, supervising internships, more excursions in and interaction with the professional field, and more guidance and assistance for students. The results for 2021 are reported in Section 2.4.6.

The Dutch government had hoped in early 2021, after an intensive vaccination campaign, that the coronavirus would be under control and society would be able to function in a new normal by the second half of the year. However, this proved not to be the case. As a result, a lot of education was provided online as well in 2021. All the necessary adjustments did provide quality learning experiences, but also led to a very high work pressure for lecturers and support staff. Both students and lecturers missed the interaction on campus that characterises WU.



# **Educational reform**

Our innovation strategy in 2021 continued to focus on achieving the mission for Wageningen education (see Section 2.4.1). WUR believes it is important to keep the education portfolio up to date for different target groups, to create more flexibility in education in response to the changing needs of students and professionals, and to support them as well as possible in their learning process. In order to realise this, WUR believes it is important to have sufficient, well-trained lecturers who possess a rich repertoire of didactic knowledge and skills and to have facilities and support that match these ambitions.

Translating this into an innovation strategy meant that by 2021, investments were mainly made in course innovation, in connection with new scientific and didactic insights of lecturers but also from the necessary adjustments as a result of the coronavirus pandemic. This included experiments with new IT tools in education.

# Further work was done on:

- providing all the necessary software for students in an app store: allowing students to take exams on their own devices and adapting facilities in education rooms;
- providing more blended education, with valuable interaction on campus. In part, this involved exploring online alternatives to practicals and fieldwork. It also meant embedding MOOCs into BSc and MSc education;
- · flexible learning paths (following on from a national initiative in the context of SURF) and the start of an experiment with the allocation of microcredentials in education for professionals;
- more flexibility in educational logistics, including automated sharing of student information between universities when students want to take a course elsewhere (student mobility) and the start of a shared educational catalogue across universities, including a pilot for awarding edubadges for extracurricular activities;
- keeping the education portfolio up to date, investing in the development of two new courses and strengthening the portfolio of courses for professionals (B2C);
- the strengthening of educational didactics, including skills education, didactics for education professionals, and an inspiring training programme for lecturers.

Some of the above work took place in collaboration with other parties, such as in the alliance with Utrecht University, Eindhoven University, and Utrecht University Medical Centre (EWUU), the parties participating in the Science & Technology sector plan, the 4TU partnership (and more specifically the 4TU Center for Engineering Education), and the Acceleration Agenda "Educational Reformation with ICT" and resulting initiatives.

# **Education for professionals**

Providing and delivering professional education is also becoming increasingly important for universities. WUR also committed itself to making its knowledge even more accessible to professionals worldwide. To achieve this, an intensive collaboration between the teams of Open & Online and Wageningen Academy started in the summer of 2021. In a programme, both teams are working on richer course offerings and improvements in operations and administration to achieve growth. The collaboration and coordination with WCDI has also been intensified.

In a partly joint effort, 15 new courses for professionals were introduced, for example the online summer school Greenhouse Horticulture, the online course Data Driven Agri-Food Business and the blended course Planning, Design and Management: Public Space and Transitions. More than 500 participants attended these new courses. Four new MOOCs have been published, bringing our total portfolio on edX to 43 MOOCs. The number of MOOC registrations in 2021 was approximately 150,000, bringing the total to over 1.2 million since the first MOOC in 2015.

# Keeping the portfolio up to date: two new courses

Lecturers from various sciences groups and the Wageningen Data Competence Center developed a Master's degree in the field of data science in 2021 (Data science for food & health). WUR completed the macro-efficiency process for this study programme in 2021 and is preparing for the Toets Nieuwe Opleiding (new study programme assessment), which will take place in January 2022; the programme will start in September 2022. A proposal has also been developed by lecturers from various sciences

groups for a BSc study programme in Marine Sciences. For this purpose, the macro-efficiency process and the new study programme test will take place in 2022.

An internal analysis of the entire WUR education ecosystem was carried out in 2021 with the aim of aligning and further strengthening the total offerings with the strategic educational goals of the WUR. We want to repeat this analysis every three years.

# **Quality Agreements**

In 2021, strides were made towards the realisation of the agreements made in 2019 regarding the Quality Agreements 2019-2024 for WU. As such, a decision has been taken on how to utilise the funds released due to the discontinuation of the basic study grant, for the purpose of improving the quality of education at WU (see Chapter 3 of this annual report for an extensive report).

## Student welfare

As a result of the coronavirus pandemic, the wellbeing of students is under pressure, which is why a lot of attention was paid to student wellbeing in 2021 as well. The activities that took place were partly funded by resources from the Nationaal Programma Onderwijs, partly from the Quality Agreements and partly from other own resources. For a more extensive report on attention to student welfare, see 2.4.6.1.

# **Student Challenges**

The second and final edition of the ReThink Protein Challenge on protein transition, organised by WUR Student Challenges, took place in 2021. 352 students from 92 universities in 34 countries registered and 48 teams enthusiastically entered the challenge. These teams were supported by the network of experts of the Challenge partners. 10 of the 12 finalists have indicated that they actually want to develop their innovation further and introduce it to the market; several have already registered with the Netherlands Chamber of Commerce. Besides the ReThink Protein Challenge, WUR Student Challenges also co-organised/organised the Competition for Climate Adaptation in Food Systems and the Dutch 4TU Impact Challenge. Approximately 500 students in total participated in these challenges, including 91 WUR students. WU students were also involved in a long series of international challenges led by other universities.



# IT in education

Many IT and educational developments took place in 2021:

- continued experimentation with new tools in education such as the Labster, H5P, Codegrade, Traintool, and Comprove applications and the Peek app;
- all course applications for education were included in the WUR AppStore and made available to students on their own devices. The focus in 2021 was on optimising the way in which this software is made available to students as well as on version, contract, and licence management from the perspective of the institution;
- the ability for students to complete exams on their own device. This required the acquisition of new security software and its integration with other software;
- protocols have been developed for digital student examinations, including the preparation for the digital examination by the student and lecturer and the actual examination (including supervision by the invigilator). By the end of 2021, we had gained such extensive experience that it could be used as a standard operating procedure in 2022;
- implementation of the new student information system Osiris;
- an application was chosen for the distribution and management of videos: Yuja, which will go live in 2022;
- the updated Groen Kennisnet application, developed as part of the Groenpact partnership, is now live;
- the new student portal MyWURToday is now live. A significant number of students had become acquainted with this portal by the end of 2021.

Finally, the permanent security of data in digital education systems, as well as digital accessibility for students with visual impairments, were also worked on in 2021.

#### 2.4.3 Results and success rate

The success rate (study success) of the Master's programme after two years is 24% (for the 2019 cohort). Compared to the previous year, the Master's programme net yield has increased slightly after two years, but it is still not at the level of the period before the coronavirus pandemic. The net yield of Master's programmes after three years is 71%, which is similar to previous years. The net yield of Bachelor's programmes after three years is 35%; this is almost the same as the previous year (36%). The yield after four years for the Bachelor's programmes is 72%; this is slightly lower than the previous year (75%).

For the 17th time in a row, WUR was elected as the best university in the Netherlands in 2021 (Keuzegids 2022). 9 of the Wageningen Bachelor's degree programmes received the distinction of Top Degree Programme, the same number as last year.

In prominent international rankings such as Times Higher Education, ARWU, and QS, WU consistently received top spots in 2021, despite some of these rankings not adjusting for the formative scope of an institution. Our quality comes best to the fore in the subject rankings that differentiate between different fields. WU ranked first for Agriculture (ARWU, QS ranking and US Best Global University Rankings) and Environment/Ecology (Best Global University Rankings), and second in the fields of Plant and Animal Sciences (Best Global University Rankings), and third for Food Science and Technology (ARWU).

In accordance with the UI GreenMetric University Ranking, which focuses on policy, facilities, and education and research relating to a green campus and sustainability, WUR can refer to itself as the greenest university in the world for the fifth consecutive year in 2021. According to SustainaBul, WU was also the most sustainable higher education institution in the Netherlands in 2021.

#### 2.4.4 Quality assurance in education

# Internal

The course and programme evaluations provide crucial feedback to lecturers, programme directors, chair holders and the Examining Board regarding the quality of education. The assessments are

transmitted, the information is collected, and the reports are prepared using the Programme and Course Evaluations (PaCE) system. Updated questionnaires for BSc graduates and for the evaluation of the internship were introduced in September 2021.

The average overall satisfaction score of students across all courses is 3.9 on a scale of 1 to 5; practically the same as the preceding years. At the course level, 42% of the courses even score a 4.0 or higher (this was 36% in 2019-2020).

The response to the professional evaluations decreased again in 2021 (on average 30%). The number of courses that received feedback from the course coordinator (i.e. a response to the results shared with the students of the course, among others) increased further from 22% in 2019-2020 to 35% in 2020-2021. Students greatly appreciate the feedback on the evaluations; this provides insight into how the results of the evaluations are concretely used for improvements.

The programme evaluations are conducted at the end of the first year of the BSc (average response rate of 25%) and upon completing the BSc or MSc programme (response rate of 25% and 30%, respectively). The reports are sent to programme directors and committees with the objective of using the feedback to continue improving their study programmes. In general, students say they are very satisfied with their education and the basis it provides for further education or employment. They would also like to be better informed about career opportunities.

The programme committees wrote an annual report and annual plan for the first time in 2020-2021, in which they reflect on the education provided and the improvements that have been made and look ahead to the new academic year. In it they describe their ambitions, innovations, and/or improvements. Discussing this annual report is part of the annual visit by the programme committee to the Board of Education. The annual reports show how much time, care, and attention have been paid to providing good education during the coronavirus pandemic as well as to continuing to improve and further develop education. In connection with the annual reports and plans, the importance of continuing to organise meetings between the study programme and the work field advisory and examination committees was emphasised once again.

WU also participated in the National Student Survey (NSE) and the International Student Barometer (ISB) in 2021. The results of the ISB are expected in early 2022. The response to the NSE was high, 43%, and the results show that students are generally very satisfied with their study programme and WU. Overall satisfaction and atmosphere at the academy score higher than the national average. The NSE revealed the following points of interest: preparation for career opportunities and more attention to reflection.

# **External**

No external on-site reviews for programmes took place in 2021, in accordance with the review schedule. However, preparations have started for the review of the BSc study programme in Economics and Policy (review in 2022) and the application for the new study programme test for the MSc study programme in Data Science for Food and Health (review in 2022).

From the recommendations of the panels in the third cycle of degree programme assessments, the thesis procedure and assessment, the internship assessment, and the function of the examination boards were among the topics chosen for further elaboration. The progress of the improvements made is reported to the Board of Education twice a year.

#### 2.4.5 **Funding**

Education at WU is funded by direct government funding for education and research that consists of government funding of €269.8 million and the proceeds from tuition and course fees of €35.6 million, totalling over €305.4 million. Effective as of 1 January 2018, the funding of green education was transferred to the Ministry of Education, Culture and Science (OCW). WU participates fully in the WO funding model of the Ministry of Education, Culture and Science since 2019.

#### 2.4.6 Students

#### 2.4.6.1 Study, student counselling, and student wellbeing

To ensure good study progress and student wellbeing in general, we offer our students guidance and assistance through study advisors, student deans, and psychologists, and an extensive Student Training & Support training centre.

The study advisors provide answers to questions concerning the content and organisation of the study, they have a good overview of the structure and content of the study programmes and studying as such. In principle, every student is in contact with a study advisor, who is also the one who can contact a student counsellor or psychologist for help and support for non-study related problems that have an impact on the course of studies.

The university has also invested in preventing problems in the past year by increasing the resilience of students, such as through the training centre.

#### Student Deans

- The total number of appointments with the Dean's Office increased by 3% in 2021 (from 1688 to 1747), this is mainly due to the increase in student numbers. The percentage of students making at least one appointment with a dean has remained the same (8%).
- The number of conversations with students with ADD/ADHD has increased, while the number of talks with students on the autism spectrum (ASD) has decreased. Both cases seem to show the (negative and positive respectively) effect of online education and self-study.
- There were more students with psychological issues (up from 18% to 21.8%) and an increase in the number of students already suffering from psychological problems before their studies.
- There is a change in the ratio of interviews with BSc and MSc students respectively, with an increase in interviews with MSc students (from 45.9% to 48.4%).
- Reporting in the area of RSI/CANS has been increasing since 2019. From 78 in 2019 (4%) to 93 in 2020 (5.5%) and 99 in 2021 (6.6%). Online education has probably played a role in this.

# Student psychologists

- In 2021, 8.7% of students reported to a student psychologist (almost 1,200) and 2,407 interviews took place.
- Of this group, 70% made direct contact, 14% were advised by the study advisor, and 10% were advised by a fellow student.
- The range of programmes has been expanded to include mindfulness, self-image, and selfcompassion. In total, about 140 students participated in a course.
- Personalised support is available through life coaches, peer coaches, and the Gezondeboel eHealth platform. Students also have the option of completing certain eHealth modules without the intervention of a psychologist; the platform is now used by approximately 1,600 students.
- The percentage of students reporting a personal problem has dropped slightly to 69%, the percentage of students reporting a study-related problem has risen slightly to 31%. The problems often relate to several areas, both personal and academic, and affect each other.
- The main request for help from students this year was also clearly related to the exceptional circumstances due to the coronavirus pandemic: the lack of structure and the limited availability of facilities. Lack of motivation and focus and study stress are the most common, followed by fear of failure and difficulties with discipline. In the category of "personal problems", depression is the main reason for requesting help, followed by tension and stress.
- Due to the pandemic, the Walk-In in Forum was only open a few days a week in September and October.

# Training centre for student training and support

- A stress prevention week was held for the third time in 2021 ("Surf Your Stress Week") and the Surf Your Stress Café was launched, where students talk to each other about current topics such as worrying.
- Lectures and activities have been organised on an occasional basis, including on the theme of

- Seven new programmes have been developed for students relating to skills, wellbeing, and personal development. A total of 58 training sessions were conducted last year for more than 1,700 participants.
- Instagram@WUR Wellbeing was launched; in a short time more than 57 photo stories and short videos were made.

#### 2.4.6.2 Student services and study climate

# Student services

We are highly committed to providing excellent service to our students. To a large extent, this is provided for by the Student Service Centre (SSC), housed in the Forum building. Students with questions about enrolment, admission, visa, tuition fees, grade lists, graduation, and participating in an exchange programme.

The service provided by the SSC is organised according to the principle of "self-service where possible, extra personal service where desired and necessary." In this way, the SSC wants to be able to provide tailored solutions, also taking into account the diversity within the student population. Service provision to students is conducted by phone, online (website), the student contact system, and the information desk. The SSC was also accessible during the lockdowns. We switched to a new student information system, Osiris, in 2021. Although this is a standard system, the design is based as much as possible on the diversity of the various target groups who come to study in Wageningen.

# Study climate

A good study climate is important for the study performance of students. An important start is made during the Annual Introduction Days (AID). AID was able to go ahead in person this year; distance and group sizes were taken into account. This involved splitting the AID into two different weeks and setting up four festival sites per week. Because many international students first had to go into quarantine, a special buddy programme was set up. Together with the Municipal Health Service (GGD), additional information was also given to this group about the vaccination programme. During the academic year, study associations received additional support for organising activities that were still possible despite the complicated circumstances. Additional activities were organised in winter for students who could not go home.

An agreement on the prevention of undesirable behaviour was signed by student associations in 2020. This agreement was signed again in 2021, when an agreement was made to pay more attention to undesirable behaviour concerning sexual harassment between students. Fortnightly meetings take place between the municipality of Wageningen, the student associations, and the University.

WU values diversity and has launched several initiatives to contribute to an inclusive study environment. Twice a year the rainbow flag is hoisted to let LGBTI+ students and staff know that they are welcome here. We offer workshops to prepare students for the education system, culture shock, and working in an international environment. We organise One World Week every year - a week of activities aimed at creating understanding between people with different cultural backgrounds, sexual orientations, religions, gender identities, and abilities. We also actively contribute to projects aimed at combating racism and discrimination.

Although housing is not a core task of the university, it is an important part of the study environment for students. A new agreement was concluded with student housing provider Idealis in the field of student housing for international students in 2021. This agreement makes it possible for our international students to find a room in Wageningen on time.

#### 2.4.6.3 Student numbers

The influx of first-year BSc students (excluding Pre-MSc) decreased by 12% in 2021 (reference date 1 October). This decrease is mainly caused by a decrease in first-year Dutch BSc students. A similar decrease has been seen nationwide. This is largely due to the fact that a lot of Dutch BSc students started in the year 2020 because of the coronavirus outbreak, which caused fewer students to take a gap year and more Dutch students to start university studies. There were also more VWO graduates

due to the coronavirus measures at secondary schools. These issues no longer played a role in 2021, and this is one of the reasons why there is a decrease in first-year Dutch BSc students in 2021 compared to the previous year. The inflow in the MSc programmes has grown by 3%. As for the BSc programmes, the number of incoming Dutch students in the MSc programmes decreased (-8%). However, the number of foreign incoming students in MSc training courses has risen compared to last year. The increase in first-year international MSc students may be due to the fact that students postponed coming to WU last year due to the coronavirus pandemic and that this group of students still joined WU in 2021.

On the reference date 1 October 2021, the percentage of non-Dutch BSc students was 7%: 377 of 5,792 students, spread across 60 nationalities. Of the international students, most are of German nationality (17%), followed by Italian (11%), and French (9%). 6 of the 19 BSc programmes were taught in English.

Of the Master's students, 35% have non-Dutch nationality: 2,511 of 7,249 students, spread across 99 nationalities. The most common nationalities are Chinese (431), Italian (280), German (278), Greek (178), Spanish (134), and Indonesian (131). All the Master's programmes are taught in English and are provided to Dutch and non-Dutch students together.

Among the 112 Pre-MSc students, 25 are of non-Dutch nationality (22%).

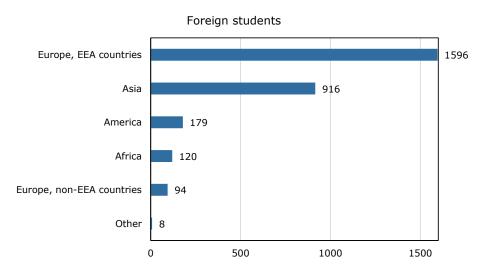


Figure 2.2 Distribution of the 2,913 foreign students (BSc, MSc, and Pre-MSC) at Wageningen University based on nationality, reference date 1 October 2021. The "other" category includes Australian and New Zealand students and students whose nationality is unknown (source: Osiris)

#### 2.4.6.4 Student facilities

We feel it is important for students to have a rich life in and outside of the university, in addition to being active in their study programme. The university supports a range of extracurricular activities for organisations: student associations, study associations, sports and cultural associations, and organisations involved in social responsibility, sustainability, entrepreneurship, building, and skills. A wide variety of facilities are realised this way, while students gain experience in organising these. Students also play a crucial role in the preparation of the introduction weeks for new students (in August and February) and in the organisation and support of sports activities for students.

Sports Centre De Bongerd (SCB) is the sports centre for students and employees of WUR. All students and staff are able to use the SCB facilities at reduced rates. SCB offers a high-quality sports programme with a broad range of sports and activities in excellent indoor and outdoor facilities. The SCB, like the rest of the sports world, was again affected by the coronavirus pandemic in 2021. After the lockdown from December 2020 to 3 March 2021, the SCB was allowed to restart its outdoor sports programme. We organised "Walk and Talk" for our national and international students during

the lockdown by matching sports instructors with students who felt lonely. With the help of the SCB lecturers and the boards of the student sports clubs, various protocols were written to enable sports under the ever-changing coronavirus measures with the entire sports programme taking place outside: in foursomes, pairs, inside at 1.5 metres distance, and everything in between. For example, we managed to grow our student sports clubs by 800 members compared to 2019; students like to meet each other and be part of a club focused on sociability and sporting activities.

Wageningen University's Sports Foundation (SWU) Thymos, promotes the interests of Wageningen student athletes — individual athletes, as well as members of the student sports clubs (SSAs). Although 2021 was a difficult year due to the coronavirus, SWU Thymos ensured that the Wageningen students kept moving in various ways. For example, there was a subsidy for home sports equipment, and 1.5 metre activities were organised. When sports were allowed to resume without restrictions, SWU Thymos started organising various activities and worked hard to get as many students as possible moving again. The Foundation operates on the "for students, by students" principle and is in close contact with the university, Sports Centre De Bongerd (SCB), the Municipality of Wageningen and Student Sports Netherlands.

#### 2.4.6.5 International exchange

The exchange programme offers WU students the opportunity to study abroad at renowned international institutions and thus gain new experiences. In return, the university receives international students who perhaps otherwise would not have come to WU to study. In the vast majority of cases, this is six months of study. Incoming students are a welcome addition to the diversity of nationalities in Wageningen and contributed to the international character of our education. The exchange programme also contributes to the success of the ELLS (Euroleague for Life Sciences) network, with more than 50 students coming to Wageningen each year and more than fifty students going from Wageningen to one of the ELLS partners.

The EU has allocated a record amount of Erasmus+ funds for 2021: €2,868,702, 20% of which is for exchanges/internships outside Europe and the rest for exchanges/internships within Europe. A further €79,780 was allocated for an exchange with HUJI (Israel).

526 WU students were nominated for exchange in 2021/2022 (reference date 24/01/2022). This is about 10% more than usual, which can largely be explained by students who could not go on exchange a year earlier due to the coronavirus making up for lost time. Of the 526 nominated students, 60 have a destination outside Europe, which is considerably less than in previous years. This is due to the fact that exchange is still not possible for many destinations outside Europe because of the coronavirus.

The number of incoming students is 359 for 2021/2022. This is slightly less than in the years before the coronavirus, as this made it especially difficult for students from outside Europe to enrol. The incoming students took part, whenever possible, in the regular activities organised for them, such as the Annual Introduction Days and activities by student organisations such as ESN and ISOW. Some students chose for a regular study programmes at WUR following their exchange.

For internships, 157 grants with an average value of €1,968 were awarded for the 2021/2022 academic year (reference date 24 January 2022).

Several new agreements with universities were concluded in order to meet the demand for exchange options in different fields and regions in the coming years. This brings the total number of agreements to 228.

#### 2.4.6.6 Student participational structure

Students at WU enjoy participation at different levels within the university: in the decentralised programme committees (concerning the content and quality of the degree programmes) and at the central level in the Student Staff Council (SSC) and the Student Council (SC).

The Student Council consists of twelve full-time members from various groups and nationalities. These student members are elected for a one-year term by WU students. The turnout for the elections, which took place entirely online in 2021 due to the coronavirus measures, was 27.6%. Important topics on the agenda of the SC in 2021 were - in addition to the regular topics such as the Education and Examination Regulations (EER) - the consequences of the coronavirus pandemic and the resulting measures, the guidelines and procedures for courses with a maximum number of participants, the student grievance regulations, the Ombudsperson regulations (discussed with the COR), the policy for reporting and handling safety incidents at WUR (discussed with the COR), and the Student Council's initiative proposals for a sustainability fund for study associations and gender, including the WUR language policy.

#### 2.4.6.7 Objection and appeal

# Dispute Advisory Committee

The Dispute Advisory Committee (GAC) received 13 appeals from Wageningen University in 2021.

# Examinations Appeals Board

In 2021, the WU Examination Appeals Board (CBE) received 58 appeals, 26 of which were directed towards a decision not to admit the appellant to an MSc programme. Of the remaining appeals, 17 were made against a binding negative study advice, 8 against an assessment, 2 against a refusal to grant an exemption, and 2 against a sanction for fraud. The other appealed decisions concerned sanctions for fraud, resuming an MSc thesis, and a refusal to grant an exemption. In one case, the appeal was declared inadmissible due to inexcusable delay and, as a result, the hearing of the applicant was cancelled. In 51 cases, the parties agreed on an amicable settlement and the EAB consequently did not handle the appeal. In five cases, the CBE declared the appeal unfounded after hearing the student and the Admissions Committee or Examining Board.

#### 2.4.7 Alumni

The alumni network of WU in 2021, consisted of more than 59,300 graduates and PhDs. Of these, 44,211 were Dutch and 15,156 international. Most of the alumni activities in 2021 took place online like they did in 2020. This includes the Wageningen Experience Day (WED) for alumni on 2 October 2021. Approximately 1,100 alumni registered to watch it live or to visit the digitally recreated campus later in the month. The 25- and 50-year reunions also took place online as part of the WED. It became apparent that the in-person reunions are much preferred and missed. The first activity for young alumni (up to 35 years of age) was also organised in 2021. This was an online career café. Students and young alumni had the opportunity to speak in small groups with WUR alumni about their own careers and experiences in the labour market. This event was very well received and we intend to make it an annual occurrence.

Various international meetings took place online with the 4TU/DEAN (Dutch Engineers Alumni Network) in Switzerland, Spain, Scandinavia and Helsinki (live), in collaboration with Dutch embassies and other parties. There were online meetings with several Dutch universities in the United States and South Africa and live meetings in Israel. Together with the local alumni associations from Ethiopia and Uganda, an online cross-border event with the theme "Feed the Future, do it well!" was organised and the local alumni associations from Tanzania and Kenya were invited to the online Mashariki Summit.

The support by the alumni office to the Studiekringen & Netwerken (S&N, study circles and networks) of the former Koninklijke Landbouwkundige Vereniging (KLV) was also implemented, which will be phased out until the end of 2023. As part of this, the alumni office facilitated the first meeting of the informal platform S&N online on 30 March. The aim of the informal platform is to give S&N the opportunity to meet each other in an easily accessible way. This offers the opportunity to exchange experiences, to professionalise, to learn from each other, and to explore partnerships.

The alumni network "Wageningen Ambassadors" consisted of 34 Dutch WUR alumni in 2021, all leaders in business and in government that have a close relationship with WUR. Using their network, experience, and financial resources, they want to build a bridge between WUR and society. These

ambassadors supported six projects in 2021. Only four of these went ahead because of the pandemic, including a contribution to the organisation of TEDx WU and the Fablab Wageningen. The Wageningen Ambassadors also contributed to the WUR Student Challenges, not only financially, but also as coaches in the ReThink Protein Challenge #2. Wageningen Ambassadors have also been able attend an exclusive mini-master class given by a top Wageningen researcher twice a year since 2021. The researcher poses a question to the ambassadors, who use their brainpower and expertise to look for answers to pressing social issues.

#### 2.4.8 Outlook

We will continue our efforts on the quality of education and support for students in 2022. In doing so, we will implement valuable insights and practices gained during the coronavirus pandemic more structurally in education.

To this end, WU will continue the implementation of the quality agreements in 2022 as well as the implementation of the "Nationaal Programma Onderwijs". In the context of both plans, the implementation of the ambitions and objectives as set out in the "Vision for Education" will be continued. This includes the implementation of the skills education offerings for the Bachelor's programmes, and the new framework developed in 2020 for the Master's programmes will be implemented step-by-step to enable things like greater flexibility. Furthermore, work will also continue on implementing the recommendations of the Quality Assurance Institutional Audit, and the recommendations of the programme accreditations. The activities within the Acceleration Agenda for Educational Innovation with ICT will be continued, including flexibilisation in education, educational activities in the context of the alliance with Utrecht University and Eindhoven University of Technology, and the educational innovation activities together with the other partners within the 4TU.

In 2022, attention will also be focused on the further development and integration of the "Education Ecosystem", a cohesive portfolio of campus education, online education, and education for professionals. The emphasis will be on addressing the recommendations that emerged from the evaluation of the education portfolio and developing a portfolio for online education for professionals (B2C). The new MSc programme "Data science for Food & Health" will also commence in September 2022. A macro-efficiency process and the preparation for the new study programme assessment will take place for a new BSc Marine Sciences programme, with the aim of starting this programme in September 2023. Furthermore, the main focus in 2022 will be the launch of the new video distribution and management platform (Yuja), and the completion of the implementation of examinations on students' own devices.

We will also start preparing for the renewal of our vision on education in 2022.

Work pressure and the vitality of lecturers and other educational staff are important points of interest when implementing our ambitious plans.

#### 2.5 Research

#### 2.5.1 Coronavirus

The coronavirus has had some effect on research at WR and WU in 2021. Our experiences from 2020 have helped to ensure that delays in the implementation of research have been very limited. For example, this is reflected in the number of PhD graduations, which was at a similar level in 2021 as in the years before the pandemic. Where the delay typically concerned temporary research projects, we always looked for customised solutions, including the use of funding from WU and the Nationaal Programma Onderwijs (see also Section 3.2). These include PhD projects or postdoc projects.

The bilateral market, which is important for WR, remained at a good level in 2021. Participation in public-private partnership projects (PPPs) regarding the top sectors remained at a high level. Together with additional assignments provided by the Dutch Ministry of Agriculture, Nature and Food Quality, WR's research portfolio was very full in 2021.

International projects were limited due to travel restrictions and coronavirus measures in other countries. By building on the experiences from 2020, we have maintained good contact with local partners through digital communication tools.

# 2.5.2 Policy and organisation (graduate schools), (LNV programmes), (investment themes)

The WU investigation will be conducted within the chair groups. Each chair group, led by a professor, has its own sphere of expertise within the domain of healthy food and living environment.

Wageningen University leads six graduate schools within an overarching organisation. The Wageningen Graduate Schools:

- Experimental Plant Sciences (EPS; a national graduate school).
- Wageningen School of Social Sciences (WASS).
- Graduate School for Production Ecology & Resource Conservation (PE&RC; also a national graduate school).
- VLAG Graduate School for Biobased, Biomolecular, Food and Nutrition Sciences.
- Wageningen Institute of Animal Sciences (WIAS).
- Wageningen Institute for Environment and Climate Research (WIMEK; part of the national graduate school SENSE, for which Wageningen University acts as coordinator).

The WU graduate schools have three core tasks: they coordinate, develop, and facilitate the PhD programme of WU. They also ensure the safeguarding, monitoring, and advancement of the quality and progress of academic research (PhD candidates, postdocs, and researchers). Finally, they coordinate a cohesive research programme for the university that is in line with the mission of the graduate school.

Most of WR's research is funded by the Dutch Ministry of Agriculture, Nature and Food Quality: Knowledge Base Research (KB), Policy Support Research (BO), Statutory Research tasks (WOT), and research within the top sectors (TS). WR also engages in research in European programmes and contract research.

KB funds are spent within the five WR themes of the 2019-2022 Strategic Plan:

- Circular and climate-neutral
- Food Security and the Value of Water
- Nature-inclusive Transitions
- Safe and nutritious food
- Data driven and high tech

The current five WR themes were originally set to run until 2022. They have been extended for two years (2023-2024) due to the extended WUR SP. A mid-term review of the WR themes in 2021 produced the following main recommendations to be included in this extension:

- Adopt more visionary programming for each WR theme that connects desired outcomes to required outputs of KB projects.
- . Ensure that all relevant internal markets (BO, TS, EU, and bilateral market) are adequately served by the output of WR themes.
- Work across multiple scales and connect them (regional, NL, EU, global).
- Knowledge developed in the Data Driven & High-Tech theme and the Wageningen Modelling Group is relevant to all other WR themes. Therefore, this interaction must be preserved.
- Strengthening WU-WR collaborations is recommended.
- It is not necessary to stop a WR theme or start a new WR theme. However, it was recommended that there should be more intensive collaboration between the WR themes on cross-cutting issues such as climate, land use, transitions, and other crossovers yet to be identified.

- · Budgetary reservations for co-funding EU programmes are recommended, provided that they fit within the objectives of the WR theme, because these projects can significantly increase a WR theme's impact.
- Increase the visibility of the WR programme leaders and their core team in the organisation.
- · Encourage interdisciplinary working even more by selecting/training project leaders for this purpose.

The position of WR in the national and international knowledge ecosystem is based on our knowledge base. It is very important to develop them continuously. The knowledge we are developing now, in our five robust knowledge base programmes, is essential for finding answers in two to four years' time. The knowledge base develops building blocks and expertise that we use in the other knowledge instruments (BO, WOT, TS, EU, and Contract Research). We promote cohesiveness, and in turn synergy, between the knowledge base and the other knowledge instruments.

In addition to WR themes, three investment themes continued in 2020, within the framework of the 2019-2022 Strategic Plan, for which we deployed both strategic resources from WU and a small portion of KB resources from WR:

- Connected circularity
- Protein transition
- · Digital twins

Three new investment themes have also been developed as part of the extension of the WUR Strategic Plan in 2021. These concern:

- Biodiversity-positive food systems
- Transformative bioeconomies
- · Data-driven discovery in a changing climate

These themes were prepared in 2021 and will commence in 2022.

The BO is divided into two programmes:

- Sustainable food supply, production chains, and a nature and
- Climate portfolio.

The legal research tasks have been incorporated into six programme units.

- · Infectious Animal Diseases
- Food Safety
- Genetic Resources
- Nature and Environment
- Fisheries
- Economic Information

Research within the top sectors Agri & Food and Horticulture & Propagation Materials is managed by the Top Consortium for Knowledge and Innovation (TKI), specifically set up to manage these two top sectors. Planning for each top sector is done on the basis of questions that are formulated in the context of Innovatiehelix of the government, the business community, and research institutes and, increasingly, citizens. These questions lead to PPPs that are programmed annually through a call on the basis of the Knowledge and Innovation Agenda (KIA) of the Agriculture Water Food theme (2020-2023).

### 2.5.3 International

In order to increase the quality and quantity of the international portfolio, WUR has regional account managers for Brussels/Europe, Central and East Europe, the Middle East and Northern Africa, Africa, Asia, China, Latin America, North America, and Oceania. Within these regions, the account managers focus on the countries or areas that are most relevant for WUR.

### ΕU

Brussels/Europe is important for WUR because the Brussels framework programmes for research and innovation use a lot of research resources. The new Horizon Europe programme that began in January 2021 is of substantial importance to WUR, because they contribute to the scientific positioning, collaboration with partners in and outside Europe, network formation, and attracting talent. The Horizon Europe programme offers many opportunities for Wageningen, certainly within cluster 6 "Food, Bio-economy, Natural Resources, Agriculture and Environment", but also within other parts of the programme. WUR was very successful in cluster 6 in the first call of 2021 with no less than 52 approved projects, of which seven were coordinated efforts, with a total EU contribution of €37.5 million.

The WUR Europe Council has taken further steps to contribute to the long-term goals of the EU as WUR. The WUR Europe Council has the ambition to position WUR as the strategic knowledge partner in its domain in Europe, to contribute to solving the societal challenges in our domain together with strategically leading European partners, and to support the European Commission in the development and implementation of its long-term agenda and policy with regard to the European Green Deal (climate), international food security, the future of agriculture (CAP), new breeding techniques, and so on.

The WUR Europe Council further developed the relationship management with the Brussels institutions and strengthened the cooperation with LNV towards Brussels in the new European partnerships within Horizon Europe in 2021. Strategic collaboration with INRAe was further strengthened through closer collaboration with INRAe European Affairs. Collaboration with four AG-Tech centres is being sought within the framework of the UK strategy. An analysis was also conducted of the European Technology Platforms (ETPs) in Europe in WUR's domain and the possible role of WUR in those ETPs. A recommendation has been made to operate more strategically in those ETPs.

### Central and Eastern Europe

WUR's involvement in Central and Eastern Europe was intensified in 2021. Relations with Dutch embassies and networks in the region have been strengthened, specifically in countries such as Bulgaria, Russia, Ukraine, Hungary, Poland, Latvia, and Estonia. There were several official visits to WUR (in person and online) by Eastern European universities and government delegations. Within the framework of the EU Widening Participation Programme, the collaboration with the Agricultural University of Plovdiv in Bulgaria has been strengthened, especially in the field of regional bioeconomy. This initiative runs until 2023 and contributes to the strategic positioning of WUR in research and education in Southeast Europe. Through several bilateral webinars with the Kyiv University of Life Sciences (Ukraine) and discussions with local partners, an initiative on research and innovation in Sustainable Food Systems and Climate Resilience for Ukraine (CLIMAGRI4Ukraine) was launched within the Opportunities for Tomorrow programme (LNV). Furthermore, a WUR-wide Memorandum of Understanding (MoU) was signed with the National Research University - Higher School of Economics, Moscow (Russia) as a result of the implementation of the Dutch Organisation for Scientific Research Science & Diplomacy project (RUSARUR: Sustainable Food Systems in Urban Rural Regions).

### Africa

A specific strategy has been developed to increase WUR's contribution to the existing Africa-EU partnership. This partnership with Africa is a top priority for the European Commission. In order to expand WUR's input, we are actively approaching various DGs involved in the implementation of this partnership. Since the Dutch government has decided to use the Delegated Cooperation instrument and can thus take responsibility for the implementation of EU programmes in Africa, this offers specific new opportunities for WUR to be involved; two new Delegated Cooperation programmes were started in 2021 that WUR is implementing with partners. WUR is also very actively involved in the development of a Europe-Africa Research & Innovation Platform on food and nutrition security and sustainable agriculture.

The year 2021 was dedicated to the UN Food System Summit and its preparations. WUR made an important contribution to the IFAD Rural Development Report "Transforming food systems for rural prosperity." We have supported African universities in their desire to have policies and actions based on solid evidence and actively participated in the development of the Ethiopian Food Systems Roadmap. Together with African and Dutch partners, we initiated a discussion on the role of

agricultural vocational training in the African agricultural knowledge and innovation system. This took place within the framework of the "Africa Knows! It is time to decolonise minds" conference. WUR set up a small administration office in Ethiopia in 2021. This office supports large research programmes that WUR carries out with local parties in Ethiopia.

Despite the coronavirus pandemic and security issues in the Sahel, the One Wageningen Sahel Platform initiated new research projects in the Sahel and developed new ones. The monthly meetings, in which all sections of WUR are represented, prove to be helpful in organising the necessary collaboration in a complex region.

WUR's regional account for the Middle East and North Africa was further developed in 2021. Research projects in the Gulf region focus on efficient water use, self-sufficiency, and food safety in horticulture. WUR mainly contributes in the United Arab Emirates and Saudi Arabia by designing and demonstrating research facilities, setting up research programmes, and capacity building. As a result of the coronavirus pandemic and falling oil prices, interest in local food production and storage has increased in the Gulf region; there are opportunities for collaboration here. In the Levant, WUR is involved in projects to improve water productivity (Egypt, Jordan) and innovation in the horticultural sector (Jordan). In North Africa, WUR supported research into the impact of potato supply chains as part of a regional food system in Morocco and Algeria. In Tunisia, WUR developed a programme specifically aimed at employment for young people and women in the agricultural sector.

### Asia

Despite the travel restrictions, there were many opportunities to forge or strengthen strategic partnerships in Asia. This was achieved through the virtual reception of various delegations on the campus. The further strengthening of relations with various countries (such as India, Sri Lanka, Myanmar, Indonesia, Malaysia, and Singapore) has led to the development of new projects and initiatives. Several new agricultural advisors were virtually welcomed on the Wageningen campus.

China remains of great importance to WUR, and collaboration with Chinese partners has proven resilient throughout the coronavirus crisis. Several dozen PhD candidates from China Agricultural University (CAU) and Chinese Academy of Agricultural Sciences (CAAS) started their research at WUR in 2021. Two joint PhD programmes, with CAU and Tsinghua Suzhou Institute, are ongoing. Several other major programmes are in development, including the YST Research and Innovation Center on Biological Control.

Following the mid-term review of the China Business Plan in 2021, efforts were made to strengthen the organisation of the China Office. This was accompanied by investments in financial and legal expertise on location.

Considerable attention was given to knowledge security in relation to collaboration with Chinese partners in 2021. A series of interviews with WUR employees were published, in which they explain why and how they work with their Chinese partners.

WUR received a WOB (transparent governance) request in 2021 about its long-term collaboration with China. The requested information has been provided.

### Latin America

The priority countries in Latin America are Brazil, Colombia, and Mexico, followed by Argentina and Chile. The Caribbean Netherlands are also increasingly receiving special attention within WUR, partly due to studies under the knowledge base theme "Nature-inclusive transitions" and the need for WUR to look more broadly at the challenges of Small Island Development States (SIDS) in the Caribbean.

"Smart" soy production was launched in Brazil in 2021 as part of a public-private partnership with Brazilian companies and financed by the top sector AgriFood. A joint/double PhD programme is being set up with the Faculty of Agriculture (ESALQ) of the University of Sao Paolo and is expected to start in 2022. A programme was approved in 2021 that makes more efficient use of resources and investigates reduction of greenhouse gas emissions in integrated (crop-livestock-forestry) systems

with partners in three countries of Europe (including the Netherlands) and partners in Argentina, Brazil, and Uruguay.

The ties with Surinamese partners in the Caribbean were strengthened and a project proposal with the Food and Agriculture Organization (FAO) on Climate Change Impact Assessment was undertaken. Furthermore, an agreement on specific subjects with the Ministry of Agriculture, Nature and Food Quality of Suriname has been prepared. We are working with partners in Bonaire on a project to process organic waste and Sargassum seaweed (a problem in the Atlantic Ocean and particularly off the coast of the Caribbean islands and Mexico) into biogas and possible other circular applications/products.

An exploratory mission to Bolivia was organised. This focused on gaining insight into Bolivia's opportunities for sustainable reuse of vegetable oils and sustainable production of biodiesel (FAME and HVO). WUR will look into whether it can carry out a comprehensive study into the available and sustainable raw materials for biodiesel for Bolivia in 2022.

### VS

Our key strategic partners in the US are Cornell University, UC Davis, and MIT. In Canada, these are the University of British Columbia, University of Alberta, and University of Guelph. In 2021, efforts were made to strengthen collaboration with other universities of strategic importance, including the University of Florida (US) and Simon Fraser University (Canada). The collaboration with these partners progressively increases our visibility among local government and local businesses. Together with the Dutch business community (FME) and government (agricultural council, Consulate General in San Francisco, Dutch Ministry of Agriculture, Nature and Food Quality), we are initiators of CaWaDu in the US, a long-term research and innovation programme with parties in California and Washington state. The themes are robotics in fruit growing, greenhouse horticulture, precision farming, dairy, and food waste. Over the course of 2021, a process was started with parties in Texas for a similar programme on the themes of Food & Water and Post harvest & Packaging.

In Canada, the emphasis in 2021 was on the "protein transition" theme. With the Protein Industries Supercluster and four Canadian universities as well as the support of the Dutch government (Consulate General in Vancouver, Dutch Ministry of Agriculture, Nature and Food Quality, agricultural council) and their Canadian counterparts, the first steps were taken towards realising the plans to arrive at a public-private partnership programme. Several Canadian universities and a federal funding programme for student scholarships also started making scholarships available for the exchange of Master's students and PhD candidates based on research assignments.

### Oceania

One of the activities in Oceania this year was to strengthen contacts with the Dutch embassy in Wellington. This was prompted by a student challenge organised by WUR in the autumn on climate adaptation in food systems. Student teams from all over the world participated and the team from Massey University, from Palmerston North, New Zealand, won the challenge.

### Food and Agricultural Organisation of the United Nations

This year, FAO and WUR have cemented their relationship with a fully renewed MoU signed in December. The MoU builds on the long-standing relationship between FAO and WUR. The strengthening and acceleration of this collaboration aims to work towards a solution to the challenges that the world is currently facing. WUR and FAO joining forces facilitates the Science Policy dialogue and can, where possible, create impact for sustainable developments at both the national and global level.

#### 2.5.4 Results

### Academic awards

The awarding of six Dutch Organisation for Scientific Research Veni grants, three Vidi grants, and 1 Vici grant in the domain of Exact and Natural Sciences in 2021 brought the total number of

laureates, since the beginning of the innovation incentive in 2002, to 114 Veni, 58 Vidi, and 15 Vici grants. One ERC Starting Grants was awarded to a Wageningen researcher in 2021. Since the ERC grants were set up by the European Research Council in 2007, ten ERC Starting Grants and eleven ERC Advanced Grants were awarded to WUR. The ERC Consolidator Grant was set up in 2013, of which Wageningen has received one. Seven of these have since been awarded to Wageningen.

### PhD graduations

The graduate schools ensure a challenging PhD programme and are committed to helping their PhD candidates attain the highest possible level. Their success has been demonstrated numerous times by the positive assessments of the inspections that have been carried out and by the participation levels of PhD candidates in Europe in the courses offered in Wageningen. At year-end 2021, WUR had 2,332 PhD candidates. Most PhD candidates are affiliated with one of the Wageningen graduate schools: EPS (232), WASS (458), PE&RC (446), VLAG (547), WIAS (221), and WIMEK (426). A few PhD candidates are affiliated with graduate schools led by other organisations.

Despite the coronavirus pandemic, the number of PhD graduations in 2021, was again at 294, similar to previous years (283 in 2020, 293 in 2019). Of the 294 PhD graduations in 2021, four were "joint graduations", in which a partner university was also involved. In all cases, the graduation ceremony took place in Wageningen. Of the 294 PhD candidates, 140 were women (48%). 194 PhD students (66%) had non-Dutch nationality. The percentage of PhD candidates with a successfully completed Training & Supervision Plan (TSP) decreased slightly to 87% (93% in 2020, 91% in 2019).

### Top Sectors

Within the framework of the Knowledge and Innovation Agenda for Agriculture, Water Food (LWV), the TKI awarded 98 new PPPs for Agri & Food and Horticulture & Propagation Materials in 2021. €45 million was available for PPPs in 2021. Of this amount, €18 million was a direct subsidy to WR, €7 million was financed by a PPP allowance from the Horticulture & Propagation Materials top sector and €20 million by a PPP allowance from the Agrifood top sector. The business community makes a financial contribution of 50% (in money and in kind) to the PPP projects.

Furthermore, projects were started within the framework of the "Kennis op Maat" programme (with a total value of €2.7 million). €0.6 million was available for the "Seed Money" programme aimed at internationalisation. 15 projects were financed from this. Additionally, €1.9 million was committed to 30 new EU co-funding projects of Wageningen Research Foundation.

#### 2.5.5 Quality assurance in research

Every six years an evaluation of the Wageningen graduate schools is carried out in accordance with the Standard Evaluation Protocol (SEP 2021-2027), developed and established by the Royal Netherlands Academy of Arts and Sciences (KNAW), the Netherlands Organisation for Scientific Research (NWO), and the Universities in the Netherlands (UNL).

All Wageningen graduate schools were assessed in accordance with the renewed SEP (2021-2027) in 2021. The evaluation took place in the context of a research unit's self-defined goals and strategy. The self-evaluation also paid attention to specific aspects such as Open Science, Academic Culture, HRpolicy, and PhD-policy. The leading unit in the visitations is the graduate school with newly formed research units as the smallest unit. The evaluation reports will be issued in 2022. On this basis, graduate schools will individually draw up an action plan and the Executive Board will also determine what generic actions are needed.

An evaluation of the individual WR institutes takes place periodically as part of the agreements between the Dutch Ministry of Economic Affairs, the Ministry of Agriculture, Nature and Food Quality, and the Ministry of Health, Welfare and Sport. In accordance with the EMTO protocol, WR as a whole is evaluated once every four years. The 2020 EMTO evaluation and its recommendations have been the basis for the developments of the WR 2022-2025 Strategic Agenda in 2021.

Wageningen Food Safety Research and Wageningen Food & Biobased Research were evaluated for quality, impact, and vitality in 2021. Both institutes have received very positive assessments from the independent peer review committees.

#### 2.5.6 Open Science

Open Science is a more open way of conducting, publishing, and evaluating scientific research. Open Science therefore focuses on the pursuit of greater collaboration and reusing knowledge and transparency, not only between researchers and disciplines, but also in society as a whole. WUR is committed to the Open Science ambitions of the 2030 National Plan for Open Science and is working together with other Dutch universities on this. The transition to Open Science is a priority area of the WUR 2019-2025 Strategic Plan. The WUR Open Science & Education (OSE) programme has been promoting the connection between our research and education and society since 2019 by making Open Science principles and approaches increasingly part of our standard practice. The programme facilitates WUR researchers and lecturers in this and provides support with guidelines, tools, resources, and best practices. The WUR OSE programme focuses on seven themes: Open Access, FAIR Data, Outreach, Citizen Science, Open Education, Recognition & Rewards, and Open Science Skills.

The Open Science Skills programme was further developed in 2021 for researchers involved in WUR investments and for coordinators of major research proposals for Horizon Europe Calls. Together with the other Dutch universities, we worked on the new Open Science vision and approach for 2021-2030.

### Open Access

Open Access is a publishing model that makes research information available to readers free of charge. The WUR Open Access policy was translated into practical workflows and guidelines in 2021. One of these workflows concerns the implementation of the Taverne amendment, part of the Dutch Copyright Act. This amendment gives researchers the right to make their publications available through the WUR Repository Open Access after a six-month embargo. Many WUR researchers are using it and have opened more than 500 refereed articles and 75 book chapters and conference proceedings by 2021.

Open Access publishing was also stimulated and facilitated in other ways in 2021. Together with Dutch colleagues, WUR wrote a practical guide to inform researchers on how to store and use preprints. The number of national and local agreements with publishers has also increased further, enabling WUR researchers to publish in almost 12,000 journals free of charge or at a reduced rate. These developments have contributed to the fact that the number of refereed articles by WUR corresponding authors that are published in Open Access rose to 92% in 2021. This means that the goal of 100% Open Access is increasingly in sight.

### FAIR Data

The Data Stewardship network has grown in number and expertise over the past year. The library and WDCC facilitated this by providing training sessions, presentations, and workshops on topics such as "Engaging Researchers with FAIR data" and "Metadata in Research". WUR has taken an important step in the field of infrastructure with the introduction of a new research data management service, Yoda, which supports findable and accessible research data throughout the research cycle.

# Citizen Science

The WUR "Citizen Science" network that exchanges experiences and best practices in Citizen Science research has grown to more than 100 members. This also applies to the development of the WUR "Citizen Science Investigations" (CSI) portal, which is now underway.

# Open Education

WUR's own portal "Library for Learning", a large collection of Open Access educational resources, facilitates the sharing and reuse of educational resources within our own institution. Through semiopen sharing within a partnership or an alliance, we are gradually working towards making materials available outside the institution. In the context of semi-open sharing, the SURF portal "Edusources" has been piloted for the project "Boundary Crossing". Frameworks have been established for the use of Creative Commons licences when educational materials are shared outside WUR.

### Recognition & Reward

The Recognition & Reward Committee completed the first phase of its work in late 2021. This phase focused on an analysis of the current method of Recognition & Reward and the need for changes within it. Open Science is one of the aspects included. The importance of Open Science, and recognising and rewarding related activities as part of doing research, is widely endorsed in our organisation.

#### 2.5.7 **Funding**

#### 2.5.7.1 **Wageningen University**

Research at WU is funded by direct government funding, indirect government funding, and contract funding. The amount of direct government funding for education and research was €305.4 million in 2021. In addition, targeted subsidies from the Ministries of EZK and OCW totalled €2.6 million. The indirect research funding, the second flow of funds, which is mostly provided by the Netherlands Organisation for Scientific Research (NWO), amounted to €33.8 million in the year under review. External funding, or the third flow of funds, amounted to €68.1 million. Of this amount, approximately €44.1 million was related to contract research, €3.8 million to top sector research, and €20.2 million to co-funding and subsidies.

The graduate schools had approximately €2.8 million of their own resources at their disposal for the appointment of PhD candidates and postdocs in 2021.

#### 2.5.7.2 **Wageningen Research Foundation**

Of the 2021 research funding at WR, €34.9 million comes from an institute grant from the Dutch Ministry of Agriculture, Nature and Food Quality. €103.9 million came from programme funding, consisting of  $\in$ 82.3 million from LNV programme funding (BO and WOT),  $\in$ 19.3 million from NVWA programme research and €2.3 million from the Dutch Organisation for Scientific Research's secondary flow of funds. An additional €27 million comes from the co-funding and subsidy market (including the EU), €71.3 million from the Top Sectors, and €96.5 million from the bilateral market/contract research (including the business community and LNV).

Despite increased attention to the issue, there were still persistent problems with surpluses in 2021, especially in the top sectors and within the BO (Climate portfolio). Both the WR and the Ministry of Agriculture, Nature and Food Quality are preparing more drastic measures to comply with the TO2 regulations on surpluses during a two-year transition period.

#### 2.5.8 Outlook

The quality of our research is high, and that applies to both WU and WR. The evaluation of WR in 2020 and the peer review of WU in 2021 confirm this. This gives us a good starting position for the coming years. The use of Van Rijn and sector planning resources has given university research a boost. This may be followed up on in the coming years with the funding of new sector plans. WR's knowledge base has been structurally strengthened since 2018. The coalition agreement lays down major investments in higher education and research. Some of these are temporary funds, such as the National Growth Fund, and some are structural. The combination of the strong position in terms of content and the planned investments means that we are looking to the future with confidence.

During the term of the new strategic plan, the development of new knowledge at Wageningen Research Foundation was organised into five programmes, financed by the strategic knowledge base funds described under 2.5.2. The appointment of five programme leaders, responsible for programming content, external and internal positioning, and management of the programmes constitutes an important innovation. The evaluation of the organisation of the knowledge base themes showed that this innovation is valuable and will be maintained in the coming years. We are therefore working on a more integral design and management of the themes. In the year to come, it will be evaluated whether this innovation has the desired effect.

Furthermore, additional investments will be made in the three WUR-wide research themes (Connected Circularity, The Protein Transition, Digital Twins). For this, strategic resources from Wageningen University and knowledge base resources from the Wageningen Research Foundation have been used. The KB themes and the investment themes are closely coordinated. The investment themes "Connected Circularity" and "Digital Twins" involve the KB programme leaders of "Circular and climate neutral" and "Data Driven and High Tech" respectively as heads. They form a team together with the Wageningen University coordinator.

Due to the Russian invasion of Ukraine in February 2022, the partnership with Russian universities and research institutes has been suspended. The collaboration with Ukrainian universities and research institutes continues. Depending on the developments in 2022, it will be considered whether and how collaboration can be resumed.

The new themes established through the extension of the Strategic Plan will start in 2022. Together with the current themes, they contribute to the consolidation and strengthening of WUR's position as a leading research institute, also in the coming years.

The coronavirus pandemic has affected ongoing research. The phasing out of restrictions in 2022 and the expectation that the pandemic will become more endemic mean that the impact of the coronavirus on research in 2022 is expected to be very limited. New priorities have emerged within our domain that relate to the emergence of pandemics. In particular, zoonoses and the relationship between nutrition and health are important here. We will consequently further develop our ERRAZE@WUR (Early Recognition and Rapid Action in Zoonotic Emergencies) programme in the coming years.

A number of very important social tasks are the heart of WUR's expertise. These include the sustainable production of food and bio-based raw materials for a circular economy, issues of climate adaptation and land use, and the nitrogen issue in the Netherlands. These tasks require the development of new knowledge in the coming years, building on the knowledge base available at WUR.

#### 2.6 Value creation

Due to our international position as a leading research institution in the field of healthy food and living environment, we have a great responsibility to put the knowledge that we have developed into practice. This is why we share our knowledge and infrastructure and we make these usable for the crucial social challenges in our knowledge domains. Our knowledge achieves economic and social impact through application.

Society is increasingly demanding answers to questions regarding the legitimacy of public spending in the area of research and demanding that these scientific insights be translated into innovative applications. Additional value creation from education and research is a continuous process involving many stakeholders, including the government, the business community, entrepreneurs, regions, and societal organisations with WUR playing a central role. Creating impact together also is and remains the central message of the WUR 2019-2024 Strategic Plan - Finding Answers Together (including the extension). WUR also engaged more actively with the outside world in 2021 about transparency, academic integrity, and responsibility, issues that are central to WUR's research and collaborations. It is summarised on the related web page.

The initiatives launched within the framework of the Strategic Plan were further expanded in 2021, such as by stimulating an entrepreneurial attitude among our employees, increasing the investment resources for accumulating knowledge and building facilities at WUR, and the crossovers between Wageningen disciplines. Inspiring stories about the realised impact in society are accessible via the impact stories. During the opening of the academic year, WUR made social licences for five patents in the field of CRISPR-Cas available free of charge to NGOs that, on a non-profit basis, want to improve

the world's food supply (link). The general goal is to further anchor creating impact into the DNA of WUR students and employees.

Research funding providers, government organisations, the Royal Netherlands Academy of Arts and Sciences (KNAW), and the business community expect us to make our impact and value creation apparent. Quantifiable valorisation indicators were developed in a UNL context that make our output visible across the breadth of all the WUR activities, from our graduates to spinoffs and from IP requests to the additional training of pre-university education teachers (see Appendix 2). Output is an indicator of future impact.

#### 2.6.1 Collaboration, tech transfer, and co-creation with partners

Our knowledge makes a significant contribution to innovation and progress within society. Our value creation is not only done by transferring knowledge and technology through various forms of intellectual property rights, licences, and spin-offs, but forms of collaboration such as contract research and public-private partnerships are especially important for this. WUR works with businesses, governments, NGOs, and other academic institutions. Knowledge development through co-creation with various stakeholders in the production chain or with partners that have different perspectives increases the chance of broadly accepted solutions and the actual use of knowledge to create impact and innovation.

#### 2.6.1.1 Co-creation and the development of new partnerships

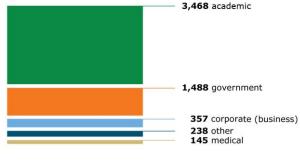
WUR carried out many publicly and privately funded projects and programmes (PPPs) at the European and national level in 2021, including for the benefit of the national government's Knowledge and Innovation agendas. WUR is involved in all agendas, but the main focus is on Agriculture, Water and Food in collaboration with the Agri & Food and Horticulture & Propagation Materials top sectors. A lot of time and energy was invested in the National Growth Fund applications in 2021, together with other stakeholders. The applications "Switch to Sustainable Food Systems" and "NL2120, het groene verdienvermogen" are co-produced by WUR. WUR is also involved in many other applications.

The turnover from EU grant programmes is a measure for the contribution of WUR to co-creation on international social challenges. Wageningen University's revenue from EU subsidies, €18.0 million in 2021, was slightly higher than in 2020 (€17.0 million) for the second year in a row. The turnover of WR from EU funding programmes increased to €21.3 million in 2021, compared to €19.0 million in 2020. See also Table B2.15 in Appendix 2.

Research projects carried out through co-creation with stakeholders often also lead to co-authored publications in academic journals and trade journals. The number of co-publications is growing every year (Table B2.16 in Appendix 2). Figure 2.3 shows that the primary share of the nearly 3,800 copublications are prepared with others in academia and roughly one third are prepared with government bodies, and 10% with the business community. Remarkably, the number of medical copublications is growing relatively fast.

# Co-publications 2021

Number of co-publications (co-authored publications) of Wageningen University & Research with partners from within an outside of academia, globally



source: Scopus, Elsevier B.V. All rights reserved. SciVal ®

Figure 2.3 Number of WUR co-publications with partners in 2021

#### 2.6.1.2 Knowledge transfer and innovative capacity

WUR sometimes records the intellectual property of its discoveries. The main objective here is to encourage the business community to use these for the development of new products or processes, thus increasing the innovative capacity of society. By granting patent licenses to potential market partners, knowledge can be broadly disseminated, thus leading to more innovations and impact. WUR has 133 active patent families in its portfolio and has granted 76 licenses for patents, species, models, or materials. 13 new patent applications were submitted in 2021: 5 by WU and 8 by WR (see Table B2.4 in Appendix 2). This number is in line with the long-term trend.

Screening & scouting of potential IP-worthy ideas has been intensifying since 2020. Scouted ideas are screened and an Invention Disclosure Form (IDF) is prepared for ideas with potential. 22 IDFs were registered in 2020 and this decreased to 12 in 2021. The number was probably higher in 2020 because there was still some catching up to do.

The Thematic Tech Transfer Circular Technology (TTT-CT) programme led by WU is a collaboration within 4TU and TNO. TTT-CT brought four startups to "investor ready" level for SHIFT Invest in 2021. TTT-MedTech was also awarded in 2021 in the 4TU/TNO/3UMCs context (led by UT), in which WUR participates.

The turnover in bilateral research with the business community is a measure for the contribution of WUR to the innovative capacity of businesses. Wageningen University's contract research, bilaterally funded by the business community, amounted to €18.3 million in 2021, compared to €14.2 million in 2020. The turnover of Wageningen Research from bilateral research for the business community consisted of €46.3 million from contract research funded by the business community in 2021, compared to €42.7 million in 2020. Both increases put WU and WR back on the same level as 2019. The 2020 numbers seem to have been a dip caused by the coronavirus. See also Table B2.14 in Appendix 2.

#### 2.6.1.3 Knowledge for government policy and legislation

An important part of the research conducted at WR institutes is commissioned by the Dutch and EU government. We carry out SRT (statutory research tasks) in the areas of infectious animal diseases, food safety, economic information, fisheries management, genetic resources and nature. Our policysupporting research and scientific research form the basis for government policy, rules and regulations in our domain aimed at protecting the health of people and animals, promoting exports and preserving a vibrant nature. Through these statutory research tasks, the policy-supporting research, and PPS research, we make a concrete contribution to society. The knowledge is made available via KennisOnline and newsletters. Theories of Change for the long-term mission-driven innovation

programmes (MMIP) were developed for the Knowledge and Innovation Agenda for Agriculture Water Food in 2021, which help to build an impact-driven research portfolio.

For a number of years now, the TO2 magazine has been published annually, in which the joint TO2 institutions show how research has an impact on society. The WUR examples in the 2021 version include closing the cycles in greenhouse horticulture, alternatives to animal testing, and rapid testing of cocaine samples.

#### 2.6.1.4 Customer satisfaction

The Ministry of Economic Affairs and Climate (EZK) has submitted an impression of customer satisfaction and knowledge utilisation for all six TO2 institutes to the House of Representatives. In 2020, just as in the previous years, WR clients were very satisfied. WR scored an 8.9 for client satisfaction and almost 99% of respondents deemed the research to be useful in 2021 (see Tables B2.7 and B2.8 in Appendix 2).

#### 2.6.2 The entrepreneurial use of knowledge

New enterprises contribute to the application of new knowledge and, through their growth, to economic development. Stimulating entrepreneurship and supporting startups are therefore important components of value creation for WUR. WUR encourages entrepreneurship among students supports the founding of startups. If these startups grow, they will have the opportunity to establish a location on Wageningen Campus. Employees and startups outside of Wageningen are also welcome to use their knowledge in the agri-food domain. We aim to have WUR serve the entire chain: from stimulating and inspiring students to linking up with investment funds for scale-ups.

#### 2.6.2.1 **Entrepreneurial education**

With its regular course programme, WU offers a wide selection of degree programmes that support enterprising students at all stages of their education. The introduction of a continuous learning trajectory "entrepreneurial skills" was launched and, as a result, more and more Wageningen students are introduced to entrepreneurial skills. In the 2020-2021 academic year, there were more than 20 courses that were fully or partially focused on value creation or entrepreneurship for (beginning) Bachelor's students, Master's students, and PhD candidates, reaching more than 1,400 students (nonunique). This growth is expected to continue in the coming years as more study programmes incorporate these skills into the standard curriculum. Only counting the students (non-unique) who actively opted for an entrepreneurship course (in other words outside the standard curriculum), there are more than 600 students this academic year (for additional details about the number of core subjects see Table B2.2 in Appendix 2).

In the 2020/2021 academic year, 32 new students entered our designated MSc entrepreneurial programmes (Mastertrack & C-KIC, > 48 ECTS), in which a total of 110 students are currently enrolled. This number is lower than last year due to the absence of the discontinued Climate KIC programme. In the 2020-2021 academic year, WU students carried out 32 entrepreneurship-related projects for businesses in the context of the course E-ACT.

The flow of students from the BSc or MSc education to extra-curricular follow-up activities has remained stable. More than 1,236 unique students participated in extracurricular entrepreneurship education through StartHub. The StartHub has about 350 active (student) members, 77 of whom joined in 2021. There are several students who have started a business from within the various educational programmes, such as Thinking Circular (master track entrepreneurship), DNAMI (CKIC) and Laminara (New Venture Creation: from idea to plan).

#### 2.6.2.2 StartHub

Student incubator StartHub Wageningen caters to students, PhD candidates and recent graduates who wish to learn more about entrepreneurship and/or who have already started their own business. The educational components test and develop the interest of students. Guidance and assistance with actually starting a business provide career perspectives. The StartHub works together with an active Student Board, sponsor partners, and external private partners in order to provide advice to students

starting businesses. A starters logo has been introduced in 2021 for start-ups that originate from the StartHub. This logo is a variant of the WUR spin-off logo.



The incubator organised a total of 29 practical workshops on entrepreneurship as part of the StartHub programme in 2021. The number of intake interviews was 79. Despite the coronavirus, students were able to find the StartHub online through a stronger social media presence and a revamped website. There were more "flexible" rentals at StartHub this year. The number of teams coached by StartHub is a stable figure; approximately 40. In 2021, two legal entities (see Table B2.6: Dnami and Booch ferments) were established by members and tenants of StartHub and no startups have received a student startup loan from StartLife to accelerate their activities.

StartHub housed 22 startups with offices in the Student Incubator in 2021, a slight decrease compared to the previous year. This is due to a reduced influx of tenants and the stricter exit policy: this policy involves entrepreneurs now drawing up a development process with their StartHub coach and being allowed to rent from StartHub for a maximum of two years from their move into PlusUltra2. This is expected to accelerate the development of the companies.

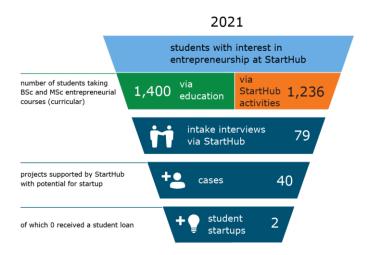


Figure 2.4 Education and incubator programmes for entrepreneurship for WU students

#### 2.6.2.3 StartLife

StartLife is one of Europe's leading and longest-running agri-food technology start-up accelerators. The mission is to help startups that contribute to making the global food system more sustainable, excel, and accelerate. The accelerator offers startups business development, support, mentors, loans, and access to a global network of investors, corporates and experts. The accelerator, which has close ties with co-founders WUR and regional development agency Oost NL, has provided support to more than 400 agri-food technology startups since its inception in 2010, which have raised more than €230 million in follow-up capital and created more than 1,400 new jobs thus far. StartLife scouted 516 startups in 2021. After 200 intakes, 40 startups were launched in StartLife programmes, 5 of which have a connection to WUR. The Startup Fund Gelderland, which will replace the Wageningen Preseed loans, was prepared in 2021. Four startups were provided with financial

support with a total of more than €300,000 in pre-seed loans in 2021.

The number of corporate partnerships of StartLife grew to 13 corporate partners, 8 programme partners, and 10 investor partnerships in 2021.



Figure 2.5 Output of StartLife

Rabobank, Anterra Capital, StartLife, and WUR organised the second fully online F&A Next in 2021. F&A Next is the first and largest European platform that connects investors, corporates, and startups/scale-ups in the agri-food domain. Participants gave the event a rating of four out of five and particularly appreciated the networking opportunities.

#### 2.6.2.4 Spin-offs

Knowledge application can occur through the transfer of intellectual property to researchers who start a company or have shares in a company (a spin-off according to the UNL definition). The spin-off policy adopted in 2020 has strengthened internal awareness. WUR has launched a total of 41 spinoffs. The special R-label for WUR spin-offs was awarded five times in 2021. By investing in the valorisation programme, StartLife, the national impact of WUR on new business activities is much higher than through spin-offs alone. No spin-offs were established from WUR in the strict sense of the UNL definition in 2021. This is because the development of new spin-offs was delayed by the coronavirus pandemic.

WUR was awarded three Valorisation grants from the Netherlands Organisation for Scientific Research (NWO) in order to conduct feasibility studies into commercialising knowledge through the establishments of spin-offs in 2021.

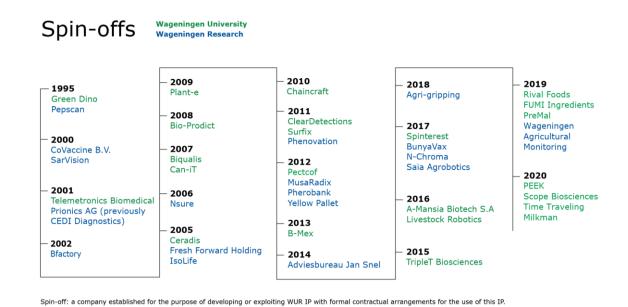


Figure 2.6 Timeline of WU and WR spin-offs

2021 was the second year in which the Road to Innovation Grant (R2IG) was available. This grant is a WUR-wide funding option in order to promote valorisation. The WUR Road-to-Innovation Grants support translational and innovative research with targeted funding, with a focus on determining application possibilities, a valorisation path, and end users. Two grants were awarded in 2021 and three R2IG projects were successfully completed in 2021.

#### 2.6.3 Sharing knowledge

Our students, clients, and other scientific institutions make use of Wageningen knowledge via the existing routes. Our knowledge is also relevant and applicable to anyone who is a little further away from WUR. Making our knowledge and knowledge infrastructure accessible to professional learners, businesses, citizens, and societal organisations is an important part of the value creation of WUR.

#### 2.6.3.1 Sharing scientific knowledge beyond academic world

WUR not only shares its scientific output in scientific journals, but also does so through field-specific publications for professionals in the sector and through publications for the general public, in print as well as digital/social media. Knowledge is made available to people outside the academic world via KennisOnline, Groen Kennisnet, and a large number of websites, often aimed at specific target groups. The WUR website provides various, theme-focused publications. This enables a larger group of potential users of this new knowledge to be reached. The number of publications for professionals and the general public remained stable: approximately 700 for WU and more than 1,100 for WR (Appendix 2, Table B2.17).

#### 2.6.3.2 **Applicable knowledge for SMEs**

The agri-food sector consists largely of SMEs. WR works closely with them in all kinds of research projects. A new programme was launched in 2020 together with the top sectors and the Dutch Ministry of Agriculture, Nature and Food Quality to unlock available knowledge in such a way that it offers a concrete action perspective for SMEs. There are more than 45 projects in progress. At WR, half of the contract research is financed by SMEs. Questions from SMEs are also addressed within "Society Based Learning", the practical networks around WR's regional locations and in collaboration with HBO. The Wageningen Campus also provides space to many SMEs.

#### 2.6.3.3 Science communication and Wageningen Dialogues

In addition to communication with fellow scientists, businesses, NGOs, and government bodies, WUR is active in science communication directly with society. Our organisation operates at the cutting edge of today's major social themes, which pose significant challenges for the world and elicit a wide range of diverging opinions. WUR aims to make the dilemmas and trade-offs of different solutions visible and open them up for discussion. WUR and stakeholders are encouraged to discuss this through Wageningen Dialogues. 26 dialogues were organised in 2021. Depending on the coronavirus situation these took place in a hybrid way or fully online. The dialogues reached 1,200 people and 125 organisations. Approximately ten dialogues concerned the WUR strategic themes.

Other dialogue-style sessions organised in 2021 include the successful WURlive sessions (17), where WUR and LNV colleagues met online to discuss a sensitive proposition: the "De Maaltijd van Morgen" (tomorrow's meal) series with eight sessions in Pakhuis de Zwijger and the "Humans & Animals" trilogy in De Rode Hoed on the human relationship with animals. The Dialogue Navigator which helps our colleagues and students to use, conduct, and facilitate dialogues was completed in 2021.

In addition, various broadly accessible meetings have been organised on and around Wageningen Campus, which contribute to the dissemination of knowledge: This was less in 2021 than in other years.

#### 2.6.3.4 **Society Based Education**

Companies, governments and research institutions can be supported with Society Based Education, where questions from society are connected to subjects in our education. In the different courses, students and their supervisors investigate the problem at hand, enabling students to learn to apply academic skills in order to solve problems in society. This usually takes place in a multidisciplinary environment. In the 2020-2021 academic year, this involved 264 projects for small and medium-sized businesses, startups, PPS consortia, the government, and social organisations. A total of 2,171 Bachelor's and Master's students and 449 employees (WU and WR) were involved (see Table B2.10 in Appendix 2).

#### 2.6.3.5 Collaboration with primary, secondary and green education

With the assistance of PPPs, WUR provides a major contribution to lessons on nutrition and food in primary education. A tremendous number of students and teachers in the primary education sector were reached with taste lessons and EU School Fruit.

Together with researchers, the Wageningen University Science Hub (WKWU), the Smaaklessen and EU School fruit support centre, and Wageningen Pre-University developed lesson materials and activities for primary and secondary education. Through this, WUR contributes to socially relevant, challenging and attractive education and improves the quality of incoming students. In the year under review, the Science Hub offered eighteen teaching products, introducing approximately 1,900 teachers and 36,000 children in primary and secondary education to themes and research from WUR. In 2021, the Smaaklessen support centre and EU School fruit reached 11,000 teachers and nearly 110,000 primary school pupils with the Smaaklessen teaching programme. The EU School fruit programme reached nearly 475,000 students and more than 20,000 teachers. Wageningen Pre-University reached nearly 1,600 lecturers through courses, workshops, and lecturer development teams with 50 lesson products. The Youth Institute challenges secondary students to look for solutions to one of the largest challenges facing the world at the present time: "How do we feed the world in 2050 in an equitable, sustainable and healthy way when the world population will have risen to 10 billion people?" It reached almost 300 secondary education students in 2021 (see Table B2.11 in Appendix 2).

WUR also participates in GroenPact — the partnership for green education. GroenPact encourages the exchange of knowledge in the green education system via programmes such as Groen Kennisnet. WR capacity is also connected to the SIA-NPRO programme Food and Green.

#### 2.6.3.6 Courses and degree programmes for professionals

WUR underlines the importance of lifelong learning for professionals, as described in 2.4.2. Courses and study programmes are also an effective way of creating value: knowledge is transferred and new networks are formed. Wageningen Academy feels that its role is to match the demand from the professional learners with the Wageningen knowledge it provides. Wageningen Academy provided 38 open-enrolment courses for 2,347 participants in 2021. 5 tailor-made courses were developed and provided to 175 students for companies.

The Wageningen Centre for Development Innovation (CDI) offers an annual programme of open enrolment courses for mid-career professionals primarily from Africa and Asia (the MENA region) and to a lesser degree also from Latin America, Europe, and North America. The courses cover the full range of WUR's knowledge domain, with topics such as Climate Change Adaptation, Fisheries Governance and Rural Entrepreneurship. Course participants come from government institutions, research institutes, NGOs and the business community. A total of 749 people participated in the 32 WCDI courses in 2021. With a course duration of two to three weeks, WCDI organised approximately 12,460 course days this way. See Table B2.3.

Summer schools at WUR are organised by the graduate schools, Wageningen Academy, ELLS, European Master in Food Studies, or by student organisations. More information is available online at www.wur.eu/summerschool.

#### 2.6.3.7 **Science Shop**

Social organisations that want to use Wageningen's knowledge can request research projects via the Science Shop, which is where students and researchers collaborate with clients on new solutions for society at the local or regional level. This requires a great deal of attention to the social sensitivity of students and the practical value of the recommendations provided to the client. The Science Shop completed 18 projects in 2021, in which 41 WUR employees, 160 Bachelor's and Master's students, and 76 external stakeholders were involved (See Table B2.9 in Appendix 2). The Science Shop delivered 13 reports, 3 brochures, 4 fact sheets, 40 presentations, and 2 dialogues in 2021.

#### 2.6.3.8 Wageningen in the region

WUR works globally but is also firmly integrated into its own locale. We participate in many regional networks such as Food Valley, Region FoodValley, WFC-E, and the Stadsagenda with the municipality of Wageningen. The Boerderij van de Toekomst (farm of the future) in Lelystad offered a voucher scheme in 2021, which was partly funded by Kansen voor West. WUR is involved in the Delta Knowledge Centre in Zeeland.

#### 2.6.4 Wageningen Campus, Ecosystem & Facilities

WUR continues the development of the Wageningen Campus ecosystem. More specifically, this relates to increasing the number of parties on the campus and the increasing diversity among parties within the ecosystem (campus acquisition), the interaction within the campus ecosystem (local buzz/campus community), and the optimal use of research facilities of WUR/Wageningen Campus (Shared Research Facilities). These matters have a close relationship with the physical aspects of the development of Wageningen Campus, for which we collaborate with the municipalities of Wageningen and Ede.

#### 2.6.4.1 **Campus acquisition**

Acquisition of potential new campus organisations has a reactive component, namely the processing of location requests submitted by parties to the WUR. This happens frequently; also during the coronavirus pandemic in 2021, many organisations interested in establishing themselves at WUR approached us. Organisations who are interested contact the campus team directly or find their way to WUR via various collaboration partners, such as OostNL, NFIA, the BSPW, Foodvalley, WFCE, or individual property owners. Their suitability to the campus ecosystem is assessed on the basis of the location criteria drawn up by WUR. Strategic, proactive acquisition is also being used to interest certain types of organisations that are underrepresented in the current campus community and that could have clear benefits for the ecosystem in establishing themselves on the campus.

Together with stakeholders, such as the municipalities of Wageningen and Ede, the province of Gelderland and organisations such as FoodValley, we are working to create an attractive business climate in the region. There were 68 active leads in 2021 relating to possible new parties yet to be established and/or expansion of already established parties. A total of 16 new organisations were established on Wageningen Campus by 2021.

#### 2.6.4.2 Wageningen Campus Ecosystem

The Wageningen Campus ecosystem has taken on a clear structure and look in recent years. Wageningen Campus is recognised and appreciated for this. Important elements for maintaining this interactive and vibrant ecosystem are excellent education and research, valorisation activities, quality and talent, entrepreneurship and startups (including StartHub, StartLife, and the Student Career Centre) and local buzz through communication and events (see 2.6.4.3).

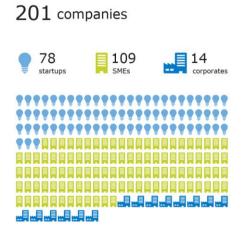


Figure 2.7 Types of businesses on Wageningen Campus

Interaction within the Wageningen Campus Ecosystem (including the Business & Science Park Wageningen (BSPW) and other regional parties) will lead to greater collaboration among different parties on and near the campus and to increased economic activity in the region. The collaboration with the municipality of Ede (World Food Centre/Food Innovation District/KennisAs) is being developed and will be expanded in 2022.

The Plus Ultra II building, which was already taken into use in 2020, was officially and festively opened in the autumn of 2021. Plus Ultra II is home to many innovative organisations (OnePlanet, Foodvalley, StartHub, WUR-Student Challenges, StartLife, and businesses) and represents an entrepreneurial core in the Wageningen ecosystem.

#### 2.6.4.3 Wageningen Campus community & local buzz

Impulse is an excellent location for an in-person meeting. Unfortunately, due to the coronavirus, it was nearly impossible to meet in person in 2021. The public in-person meetings that were organised and facilitated were mainly intended for the student community. Most of the scheduled cultural events could not take place either. Various efforts were made to keep the interaction between the different campus residents vibrant. 50 news items were shared on the Wageningen Campus website. The campus community was also kept informed through six e-newsletters. Monitoring data shows that this newsletter is well read. A great deal of attention was paid to a new Wageningen Campus website in 2021, which will go live in the spring of 2022. We also started the Campus Vlog in which campus companies introduce themselves. These vlogs are uploaded to the new campus website. We have 40 videos that give a good impression of the knowledge available on the campus. A virtual campus tour was created together with the Corporate Strategy Accounts department. The tour will be available at the beginning of 2022 and is primarily intended for organisations interested in establishing themselves on the campus or receiving national and international delegations.

### **Shared research facilities**

WUR wants to retain its leading position in education and research and advanced research facilities are crucial for this. WUR invests in high-quality research facilities every year. These facilities range from high-quality laboratory equipment and the related expertise to larger research facilities. Through the Shared Research Facilities (SRF), WUR provides third parties with access to its research facilities. This stimulation and facilitation of "joint use" not only contributes to more cost-effective operation of the research facilities, but it is also a good way for researchers (at WUR as well as outside it) to familiarise themselves with and utilise the facilities and expertise of others. This is often the basis for further collaboration in research projects and actively contributes to the strength of the Wageningen Campus ecosystem.

The new 3T-MRI scanner, in which we had invested in 2020, was launched in 2021. Major investments in 2021 include the Capillary rheometer, Robolector, Polymerisation Reactor, light microscope (LEICA Sellaris CSLM), optical tweezers microscope, and a MALDI-TOF system. Some of them will be installed in 2022. We also invested in additional storage capacity of the HPC in 2021. WUR worked on setting up an internal roadmap for research facilities in 2021, where all ideas for new research facilities are listed and prioritised. A clear process of decision-making is being developed to go from the idea to the realisation of a facility.

The SRF's search engine provides access to 447 devices, of which 234 are also accessible to external parties and SRF invested in 83 devices. Of the 447 pieces of equipment, 8 are owned by an external party (Unilever, MARIN) and 12 are located outside of WUR. The average occupancy of the SRF equipment portfolio (part of WUR's total equipment portfolio) was approximately 62.5% in 2021, of which 13% was by users outside of WUR, and the number of unique external organisations that used SRF equipment in 2021 was 57 (see Table B2.12 Appendix 2). The equipment was also widely used in research projects of WUR for external parties. The number of devices, which can be reserved via SRF's reservation system, increased to 522 in 2021. The overview of all research facilities within WUR was also further expanded in 2021, and the SRF website and intranet page were updated to make it easier to find information on research equipment and facilities.

### Available equipment via search tool search.labfacilities.wur.nl in 2021

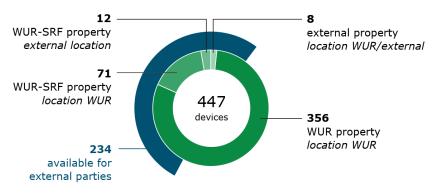


Figure 2.8 Equipment supply via search engine Facility Finder

WUR'S SRF team has been working closely with Foodvalley NL in the area of shared facilities within the Foodvalley 2030 programme since 2020, in which WUR SRF staff and two colleagues from Foodvalley NL have been working together as a single facilities team. The €7 million RegioDeal Foodvalley subsidy, which started in 2020 for investments in shared research equipment and runs for five years, has so far resulted in over €2 million being invested in equipment. A similar subsidy is also available from the RegioDeal Foodvalley for shared pilot facilities, in which Foodvalley NL has an advisory role. The first investment from this subsidy was made in 2021. The collaboration is further shaped with Shared Facility Finder, where the possibilities for finding, sharing, and investing in research facilities and equipment are shared within the agri-food innovation ecosystem. The Shared Facility Finder includes innovation facilities of more than 60 organisations.

#### 2.6.4.5 Physical aspects of campus development

Due to employees from many organisations being forced to work from home in 2021, it was still quieter on campus in terms of meeting and interaction, but Wageningen Campus certainly was not quiet when it came to property and housing. Among the highlights were the completion of the third education building Aurora, the new research greenhouses phase 1/Red, and the NPEC Phenotyping Facility, as well as the construction of the Omnia and the Upfield Food Science Centre reaching their highest points. Omnia will be the new auditorium and space for WUR discussions, inspiration, and meetings. The development of the physical campus has accelerated, which will also be noticeable in the coming years, especially with regard to the further development of Campus-Oost on the east side of Mansholtlaan.

A major step towards sustainability has been taken with the commissioning of a thermal energy storage (TES) ring for WUR and the connection of existing and new buildings to this ring, a process that will be further rolled out in the coming years. In terms of accessibility, improvements are on their way for both bicycles (express cycle route Ede-Wageningen), public transport (direct bus connection Arnhem Central Station - Wageningen Campus - Ede/Wageningen station), and cars, with the province of Gelderland's elaboration of the provincial plan Beter Bereikbaar Wageningen.

As the Wageningen Municipal Executive decided to make the Born-Oost zoning plan available for inspection, the development of Wageningen Campus on the other side of Mansholtlaan has also reached an important milestone. In this area, where currently only NIOO-KNAW and Aeres University of Applied Sciences are located, the new zoning plan provides space for approximately 80,000 m<sup>2</sup> of knowledge-intensive activity. BSPW is working hard on a quality stimulus and the promotion of available business accommodation and construction sites. Additional space has also been found around the Wageningen Campus for student housing: according to the principles, 250 extra rooms will become available on Born-Oost and student housing provider Idealis is looking for 350 extra rooms on Bornsesteeg, adjacent to the Sterflat. These and other plans should be finalised in the coming year.

The year 2022 will introduce the first projects of the WUR Strategic Housing Plan, the completion of various buildings, and possibly the first concrete developments on Campus East.

#### 2.6.5 Wageningen alumni entering the labour market

Our alumni contribute to achieving social objectives, such as more sustainable production and consumption, improved health, and the competitive capacity of the business community. In this way, they contribute significantly to the impact of WUR. Of the graduating Master's students, 41% found a job in the business community and professional field. See Table B2.1 in Appendix 2. With the LinkedIn community WUR-Connect we reach more than 9,500 alumni. Alumni involvement at WUR is of great value, and new ambitions were formulated in the year under review to further strengthen this sense of involvement, such as with the Wageningen University Fund. We believe there are more opportunities to strengthen education, research, and value creation in society together with the alumni. See also Section 2.4.7.

#### 2.6.6 Outlook

Value creation will remain a key driver for WUR staff in 2022. Creating value is once again at the forefront in the Strategic Plan extension. We will continue on the same path in 2022, with a special focus on interactions with society and a broader approach to fundraising following the repositioning of the University Fund Wageningen (UFW) in late 2021. The first projects of WUR's Strategic Housing Plan will start in 2022 and may be the first concrete developments on Campus East.

### 2.7 **Employees**

The strategic priority areas established by the Executive Board form the basis for the HR policy of Wageningen University & Research.

The coronavirus pandemic that also occurred in 2021, the associated measures, and their consequences for our employees were deciding factors for how HR policy was and could be implemented in 2021. Therefore, working from home remained the standard while education and research activities continued, also often remotely. Through customised solutions, attempts were made to alleviate the associated high work pressure

Despite this special situation, the following five HR themes were again the focus of HR policy: Recruitment, Onboarding & Inclusion, Leadership & Talent Development, Organisational Development, Vitality & Health, and HR Operational Excellence. The key figures characterising our workforce are included in more detail in the Social Annual Report (Appendix 3).



### 2.7.1 One Wageningen

Based on the One Wageningen philosophy, we encourage collaboration and internal mobility between the Wageningen Research Foundation and Wageningen University at all levels. The in-house schemes that are designed and the HR policies that are developed apply, where possible, to all WUR employees. Efforts are also being made to ensure that the collective labour agreements of both entities are aligned as much as possible.

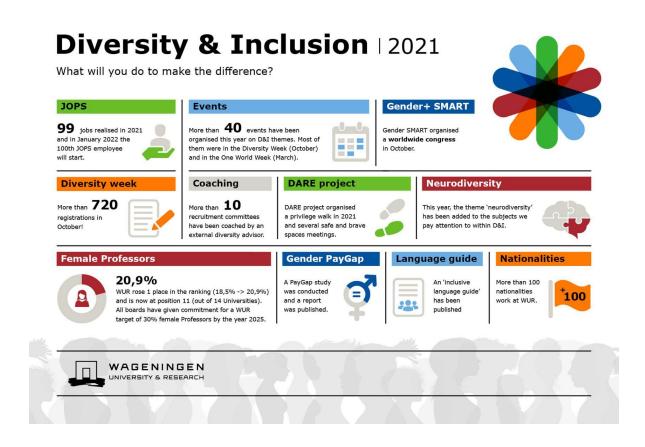
Wageningen University & Research wants individual talents to develop to their full potential by offering employees a challenging, inspiring, safe work environment aimed at collaborations. We do this by using detailed implementation of the five HR themes, by which we also help shape our Corporate Social Responsibility (CSR).

#### 2.7.2 Recruitment, Onboarding, and Inclusion

In order to realise the organisation's ambitions, a large number of new employees were recruited in 2021 as well. The recruitment team that has been established in previous years plays an important role in this, especially since WUR has also noticed that the labour market is getting tighter for many positions. Recruiting senior talent for Wageningen Research Foundation and specific staff positions is particularly complex and time-consuming. International recruitment and recruitment among other target groups is also being intensified, partly in order to increase diversity within WUR. The Expat Center Food Valley provides important support for the employment of international staff members and corporate HR offers programmes to support new colleagues from abroad.

Additional attention needs to be paid during the recruitment and onboarding of international employees, ranging from issues such as housing, paying attention to cultural differences, and work for their partner. This is another reason to organise the international community development and facilities for international employees, particularly around Wageningen. A partnership also takes place with the Expat Spouse Initiative of Eindhoven University of Technology, in which WUR will offer a dual career centre in Wageningen to promote the integration of the partners of international employees as well.

In the context of "inclusion", specific attention is also given to the employment of people who struggle in the labour market, in response to the Participation Act, the job agreement act (Wet Banenafspraak), and the quota requirement for people with a work disability (Quotumheffing Aarbeidsbeperkten). Thanks to the efforts of Job Participation Support|jops we have been able to hire nearly 100 people who struggle in the labour market and also offer them stable work.



In 2021, WUR once again committed to improving gender balance through various initiatives. We have taken a broad approach to diversity and inclusion, combining and centrally coordinating themes such as anti-racism (DARE), neurodiversity, inclusion, LGBT+, and gender balance to create an inclusive organisation. The Gender+ SMART EU project will also continue (until 2022). Targets have been established, including for the male/female ratio within the organisation. The "Diversity Week" took place for the first time, where all aspects of diversity were addressed. The various Diversity & Inclusion (D&I) project groups are more connected and aligned with each other.

#### 2.7.3 Leadership & Talent Development theme

### Leadership development

The leadership profile, which employees and managers developed together, was finalised in 2021 and embedded into the organisation in numerous ways. This profile has given WUR's vision on leadership form and substance. This profile distinguishes between management and leadership. We have identified five key elements of leadership: self-awareness, vision, people, collaboration, and external awareness. Furthermore, leadership occurs on three important levels: self-management, managing others, and managing the organisation. The profile describes per element and level what we may expect from managers in terms of behaviour.

The existing leadership programmes were completed in 2021. These were the talent programme "Personal Leadership Expedition", the programme "Leadership Development" for experienced executives, and the programme "Leadership, Impact and Science" for senior executives. Large parts of these programmes were accomplished online due to the coronavirus measures. Based on the new

leadership profile, the evaluations of the existing programmes and the lessons learned from the coronavirus period, the leadership programmes were put out to tender again in 2021. As a result, two of the three programmes have a new provider. The community of practice for managers, which was started in 2020, developed more in 2021 through a number of online events and the intranet group "leaders@wur".

### Talent development

Considerable attention was paid to the new-style Result & Development (R&O) interviews in 2021 under the heading: "Let's Talk Together". Key words here are: continuous dialogue, contribution to team results, an appreciative and development-focused approach, and attention to the employee's wellbeing and own direction. Personal leadership is highlighted in the communication, in which the new WUR leadership profile is supportive and provides a guideline for this. To stimulate continuous dialogue, all managers had the opportunity to attend a "Feed forward" workshop, which 36% of managers attended in 2021. Employees can participate online in this workshop in an abridged format. There is also a toolkit for employees and managers. The R&O form and technical support have been adapted to support continuous dialogue.

The MyDevelopment intranet group was also created to allow direct communication with employees about their development. This group focuses on various development opportunities such as workshops and training courses as well as tools that encourage learning in the workplace. Employees are satisfied with the amount of development opportunities offered by WUR (score 7.3 in the Employee Monitor). WUR's learning portal MyDevelopment was used to book over 700 external training courses or coaching programmes. They also make extensive use of the various internal training programmes offered, for example in the areas of project management, ICT, or language courses, and of the "GoodHabitz" training programmes on digital skills and personal power. Tenure trackers are offered the opportunity to work on their competences and leadership through development programmes. These development programmes were put out to tender again in 2021. A new trainer has been chosen who will design the programmes so that they focus on the current development issues and cases of the tenure trackers. The new programmes will be launched in 2022. There was a temporary alternative programme for this target group in 2021.

#### 2.7.4 Organisational Development theme

The policy advice on hybrid working "Remote Working, connected whenever and wherever you work" was formally adopted in early 2021. An important starting point for hybrid working at WUR is the ability to create a good balance between working at home and on location within people's own degree of control. Due to the coronavirus pandemic, 85% of all employees continued to be able to alternate remote work with on-site collaboration in 2021. Despite this obstacle, employees rated their own effectiveness during the coronavirus pandemic with a 7 in the MTO of July 2021. In order to be ready for the moment when we have to deal with fewer coronavirus measures and can actually work hybrid, we have used the year to enthuse and support managers, employees, and their teams in their preparation for hybrid work. In addition to over 20 new tools, an intranet platform "Working@WUR" was launched, where more than 1340 followers share their tips, experiences, and ideas about hybrid working. Contribution to the costs of working from home was secured in the new collective labour agreements of Wageningen University and the Wageningen Research Foundation, and the new Remote Working Facilities Regulation provides a clear framework for employees and managers to make agreements about working from home. An organisation-wide monitoring group "Working@WUR" will start in 2022, which will closely follow and strengthen the implementation process by actively exchanging experiences and knowledge on hybrid working.

#### 2.7.5 Vitality & Health theme

Since meetings and lectures also mainly took place online in 2021, we spoke to each other in person less often and therefore missed social contacts. This has led to an increase in physical and mental problems. As the chair massages were not provided at work during this period, employees could instead hand in their massage credits at a massage salon near their home. This option is now included as standard in the offer, i.e. independently of the recommendation to work from home.

As we want to encourage employees to exercise more during the working day, especially when working from home, we started a pilot in the summer where employees can use an app to earn Fitcoins by walking and/or cycling. The earned Fitcoins can be used to purchase products or vouchers. In order to promote vitality, we also organised two Vitality Weeks this year: one in June and one in November.

The "Vital@work" programme is offered in close coordination with Sports Centre De Bongerd and offers various workshops to stimulate working in an energetic way (at home). This included workshops on exercise, relaxation, remote working, and nutrition. A total of 2805 applications were made by 988 unique participants. The programmes are largely offered through MS Teams, which has the advantage that they are accessible everywhere and therefore give us a wide reach.

### Sick leave

Since the coronavirus pandemic in 2020, absenteeism has fallen significantly, from 4.5% to 3.5%. This sickness absence percentage remained unchanged in 2021. We expect this lower percentage to be related to the increased possibilities people to have control over their work activities when working from home, which gives them more flexibility. At the same time, we conclude that work pressure, certainly for certain groups, was experienced as high or too high, which is worrying. This will also continue to receive considerable attention.

# Social security

The social security team is in full development. This team supports HR, managers, and employees with questions about social security in the broadest sense of the word. Well-known topics are short and long-term absenteeism, unemployment, and retirement. If employees leave the organisation and are awarded benefits on the basis of the Dutch Unemployment Insurance Act (WW), they are offered support from an internal work coach (WW). The work coach assists former WUR employees in finding another job. In this way, we fulfil our reintegration obligations as a self-insurer for unemployment benefits. We fulfil our reintegration obligations regarding the scheme for returning to work for the partially disabled (WGA) and the Sickness Benefits Act (ZW) by involving an external reintegration coach. Due to the reintegration support under the WW, WGA, and ZW, the costs of paying out benefits for WUR are limited as much as possible.

In the coming year, the social security team will focus on employees who are unfit to work for the long term, who will receive WGA benefits, etc. A broader policy will be developed for this.

### 2.7.6 HR Operational Excellence theme

The scope and professionalisation of the HR Shared Service Centre was defined in more detail in 2021 and has already been implemented in some areas. Scope means: all operational administrative HR processes throughout the entire HR chain.

The main focus of professionalisation in 2021 was the "Basis op orde" (basis in order), which led to the following results, among others:

- digitalisation of signing employment contracts;
- professionalisation of HR service desk for primary questions, which has demonstrably improved the speed and quality of answering;
- employer's declarations have been set up as a self-service application process, which has reduced the turnaround time;
- standardisation and uniformity of the Eligibility for Permanent Invalidity Benefit (Restrictions) Act process (illness);
- standardisation and automation of importing Occupational Health and Safety Service documents (IT security improved);
- registration of employees' contact persons in case of emergency;
- renewal and updating of the registration of additional activities.

#### 2.7.7 Employee participational structure

Employees of WUR are represented in decentralised work councils, the Central Works Council (COR) and the Student Staff Council (GV). The latter consists of employee representatives and students of WU. The COR and GV work together in the WUR Council. The participational structure is an important partner in policy formation for the Executive Board and the managing directors of the organisational units. Involvement of the employees and students in the decision-making process regarding important topics helps to generate broader support.

The WUR Council will be intensively involved in the preparation of the Strategic Housing Plan and Working@WUR in 2021. The SSC voiced its ideas and opinions, such as on the budget of Wageningen University and the "National Program Education". The Central Works Council provided its feedback on topics such as the appointment of the WUR ombudsperson and investments in the AFSG organisational component. The Executive Board adopted the COR's recommendation to set up a central point for issuing remote working facilities and also honoured the initiative for "Free Dutch Classes". Throughout the year, there was very regular contact between the WUR coronavirus team and an ad-hoc WUR Council committee. This allowed for a quick dialogue on the latest government measures and their impact on our organisation, and for signs and ideas from employees and students to be shared.

The year 2021 was an intensive year for the participational structure with a relatively large number of requests for approval or recommendation from the Executive Board, in combination with the annual changes in the members of the Student Council and PhD representation as well as the need to work and communicate online much of the time. The annual discussion about the "Code of Good Governance" - in early 2022 - between the Executive Board and WUR Council was used to look back on this and to make agreements.

Periodic consultations were also held with representatives from the employee organisations, involved in the realisation of the collective labour agreements (CAOs), the Wageningen Research staff council (POWR), and the Overlegorgaan Personeelsaangelegenheden of Wageningen University (OPWU) in 2021. POWR and OPWU were the most important subjects of discussion in 2021 when the CAO agreements on hybrid work, work pressure (including work-life balance), and job security were further detailed. The new working method with regard to the P&D interview, "Let's talk together", was also discussed. Discussions were held in the OPWU, in the context of vitality, on using the decentralised working conditions funds to expand activities in this framework.

In the context of CSR, it is important that suitable employment conditions are offered and that employees can work in a safe, healthy environment. Furthermore, in this respect, scientific integrity must be safeguarded and human dignity protected. The methods employed by WUR to achieve these are described below.

#### 2.7.8 **Employment conditions**

WUR has two CAOs, the Collective Labour Agreements for Dutch Universities (CAO NU) and the Collective Labour Agreement for Wageningen Research Foundation. The current CAO NU runs from 1 January 2021 to 1 April 2022, with a wage increase of 1.64% as of 1 July 2021 and 0.36% as of 1 January 2022 (2.0% in total).

An agreement was signed in November 2021 for a new CAO for Wageningen Research Foundation which will be valid from 1 April 2021 until 1 April 2022. The agreement includes a salary increase of 1.64% on 1 October 2021 and an increase in the end-of-year bonus from 3% to 4% for employees hired from 1 December 2021 onwards. The remuneration for senior executives is in line with the Standard Remuneration Act for Public and Semi-public Sector Senior Officials (WNT).

#### 2.7.9 Risk analyses and evaluations

Risk analyses and evaluations (RI&Es) provide insight into the possible risks of certain work activities for the health of the employee. This insight is essential to be able to arrange work activities in such a way so as to avoid adverse health effects. In a number of positions at WUR, it is useful to periodically perform medical checks on employees or to provide vaccinations. Where necessary, this is compulsory at WUR. If an employee is unable to comply with this (for example due to their religion), the employee will not be able to carry out the particular work activities and will be assigned other duties. WUR has also developed a policy for periodic occupational health examinations (PAGO). WUR uses the Occupational Health and Safety (Arbo) catalogue in collaboration with UNL.

Finally, special attention should be given to the health risks of employees who are posted abroad. They will be given the necessary preventative vaccinations and follow-up care will also be provided upon their return to the Netherlands, in consultation with organisations such as the vaccination centre.

Due to the coronavirus pandemic, travel abroad was kept to a minimum in 2021 and the instructions of the national government were followed.

#### 2.7.10 Integrity

In order to guarantee that the work within WUR is carried out and published both independently and with integrity, we as an organisation apply a number of basic principles in the form of codes, regulations, and agreements.

### These are:

- The Wageningen University & Research Integrity Code. This applies to all employees and quest employees of Wageningen University and Wageningen Research Foundation.
- The Netherlands Code of Conduct for Research Integrity as established by UNL. This code provides an educational and normative framework for researchers and students. For the Board and the Scientific Integrity Committee it offers an assessment framework for the evaluation of alleged violations of scientific integrity. And for the organisation, the code formulates a number of duties of
- The Corporate Governance Code of Wageningen University & Research. This code describes the principles of good governance.
- The Implementation Regulations Side Activities Wageningen University & Research. According to these regulations, employees are required to ask their employer for permission in advance to carry out side activities. It is important both for WUR and for potential clients to have insight into any secondary work activities in order to prevent a conflict of interest. The approved side activities can be found at we@wur.
- The Whistle-blower's Regulations. These regulations describe how an employee should act if he/she suspects inappropriate behaviour at WUR.
- The Regulations Complaints procedure unwanted behaviour.
- The Personal Data Protection Regulations. These regulations provide a description of the tasks, responsibilities, and procedures with regard to the processing of personal data within WUR and is applicable to all data processing operations within WUR.
- The Camera Surveillance Regulations. This regulation provides a description of the responsibilities and procedures for the camera surveillance carried out within WUR.
- The Anti-corruption Code of Wageningen University & Research.

Employees are required to familiarise themselves with these principles and verify this by signing their employment contract.

More information on the independence of scientific research can be found in Section 2.9.2 (Independence).

Attention was paid during the Diversity Week to the importance of a safe and pleasant working and learning environment and the possibilities WUR offers for discussing this if not experienced as such. In this context, we also worked to make it easier to find all the possibilities offered by our organisation for raising complaints against objectionable decisions or undesirable behaviour on the intranet. People can contact confidential counsellors, occupational social workers, HR advisors and, since autumn 2021, also the ombudsperson. The ombudsperson can independently investigate on the basis of indications from the organisation about possible misconduct. A formal complaints procedure can also be initiated via the complaints officer.

#### 2.7.10.1 Complaint and arbitration procedures

Protection of employees against possible objectionable decisions or conduct is guaranteed through various complaints and arbitration regulations at WUR. The following provides an overview of the number of submitted or processed complaints in 2021 per procedure.

# Wageningen University & Research

The Scientific Integrity Committee of Wageningen University & Research (CWI) received a request from the Executive Board to advise on a situation concerning authorship in 2021. The CWI has started an investigation into this, which has not yet been completed.

No new complaints were submitted to the CWI in 2021.

No complaints in relation to the Regulations on Complaints Procedure Undesirable Behaviour were filed in 2021.

### Wageningen University

No application was made to Wageningen University's arbitration procedure in 2021.

### Wageningen Research Foundation

On the basis of Wageningen Research Foundation's Individual Right of Complaint Grievance Regulations, one complaint was submitted to the Grievance Committee in 2021, which was withdrawn by the complainant. Two complaints were also filed pursuant to the Complaints Procedure for job ranking of Wageningen Research Foundation, both of which were declared unfounded.

### 2.8 Operational management

#### 2.8.1 Management of information provision and ICT developments

The management of WUR information provision takes place at the policy and strategic levels through the IV Portfolio Board (previously the Architecture Board), chaired by a member of the Executive Board.

The Portfolio Board met six times in 2021 and discussed:

- information provision policy and strategy;
- · cross-domain (architectural) themes;
- WUR-wide and cross-domain risks;
- the progress of the domains and their connection to the WUR Strategic Plan.

Because of the coronavirus, the year 2021 was again a special year in which new hybrid forms of learning were applied thanks to the increasing digitalisation in the field of education (see Chapter 2.4.2).

### Operational management domain

The Operational Management domain has continued the development started in 2020 throughout 2021. First of all, a vision of operational management was set up with the ambition of creating a robust future-oriented operational management with a focus on "Easy Service" and with "Time4you" as its impact. This means that services and processes that logically belong together from a user's perspective will be organised more in chains across business functions, with the primary focus on ease of use for the employee. The term Easy Service resonates very well within the organisation and is embraced and adopted by all sorts of forums; it has become a household word.

This vision was used to weigh all initiatives for 2021 in terms of their respective contribution and as a primary filter for prioritising to achieve a balanced WURldclass business portfolio. An acquisition package, consisting of a customer relationship management system, was rolled out within Wageningen Research in 2021, along with a uniform environment for keeping project records. A contract management system and module for marketing & business development analyses is under

development and will be connected to it in 2022. A dashboard has been implemented that combines all important business parameters related to acquisition, projects, finance, and HR in a single overview.

HR's efforts in 2021 were firmly focused on putting the basic processes in order and opening up and improving a number of services for employees in MyHR (including expense reports on commuting and working from home). At the same time, a comprehensive plan package was developed to unify and standardise all HR services and processes throughout the organisation; from decentralised to centralised and vice versa.

Furthermore, a project was set up to implement a uniform digital drawing process to connect all supporting operational management activities to it.

### IT domain

The possibilities for digital collaboration and remote working were further expanded and completed in the IT domain in 2021. Over 140 meeting rooms are equipped with video conference systems that make blended meetings possible. The transition from Skype to Teams and the integration with telephone systems went entirely according to plan. The Servicedesk IT, including the Servicepoint IT on campus, continued to provide a busy but highly valued service throughout the year. Thanks to timely inventory purchases and the centralisation of the purchase and issue of workstation equipment, service levels have remained good, despite the ongoing global ICT equipment supply problems. This also argues in favour of central purchasing and working with a standard range of products.

As a result of hybrid working, the focus during the year was increasingly on training and personal advice for working online and online meetings. For example, the "Tips & Tricks on online document management" workshops were very popular. Significant investments were made in the knowledge areas of AI and Public Cloud solutions, in collaboration with the research domain.

IT security remained an unchanged key focus in the face of ever-changing cyber security threats. The WUR passcode (two-factor authentication) was also made available to students at the beginning of the year. At the end of March 2021, WUR became the first university institution to be connected to SURFsoc (SURF's security operations centre) and a new IT Security Services team was set up, enabling us to protect our digital infrastructure even better. This team also tackled the Log4J threat by centrally coordinating vulnerability detection and monitoring.

# Research domain

The Dean of Research, the Wageningen Data Competence Centre (WDCC), the library (Research Data Management support) and F&S-IT work together in the Research domain to provide generic support for the Digital Twins and Data Driven & High Tech programmes from the WUR Strategic Plan. A major step was taken in 2021 with the drafting of a domain information plan, which sets priorities and gives structure and direction to the research infrastructure and organisation in the longer term.

The library, together with sciences groups, combined expertise for the development of data stewardship under the banner of the WDCC. Various guidelines and best practices are jointly developed, such as for data sharing and the use of software and tools. These Data Stewards are becoming an increasingly active community within WUR, but they also participate in alliances externally, such as the Dutch AI Coalition, in which WUR is designing the Agrofood application domain.

We also have a team of F&S-IT research engineers to better support researchers in their research, involving co-creation, together with researchers. This step will be succeeded next year by the establishment of a multidisciplinary team to support data management.

The WUR has now appointed three professors of Data Science and Artificial Intelligence who, with the support of the WDCC, develop scientific programmes connected to our domains.

Within the framework of RDM Infrastructure, two directions are being worked out using expertise and knowledge. One is aimed at the level of a research group and supported by national storage platform

Yoda. This initiative puts WUR at the forefront of a national SURF partnership in which almost all Dutch universities participate. The other is aimed at large and complex data facilities that are provided with interoperable, secure, and high performance storage capabilities with iRODS technology. Among other things, this will support the Netherlands Plant Eco-phenotyping Centre platform; a programme on the NWO's National Roadmap for Large-Scale Research Facilities, which will produce several petabytes (=1,000,000 gigabytes) of data in the coming years.

A laboratory project has also been launched within the framework of innovation, which will deliver an initial IT architecture for WUR institutes in order to fully support the modern data-driven lab of the future.

#### 2.8.2 Personal data protection act

A lot of work was done by WUR's privacy organisation in 2021 because of the consequences of the coronavirus measures, in which privacy issues played an important role. It was a balancing act between privacy rights and accelerated implementation of new platforms and technology to ensure continuity of research, online education, and online examinations. On a national level, considerable effort has gone into imposing measures on major US platforms to comply with the General Data Protection Regulation (GDPR). The "Schrems 2" ruling of the Netherlands Court of Justice has also contributed to this. It is uncertain how the Personal Data Authority (AP) will assess the risks of transferring personal data to the US. Following the completion of an ongoing investigation into Google Analytics in early 2022, this could lead to the AP banning these Google services used by WUR within a few months.

A project group of the Universities of the Netherlands (UNL) stated in early 2021 that public values, which are fundamental to education, are increasingly coming under pressure due to the ongoing digitisation of Dutch higher education. Among other things, the education sector makes extensive use of digital learning environments, plagiarism and copy-detection tools, online bibliographic databases, and cloud services, most of which come from commercial providers. Tech companies can adapt their platforms as they see fit, resulting in loss of control over data of WUR students, lecturers, researchers, and employees. This data is also used for profitable services, rather than services that support a balanced curriculum. WUR will need to continue to create awareness of this. One of the measures introduced in recent years is that applications are whitelisted according to privacy and security aspects before these services can be deployed.

A maturity assessment took place in 2020, resulting in the implementation of additional best practices. The focus in 2021 was also on developing integral collaboration between privacy, security, data management, information technology and making connections with existing domains such as education, research, integrity, and archives. Compliance monitoring will be intensified. The structural safeguarding of privacy within WUR requires, in addition to a good internal privacy organisation, permanent awareness among employees and students. An ongoing awareness campaign has been launched and the recommendation to the management board is to make it compulsory for employees to participate.

#### 2.8.3 Corporate Social Responsibility

Our CSR agenda highlights the social issues that will receive additional attention in the coming years. The CSR agenda includes social, environmental, and economic sustainability. It contributes to the goals of the 2019-2022 Strategic Plan, aligning as far as possible with the Change Performance Indicators (CPIs). For the current CSR agenda themes, see Section 2.3.3.

Through projects linked to WUR's CSR agenda, more and more employees and students are finding their way to the campus as a Living Lab. For example, by contributing to the drafting of a policy vision for healthier and more sustainable catering; "The future of Food & Beverage @WUR", or by involving WUR researchers and students in plans for green management on the Wageningen Campus. A regular starting point for a Living Lab approach is an initiative from Green Office Wageningen or the Green

Impact programme, in which employee and student teams take action to make WUR's working environment more sustainable.

During the coronavirus pandemic, CSR continued to receive our attention just as it did prior. Distance education and working from home, interspersed with periods when in-person activities were allowed, required additional attention to safety, health, and wellbeing. Employee and student vitality was also an important issue in the second year of the pandemic. A varied health programme with activities and courses was offered as Vital@work and Student Training & Support. Further steps were taken towards an inclusive organisation under the CSR theme of diversity, including the GENDER+ Smart conference during Diversity Week in October, the DARE project and Job Participation Support (JOPS) for supporting employees with disabilities.

The coronavirus pandemic also changed the way we look at issues such as mobility and building use. We rapidly improved our online skills and online meetings replaced face-to-face ones. The number of kilometres travelled remained low because international business trips were still restricted. As a result, greenhouse gas emissions related to mobility were also significantly lower in 2021. Considerably less waste was collected and less water consumed in the educational and office buildings. Despite lower building occupancy, energy consumption increased. The causes were increased ventilation due to the risk of the coronavirus spreading and increased heat demand, precisely because there were fewer people in the buildings, combined with increased ventilation.

WUR is taking steps on various fronts to make its own operational management more sustainable. This was demonstrated in 2021 in a variety of locations in buildings and grounds under the heading WUR UP TO. For example, with the text "From conventional heating... to zero gas use" on the ATES wells or "From coffee cup... to toilet paper" in the toilets. A QR code provides more information on sustainable operational management on the WUR UP TO website.

Three sustainable transitions were central to operational management in 2021: the energy transition, the transition to a circular economy, and the transition to more sustainable transport. The energy policy was reformulated in the "Houtskoolschets Energietransitie 2050" (2050 energy transition outline). WUR took the next step in the transition to circular operations by issuing an innovative tender for Material Flow Management. "Mobility as a Service" (MaaS) also continued to develop. The core of this contract for transport services is that the service provider ensures that all kilometres travelled by business cars are fully electric within two years.

Two major new construction projects were carried out in 2021: the Aurora education building was commissioned in September 2021 and the construction of the Omnia dialogue centre was in full swing. Both buildings have high sustainability requirements. Aurora is nearly energy neutral and does not use gas or fossil fuels. Solar panels are installed on the roof and heat pumps are used for hot water. Omnia is surrounded by a nature garden and a pond, the building itself has a sedum roof and a natural look with lots of greenery and wood. Both buildings are connected to the ATES induction loop.

WU was named the most sustainable university in the world for the fifth time in the UI GreenMetric ranking in December 2021. Wageningen University also came first in SustainaBul — an annual ranking of Dutch educational institutions organised by students. WUR reached the 36th place in the Transparency Benchmark of the Ministry of Economic Affairs and Climate Chang and remained the leader in reporting on social responsibility and sustainability in the category Universities and Research Institutes.

We participated in the Times Higher Education Impact Ranking for the first time and achieved a place among the 300 best universities. The ranking lists universities according to their contribution to the Sustainable Development Goals (SDGs). WUR scores high on the SDGs Climate Action (25) and Zero Hunger (27). It shows how we contribute to societal challenges through our education and research, the first theme on our CSR agenda.



Our website and the 2020 Sustainability Report contain more information about the WUR CSR Agenda.

#### 2.8.4 Safety and Environment

WUR is taking its social responsibility seriously with sustainable operational management. This endeavour is also the starting point for the attention areas of safety and environment.

#### 2.8.4.1 Safety

Education, research, and support activities are accompanied by risks. In the areas of health and safety, WUR wishes to protect employees and students as effectively as possible. The objectives are to ensure optimal working conditions, guarantee health and safety, and stimulate the well-being of employees and students.

WUR's Health and Safety Policy (Arbo policy) and the practical implementation of this policy is set out in various theme-related policy documents and is based on the UNL Health & Safety Catalogue as much as possible. These apply to both WU and WR. Parts of the VSNU Health & Safety Catalogue (and the implementation thereof) concern topics such as In-house Emergency Services; Risk Assessments and Evaluations (RI&E); Hazardous Materials; Information, Instruction and Supervision (VO&T); and Arms, Neck and Shoulder Complaints (KANS).

Each organisational division is responsible for having a current RI&E for all workstations and activities and for conducting in-depth RI&Es. In the context of Information, Instruction, and Supervision (VO&T), various e-learning modules on working safely were created for students and employees in recent years. A WUR-wide e-learning on Biosafety became available in 2021. Protocols and tools were developed for building and housing management to secure and control attention to health and safety at an early stage during the construction process and in the usage phase. Tools have been developed to identify risks in technical rooms and on roofs and facades.

Considerable attention was paid to the occupational hazards caused by the coronavirus. In collaboration with the Quality, Occupational Health and Safety, and Environment column, a "coronavirus RI&E" was drafted and carried out at the organisational components. Protocols and measures have been developed on the basis of the RIVM recommendations and the regulations of the Dutch government. These were constantly adapted to the current measures. This involved buildingspecific protocols, but also the drafting of a protocol for those working from home. Working from home is supported through targeted information, the provision of resources, workplace research, and support from managers.

#### 2.8.4.2 **Environment**

The 2021 Sustainability Report describes the policy, activities, and results in the area of environment, sustainability, and social responsibility. This annual report outlines the objectives achieved in 2021 for the four environmental themes of the CSR agenda (see Section 2.8.3): Climate-Adaptive Environment, Waste & Circularity, Energy, and Mobility. Table 2.8 summarises the 2021 results. The result is explained per environmental theme.

**Table 2.8** Summary of the environmental results of operational management

Component/Issue	Objective	Achievements in 2021	
Climate-adaptive Environment	To make our own buildings and environment climate-	Wageningen Campus: 69%	
	adaptive:		
	percentage surface area that is suitable for water		
	absorption.		
Waste and Circularity	Reduction relative to 2014	+8%	
	Percentage waste separation	68%	
Energy	2.0% reduction per year	+6.6%	
	Sustainable electricity procurement	100% a)	
	Generating wind energy	54.2 million kWh b)	
Mobility	2.0% reduction in transport-related CO <sub>2</sub> emissions per	-7%	
	year		
	Share of transport in CO <sub>2</sub> footprint	25%	
CO <sub>2</sub> footprint	Emissions: reduction relative to 2010	64%	
	Compensation for footprint <sup>c)</sup> : increase relative to 2010	33%	

<sup>&</sup>lt;sup>a)</sup> Purchase of wind energy with guarantees of origin, registered with CertiQ.

### Climate-adaptive Environment

The Climate-adaptive Environment topic lends itself well to the campus as a Living Lab. WUR has a lot of knowledge about the subject, the theme appeals particularly to students, and the campus can function well as a test site. A plan to carry out a risk analysis in the form of a stress test, to be carried out by students, was drawn up in 2021. The stress test will identify the possible effects of climate change on Wageningen Campus. It will then be possible to determine the areas on which WUR should focus — for example through additional water capture or planting trees — in order to minimise risks. This is followed by the definition of a set of Critical Performance Indicators (KPIs) and associated targets. Until this KPI set is available, we use the KPIs that form part of the GreenMetric benchmark.

A total of 69% of the Wageningen Campus surface will be suitable for water absorption by 2021:

- 4% of the campus surface area is forested or is covered with forest-like vegetation
- 27% of the campus surface area is covered with landscaped vegetation
- 38% of the surface area (excluding wooded areas and planted vegetation) is suited for water absorption.

# Circularity and waste

The vision for circularity adopted in 2020 marked the transition for WUR from a waste policy to a circular economy policy. In line with the Dutch government's circular economy policy, by 2030, WUR aims to halve the use of abiotic and other raw materials prior in relation to 2014 figures. This will not only reduce WUR's consumption of raw materials, it will also reduce our volume of waste. This will have an impact on procurement: circularity strategies will start to be applied in new contracts with suppliers wherever possible. An innovative tender for Material Flow Management was carried out in 2021, in which WUR searched for new partners who look beyond waste management and are experts in the field of circularity.

WUR has three main waste streams: business waste, paper and hazardous waste. The volume of waste for each waste stream that is removed and how it is processed is known for virtually all locations in the Netherlands. The total waste stream decreased by 751 metric tonnes in 2021 or 25% compared to the previous year (see Figure 2.9). The coronavirus also had an effect in 2021. There was less business and paper waste disposed of in the office and education buildings. Due to various construction activities, there was more construction and demolition waste. The amount of waste from research activities (including hazardous waste) remained at a similar level. The waste separation percentage was 68%.

 $<sup>^{\</sup>mbox{\scriptsize b)}}$  This is 136% of the electricity consumption of WUR.

c) Calculation of the CO<sub>2</sub> emissions avoided by generating renewable energy.



Figure 2.9 Amount of waste produced in tonnes, 2014-2021

# Energy

The number of solar panels on Wageningen Campus buildings and on roofs and fields at locations in Lelystad was increased in 2021. By the end of the year, over 16,000 panels were installed at the various locations, generating 3.3 million kWh of energy. Figure 2.10 shows that electricity generated by solar panels has increased sixfold since 2018. The construction of the ATES induction loop on Wageningen Campus has now been completed and work has begun on connecting the buildings. This process will take several years and will eventually lead to a drastic reduction in gas consumption.

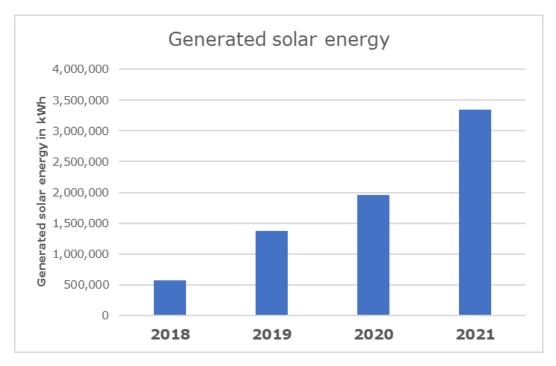


Figure 2.10 Generated solar power (kWh), 2018-2021

The WUR 2050 Energy Transition outline was adopted at the end of 2021. The outline is a refinement of the EnergieVisie 2030 and describes what WUR's energy goals are and how we are going to achieve them. The key is to achieve an energy savings of 72% compared to 2005, to phase out natural gas, and to continuously focus on sustainable generation by 2050. Until then, intermediate targets are set every five years.

2021 was the first year after the end of the Multi-year Agreement for Energy (MJA-3) for universities. In line with the Hootskooltschets Energietransitie, a report on the energy consumption of all buildings used by WUR has been issued since 2021, with the exception of rental to third parties and student accommodation. This scope change is illustrated in the tables below: Table 2.9 shows the development of energy consumption within the MYA-3 scope and Table 2.10 shows the development of energy consumption of the new scope. For this new scope, 6.6% more energy was used in 2021 than in 2020. In total, energy consumption was reduced in 2021, 39% less than 2005. This includes corrections for climate influence.

The high energy consumption of 2021 is mainly due to a relatively cold start of the year. The commissioning of Aurora also played a major role in the increased electricity consumption. Finally, the increase is partly due to adjustments in various buildings as a result of the coronavirus pandemic; for example, the need for additional ventilation for health reasons and the heating which, due to the lower occupancy rate in some buildings, was actually higher.

**Table 2.9** MJA-scope energy consumption

Energy consumption	Base year 2005	2015	2020	2021
Electricity (kWh)	59,581,768	55,660,591	46,990,737	46,806,960
Natural gas (Nm³)	11,031,812	6,503,170	5,020,796	5,247,715
Primary energy (GJ)	886,033	706,771	581,825	587,353
Electricity and natural gas (MWh)	156,551	112,823	91,124	92,934
CO <sub>2</sub> (tonnes)	53,598	11,650	8,994	9,401
CO <sub>2</sub> as a percentage of 2005	100	22	17	18
Energy consumption as % of 2005 (% MWh)	100	72	58	61

**Table 2.10** New scope energy consumption

Energy consumption	Base year 2005	2015	2020	2021
Electricity (kWh)	66,019,426	61,674,576	52,072,490	56,123,986
Natural gas (Nm³)	12,828,768	7,562,462	5,826,025	6,141,043
Primary energy (GJ)	1,000,205	794,423	653,046	699,480
Electricity and natural gas (MWh)	178,784	128,149	103,283	110,104
CO <sub>2</sub> (tonnes)	23,972	13,547	10,437	11,001
CO <sub>2</sub> as a percentage of 2005	100	20	16	16
Energy consumption as % of 2005 (% MWh)	100	72	58	61
Annual energy reduction (% MWh)				Increase 6.6

### Sustainable Mobility

The 2030 Mobility Vision sets out the policy for sustainable (transport) mobility. This vision along with its implementation agenda was launched in 2019. The focus is on stimulating public transport for business trips in the Netherlands and Europe, promoting cycling when commuting, and reducing the use of fossil fuels involved in transport. The coronavirus pandemic has created momentum for more sustainable travel and work behaviour. We would like to take advantage of this so that working from home, online meetings, and travelling only when necessary become the new normal.

The coronavirus pandemic had an impact on the intended actions of the implementation agenda for sustainable mobility. International travel was not possible for a large part of the year, and as people were mostly working at home and partially studying online, there was less traffic to work and study places. The number of business trips within the Netherlands did increase again compared to 2020. Due to changes in tax regulations, the commuting compensation schemes were adjusted in 2021. A working from home allowance was introduced and, following the collective labour agreement negotiations, a full reimbursement of public transport up to 100 km (one way) has been provided since September. Work also continued on the "Mobility as a Service" concept through the use of

electric car-sharing vehicles for business trips and the development of plans for creating shared bicycle hubs on Wageningen Campus.

The aim of the mobility vision is to reduce the CO<sub>2</sub> emissions of all WUR transport by an annual minimum of 2%. Due to the coronavirus pandemic, these emissions were significantly lower in 2021. Transport emissions in CO<sub>2</sub> equivalents amounted to 7.5 metric ktonnes in 2021 (8.1 metric ktonnes in 2020; 19.4 metric ktonnes in 2019). This equates to a 25% share of the total calculated CO<sub>2</sub> emissions. CO<sub>2</sub> emissions for mobility were 7% lower than in 2020. Compared to the "pre-coronavirus" period, there is an average reduction of 61%.

### CO2 footprint

Each year, WUR calculates its CO2 footprint in accordance with the ISO 14064-1, based on the Greenhouse Gas Protocol. The footprint provides insight into the direct and indirect emissions of greenhouse gases. Mapping out the emissions provides WUR with insight into what can be done to reduce and compensate for emissions. Figure 2.11 provides an overview of the CO2 footprints calculated for recent years.

The total CO<sub>2</sub> footprint will be 29.5 metric ktonnes of CO<sub>2</sub> in 2021. As such, CO<sub>2</sub> emissions decreased by 64% in comparison to the reference year 2010. When compared to 2020, CO<sub>2</sub> emissions decreased (-3%; 0.9 metric ktonnes CO<sub>2</sub>). Figure 2.11 shows the extent to which the sources of emissions contributed to CO<sub>2</sub> in 2021. The major sources are the buildings (especially natural gas), air travel, commuting, and agricultural lands. The impact of the coronavirus pandemic is considerable. This is reflected in the CO<sub>2</sub> emissions of transport movements, which were drastically lower than in previous years. WUR compensates for its CO2 emissions by generating its own wind and solar energy, through thermal energy storage (TES) systems at Wageningen Campus. Expressed in terms of CO2, this halted the emission of 34.5 metric ktonnes of CO<sub>2</sub>.

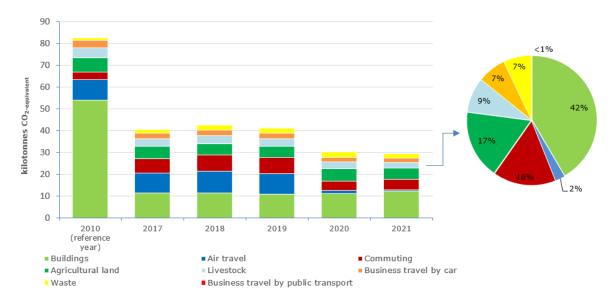


Figure 2.11 The CO<sub>2</sub> emissions in metric ktonnes, 2017-2021 with the reference year 2010

#### 2.8.5 Procurement policy and supply chain responsibility

WUR complies with all relevant laws and regulations in the area of procurement and adheres to the principles of proportionality, objectivity, non-discrimination and transparency. In order to responsibly carry out our procurement, the integrity of the purchasers must be beyond repute. For this purpose, the NEVI Code of Conduct used as the foundation. This code of conduct respects the regulations of the United Nations on human rights and the rights of children. This code serves as a test for assessing the behaviour of purchasers. The most recent General Government Terms and Conditions for Public Service Contracts (ARVODI), General Government Purchasing Conditions (ARIV), and the Uniform

Administrative Conditions for the Execution of Works and Technical Installations (UAV) are, in principle, applicable to all service contracts and outsourced work projects.

In addition to the existing laws and regulations, WUR also upholds its own procurement policy. The objective of this is to ensure that all controllable expenditures take place lawfully, efficiently and effectively, in accordance with the core values. The policies and procedures for procurement are determined by the Executive Board. The sustainability criteria of the Dutch government, as published on mvicriteria.nl, are applied as much as possible. Additional sustainability criteria, including the International Social Criteria (ISC), are considered and upheld for each contract, where possible.

WUR continues to fulfil a pioneering role in the area of sustainability and corporate social responsibility (CSR). In our procurement policy, we put pressure on chains to work on a transparent, sustainable and circular basis, free of modern slavery. The results are discussed regularly with the directors of operational management and the responsible member of the Executive Board. The specific steps initiated in 2021 included exploring the possibilities for rewarding suppliers who conduct social business according to the social entrepreneurship performance ladder and developing a vision for circular procurement as part of the overall organisational goals in the area of circular operational management.

No complaints were received in 2021. More information about the activities and results of the procurement policy in relation to sustainability can be found in the 2021 Sustainability Report.

### 2.9 Compliance

#### 2.9.1 Governance

Wageningen University (WU) and the Wageningen Research Foundation (WR) work together as a public and private legal entity respectively under the Wageningen University & Research (WUR) framework of partnership. Administratively, this collaboration was formed by a personal union. The Executive Boards of WU and WR consist of the same people. This is intended to guarantee maximum administrative unity between the university and the research institutes, housed in the WR Foundation. The Executive Boards and Supervisory Boards of WU and WR are also the Executive Board and Supervisory Board of WUR.

The Executive Board is responsible for the administration of the university and the research institutes and is accountable to the Supervisory Board. The Executive Board receives advice from the Board of Directors, in which the five science groups are represented by their managing directors.

The participational structure is an important partner in policy formation for the Executive Board and the managing directors of the organisational units. Each sciences group has a joint works council for employees of WU and WR who work within the sciences groups. Additionally, there are separate works councils for Wageningen Marine Research, RIKILT, Corporate Staff, and Facilities and Services. From these works councils, a Central Works Council (COR) has been formed for which members are elected by and from among the members of the works councils. The Student Council (SC) and the Student Staff Council (SSC) are participational bodies of the university. The SSC consists of members of the Central Works Council, supplemented by two directly elected employees, two directly elected PhD candidates, and members of the SC. Students and staff have an equal number of votes in the SSC. The COR and SSC together make up the WUR Council. The consultation meetings between the Executive Board and the central participational body take place in the WUR Council and the SC. However, the WUR Council does not have any authority, as this remains with the COR and SSC.

WUR strives to ensure complete transparency regarding the governance of the organisation, behaviour, and mutual rights and obligations. The general principles of good governance are set out in the University Governance Code as applied to Wageningen University & Research, effective 2020. The code is composed of the "Code of good governance universities" and supplemented by the provisions of the Dutch corporate governance code (NGCG) 2016 that are relevant to Wageningen Research. In the Code, WUR makes clear how it fulfils its mission and the room for manoeuvre that the law offers in the area of governance. There are nine central principles in the Code, on the basis of which WUR's Executive Board and Supervisory Board member implement good governance. This Annual Report includes a report on the compliance with this code. If specific points of the Code are not complied with, the Executive Board and the Supervisory Board shall explain why the choice was made not to comply with the Code. An arbitration procedure system between the Executive Board and the Supervisory Board was established in 2021 based on principle 5.15 of the Code. There is one partial finding remaining in accordance with the Code. Principle 8.3 of the Code states that the Executive Board shall draw up guidelines for entering into contractual alliances and for dealing with such alliances. These guidelines at least contain arrangements on the accountability of the Executive Board to the Supervisory Board for contractual partnerships. Due to circumstances, these guidelines will be drawn up in 2022 and should be viewed in conjunction with principle 8.4 of the Code, for which the Executive Board drew up the Regulations for the Establishment of WUR Spin-off Companies in 2020. The Administration and Management Regulations of WU and WR translate the method of administration, management, and organisation of WU and WR, based on frameworks as specified in the Higher Education and Research Act (WHW) and the WR Statutes.

### 2.9.2 Independence

The independence of scientific research is an important topic. At a time when universities are cooperating more than in the past with governments, NGOs, and the business community, guaranteeing this independence is even more important. WUR has various regulations and procedures in place to guarantee the independence of research, such as:

- **Dutch Code of Conduct for Scientific Integrity**
- Wageningen University & Research Integrity Code
- General terms and conditions
- The Anti-Corruption Code
- Regulations for secondary activities
- **Guidelines for Appointing Professors**
- Wageningen University & Research Whistle-Blower's Regulations

Anyone who has complaints about the independent operation of researchers at WUR can address the WUR Executive Board. The complaint will then be examined by the Scientific Integrity Committee. Complaints will be assessed on the basis of the Scientific Integrity Complaints Procedure. See also Section 2.7.9 (Integrity).

In addition to these WUR guidelines, peer reviews are conducted, there is legal supervision, and national and international on-site reviews are carried out periodically. These official inspections to assess the quality of programmes and research groups are carried out by both official bodies and independent external experts.

Conducting independent research and publishing the research results is the core activity of WUR. Conclusions on all research are reported on the basis of facts that were proved and analysed in the research. Commissioners and/or stakeholders have no influence on this. The report always mentions the funding providers. More information can be found on our website under *Positioning onderzoek* (research positioning).

WUR not only carries out research independently, but also collaborates with businesses, governments, other knowledge institutes, citizens, and social organisations. They put knowledge into practice and challenge us to make science-based changes possible. This approach is an important aspect of our strategic plan Finding Answers Together.

Special and endowed chairs are funded by external parties. Standard agreements are in place to ensure independence from external funding providers. The full list of these chairs is published on our website.

According to these regulations, employees are required to ask their employer for permission in advance to carry out side activities. It is important both for WUR and for potential clients to have insight into any secondary work activities in order to prevent a possible conflict of interest. The approved side activities can be found at we@wur.

Even with this strong focus on the principle of independence and the associated assurances and control measures that were put in place, there are still situations in which we are called to account regarding our independence. Openness, discussion, and self-reflection are a great asset in a scientific environment. Input from our employees, students, clients, and stakeholders is important here. WUR can and must be called to account for its independence, and we also want to learn as an organisation in this respect: both with regard to actual breaches of our independence and imperfections in the communication about this.

### 2.9.3 Risk management

### 2.9.3.1 Risk profile and risk appetite

The coronavirus pandemic that WUR faced in 2020 and 2021 led to an increase in the risk profile of the organisation. The consequences of the pandemic in 2021 for the organisation's operations and the measures taken to combat its effects are discussed in detail in this annual report in the coronavirus section (3.2.1). However, the pandemic will also have an impact on the organisation in the longer term, such as how working from home is handled, the further development of blended learning, and the reduction of travel movements as a result of positive experiences with online meetings. The organisation will also need to pay attention to the consequences of the crisis for students and PhD candidates in the coming years. It is now clear that the government has made additional funds available to deal with these consequences.

At the local management level, WU, like all universities, has experienced a cautious attitude in recent years with regard to entering into new long-term financial commitments in the face of the additional resources that have become available. This caution has contributed to higher results in recent years. The Executive Board is of the opinion that a more proactive attitude is desirable and will take measures to ensure that the actual implementation of the required upscaling is necessary. To this end, a number of measures have been taken by the Executive Board to ensure that the available resources are used to the maximum for good education and research and to address the high workload. One of these measures is the conscious allocation of additional funds within the organisation rather than the expected income, with the knowledge that these additional resources would lead to additional costs if there are any delays. This increases the risk profile. This is a well-considered decision, since WU has sufficient internal capital to offset any temporary shortages. WU is therefore prepared to take on more market risk. Risk tolerance is low in the areas of compliance and image.

Traditionally, WR largely derived its stability from the Ministry of Agriculture, Nature and Food Quality (LNV) funding. There was a decline of available funding from the Ministry of Agriculture, Nature and Food Quality (LNV) until 2017. In 2018, this trend has reversed and LNV funding has increased significantly in the following years. The alignment of Wageningen Research's capacity with the revised financial resources takes time. In times when financial resources are significantly increased, such as in the last three years, it is difficult to scale-up in a timely fashion to meet the capacity required to conduct the requested research. In the event of a future reduction in the large-scale LNV mandate, the reverse situation will manifest itself; it will take time to adjust capacity downwards in the event of a major reduction. For these reasons, Wageningen Research is searching for new research propositions ("markets") in order to be less reliant on LNV funding. Wageningen Research divisions take risks in order to develop new markets, because the scope and potential of the available resources in these markets are uncertain. The Executive Board considers this acceptable, provided that the research propositions fit within the business model of Wageningen Research, in which an innovative research portfolio can be built that covers its own costs on the basis of a mix of LNV funding, contract research, and grant turnover. Part of the additional turnover is realised in joint ventures, involving complex issues of taxation, accountability, and tendering. The risk profile of the general result development is also increasing, because the sensitivity of activities to the economic climate has increased and there are fewer stabilising factors in the financial system. Wageningen Research has sufficient internal capital to offset any temporary shortcomings and accepts the increased risk profile,

as long as solvency stays above the acceptable standard of 35%. WR is therefore willing to take more market risks, risk tolerance is low in the areas of compliance and image.

### 2.9.3.2 Risks of strategic objectives

The WUR 2019-2022 Strategic Plan was initiated in 2019. The plan outlines how the organisation wants to answer the social issues in its domain. To maintain its global position as a top knowledge institute, the organisation will need to change. In the strategic plan, twelve Change Performance Indicators (CPIs) are defined to measure the progress of this change process. The twelve CPIs are further operationalised and quantified as part of the implementation process. The Executive Board uses these indictors to monitor the strategy's progress at the highest level.

The long-term financial forecast, including relevant internal and external developments and uncertainties, will be included in the multi-year projections for WU and WR, and will be shared with the Supervisory Board. These give an indication of the risks associated with the growth in student numbers, developments in research turnover, and support decisions for large investments, such as the third modular education building as well as the progress of the Strategic Plan. The results for WU are shared in the Continuity section.

The main strategic risks facing the organisational units are discussed in the quarterly meetings between the managing directors and the Executive Board. The Executive Board discusses risks with the Supervisory Board

### 2.9.3.3 Operational and management risks

In order to implement and monitor intended policies, WUR has a planning and control cycle. This includes:

- annual preparation of a framework letter (multi-year framework to define the tasks for upcoming financial year);
- annual budget statement for each unit;
- quarterly reports on the balance and the development of results and the risks;
- monthly monitoring of financial and liquidity developments per organisational unit and department (Early Warning System);
- the Budget Allocation and Project System (BAPS) was implemented for preparing the LNV project estimates. These are used to inform cluster leaders and financial departments about the depletion of the LNV project budgets; additional attention was given to managing the position of "unfinished projects" in the second half of 2021, as LNV allows only limited annual underspending;
- recalculation of the cost per business unit. Deviations from previous years are being reviewed. Deviations from the previous year were clarified or explained.

The quarterly reports and the budget are a standard, integral component of the agenda in the discussions between the Executive Board and the management councils. These are organised four times each year.

Since the amount of liquidity is considerable, the policy requires regarding the spending of temporary liquidity surpluses. The Treasury regulations are the applicable framework here.

Within WUR, an interest rate committee convenes once every quarter under the direction of a member of the Executive Board.

In 2021, many efforts were made to improve the management of financial processes and internal control. WUR implemented BRIX in 2020 and expanded this system in 2021. This system uses data analysis to detect and investigate unusual transactions in the business management systems. By quickly detecting and resolving errors and deviations in business operations, the quality of business operations and their reporting improves. 28 controls were developed and put into operation in 2021. The implementation was carried out in close consultation with the decentralised organisation, thus ensuring maximum support for this project. In the first phase of the project, control mechanisms were mainly set up in the financial domain; the possibility of rolling them out to other domains is being

looked at. BRIX will be expanded with e-mail facilities in 2022, enabling fast and unambiguous communication with stakeholders.

The internal control of the grant projects continues to demand a lot of attention from the organisation. To meet the increasingly stringent requirements of funding providers, a great deal of investment is being made in improving project control through training programmes, but also by recruiting new employees with a higher level of education. Furthermore, under the direction of the Corporate Staff, efforts are carried out on the further standardisation of the instruments for project management and the implementation of the internal control of the projects has been centralised. Improvements to internal invoicing of facilities and services were undertaken in 2021, so that these costs can be accounted for in project accounts in a uniform and verifiable manner. The working agreements with the auditor on project accountability were also updated.

The internal management of financial processes and internal control fall under the responsibility of the Financial Accounting & Internal Control department. This department not only focuses on the drafting of guidelines, but also independently monitors compliance with these guidelines by the decentralised units.

Information security, specifically cybersecurity, was high on WUR's agenda again this year. The annual risk assessment which is carried out in the sector by SURF, and at the national level by the National Cyber Security Centre, as well as the internal risk assessment with sciences groups, indicated that the threat assessment has once again increased in various respects. The number of incidents involving phishing attacks in particular has increased, and the sophistication with which they are being carried out indicates that cybercriminals are becoming more knowledgeable about the organisations they attack. Distance learning and working from home make institutions increasingly dependent on a number of large cloud providers, and social control is also decreasing internally. In order to further improve risk management in this area as well, the information manager was added to the Risk Committee.

The rewritten information security policy has made it clear that responsibility for information (or data) lies with the sciences groups, departments, and employees. An increasingly clear separation has been made between implementation, policy/advice, and assessment. The core of the policy is that those responsible take protective measures on the basis of a risk assessment, which are then often applied with the assistance of the IT department. Based on the advice of the Risk Committee, a statement about the risk appetite was made by the Executive Board. This is then reflected in the (mandatory) process of data classification.

The consultation of the directors of operations of all sciences groups discusses the various aspects at least once every quarter on the basis of the quarterly report on information security and the internal and external audits in this area. The administrative agreements made in the sector about the ambition level (maturity) and periodic testing by an external auditor are fully in line with the target level previously established within WUR. The sectoral collaboration between the universities, mostly through SURF, has, in our view, a strong positive effect on WUR's resilience.

In addition to previously introduced generic measures such as WURPasscode (2 Factor Authentication) and creating offline backups, WUR was the first university institution to be connected to SURFsoc by the end of March 2021. In relation to this, a new Security Services team has been set up within the IT department, which has not only operational activities but also serves as a centre of expertise for other product teams; see also the update of the IT domain under the Operational management section.

In addition to the above, a lot of work has again been done in collaboration with Corporate Communication & Marketing and the Privacy Officers to raise awareness among employees and students. Through various channels such as intranet, interviews, workshops, and magazines, the longstanding motto "WUR is serious about data" has been systematically put into practice. The information on information security is promoted through various channels. For example, the operational information on information security has been updated and can be found easily on the intranet. Communities were organised and phishing tests conducted, for example, to keep everyone on their

toes. An e-learning game about Information Security & Privacy has been rolled out, which has been promoted extensively throughout WUR.

At WUR, an Architecture Board led by a member of the Executive Board meets regularly to monitor generic ICT design issues on a strategic-tactical level.

Social developments, both in the field of IT security and in our research domain, in conjunction with the open nature of the Campus, result in the risk of emergencies at WUR. WUR also actively participates in the dialogue on "knowledge security" organised by OCW (for universities) and EZ (for TO2 institutions). We also participate in the platform for integrated safety in higher education. Insights from these discussions are translated into WUR policies and processes.

In order to manage these risks when they occur for WUR as an organisation, WUR has an emergency team.

### 2.9.3.4 Tax and legal risks

Tax laws demand a great deal of effort from the organisation. Topics covered in 2021 were the consequences of tax rulings on commuting allowances and other allowances to employees for the WKR and payroll tax. The formalisation of the new agreements with the tax authorities about the pro rata regulations have been ongoing since 2016. Discussions are currently being held with the Dutch Tax and Customs Administration about the principles that WUR should use in determining the VAT to be reclaimed. It is expected that our final returns for the years 2016 to 2020 will be settled by the tax authorities in the first half of 2022. WUR previously based its accounting system on the expected agreement and, since 2016, has prepared its returns on the basis of this methodology. The recent discussion shows that the Dutch Tax and Customs Administration does not fully accept the refund of advance tax payments claimed by WUR. The part of the receivables that has been agreed with the Dutch tax authorities has been incorporated into the 2021 financial statements.

The public procurement legislation and the increased control make high demands on the quality of the purchasing process. On the one hand, this requires the timely identification and tendering of purchases that should be put out to tender on the basis of national or European procurement directives and, on the other hand, this requires careful documentation of the legality of the other purchases. This matter is complex and requires intensive management of the purchasing process. Unlawful procurement produces risks, not only within the procurement process itself, but also in accounting for grants. In recent years, a great deal of attention has been devoted to improving compliance with procurement legislation and residual risks have been reduced.

Two parts of the TO2 funding scheme have been interpreted differently by the Ministry of Agriculture, Nature and Food Quality since 2021 than in the past, which has led to the assumptions used in the past to determine the subsidy being labelled illegal. The first point concerns the accountability of partner funds. LNV has taken a clear stance that the spending and accounting for all funds provided under the TO2 scheme is the direct responsibility of WR and that funds awarded under so-called partner contracts in the past must also pass through WR's profit and loss account and TO2 accounting. Keeping these funds (approximately € 7.5 million per year) out of the profit and loss account is therefore no longer possible. This makes the management of Ministry of Agriculture, Nature and Food Quality funds more complex and risky. WR is currently considering how best to deal with this matter. The Ministry of Agriculture, Nature and Food Quality agreed to continue to account for partner funds in the old way in 2021. The impact of this adjustment on the result is non-existent, but it does have an effect on the presentation of income and expenses and on the control to be exercised over these expenses.

LNV has also indicated that the distinction between NAPRO (funds intended for projects still to be completed) and surplus (funds that have not been spent and for which there is no immediate destination) is not in line with the TO2 scheme. This may result in WR exceeding the norms for surplus in the regulation and having to repay the excess against the balance sheet item created. WR has agreed a two-year period with the Ministry to resolve the consequences of this modified interpretation.

### 2.9.3.5 **Risk Committee**

The Risk Committee met twice in 2021, discussing, among other things, the risks related to international collaborations, the risk assessment of Facilities & Services, the need for cyber security insurance, and the additional employment activities of professors. Because of the increased risks in the IT domain, the information manager was added to the Risk Committee. No new reports of suspected fraud were received in 2021.

The Risk Committee has continued to update the risk management in 2021. In collaboration with the decentralised units, the risk assessment of the main strategic risks was initiated Risk assessment involves the identification, evaluation, and management of risks. This includes determining who is responsible for managing a risk. The risk inventory was started in 2021. The decentralised organisation has indicated that a further deepening of the results achieved is needed. For this purpose, one or more sessions will be held in 2022 supervised by external experts.

### 2.9.3.6 Looking ahead to 2022

The risk associated with a number of elements in WUR's risk profile will increase over the next few years, as a result of the strong growth of the organisation, among other things. This growth needs to happen in a flexible and controlled manner to allow for a timely response to ever-changing exogenous factors, such as availability of government funding and incoming student volume. The limited labour market causes additional risks in this regard. It is more difficult to find qualified employees, which can put pressure on the remuneration structure and the size of the flex staffing. In addition, the increasingly stringent conditions and audits of our most important funding providers and the proliferation of laws and regulations contribute to a higher risk profile. Compliance with laws and regulations and the audits performed by our funding providers sets high standards for the quality of internal business operations. At the same time, society and our own organisation expects the support processes to be as efficient and cost-effective as possible to free up as much funding as possible to be channelled to the primary tasks. At times, these two objectives (more compliance vs. less overhead) are at odds with each other. Therefore, the risk management process must be further developed. As such, it is especially important that risks are detected and discussed by the relevant management transparently and in a timely fashion. To make this possible, the support departments are being developed further.

The key areas for attention for further risk management in 2022 are as follows:

- deepening the risk assessment and risk appetite for the strategic risks;
- further development of BRIX and other IT supportive control mechanisms. Data analysis and automation provide the option to redesign the control of business processes. Continuous monitoring and auditing ensure that processes can be kept track of consistently. WUR aims to invest in the development of these tools and processes, which will make it easier to guarantee the correct performance of business processes. WUR has set up controls for the most vulnerable processes in the financial domain in 2020 and 2021 and will work on expanding them to other processes in 2022. WUR will also examine in 2022 how the information from the audits can be used to improve the processes (continuous improvement);
- strengthening IT control measures. These are focused on being better prepared for the increasing threats in the area of cyber security on the one hand, and on the auditor's recommendations regarding the general IT controls that guarantee the correctness and quality of the information systems on the other;
- strengthening the management of the LNV subsidies, including the top sectors. The introduction of the new subsidy scheme for the TO2 institutes as well as the coordination with the top sectors regarding financial accountability requires central coordination. On a tactical and operational level, the staff departments Corporate Finance and Strategic Accounts will jointly shape the coordination with LNV. This guarantees the coordination of the substantive and financial aspects;
- the changing international political relations require more attention to knowledge security. Knowledge security was included in the internal assessment framework for partnerships in 2021. This framework was discussed with the general managers responsible for its implementation. Internal guidelines for co-operation with China will be extended to other high-risk countries in 2022. A particular risk area is the security requirements relating to the WOT components, which

- can be designated as vital infrastructure/processes in the context of national security and are therefore subject to stricter requirements;
- compliance with the sanctions imposed by the EU following Russia's invasion of Ukraine will be monitored through the internal control measures already in place for compliance with sanctions legislation. WUR complies with the policy of the Dutch government and the European Union regarding collaboration with research institutes in the countries concerned. Within the Universities of the Netherlands, this is translated into decisions that WUR supports;
- strengthening project control by centralising the development of the project control function and by centralising the internal control of projects. Special attention will be paid to collaborative, complex projects, in which WUR acts as the coordinator and is responsible for the execution involving dozens of partners in Europe and elsewhere in the world. The management of these projects requires a lot of effort from the organisation and carries risks if partners do not meet grant conditions, without adequate compensation;
- attention to the cultural aspects, ethics, and knowledge security within the organisation. Organisations in a dynamic environment require an open culture with sufficient, in-built checks and balances. This prevents tunnel vision. For such a culture to exist, it is necessary that management provides space for critical voices and is willing to include independent opinions in the decisionmaking. This requires a firm stance from the controller, among others. The Executive Board believes that the process of checks and balances is generally functioning well, but still considers it important that it receives continuous attention;
- it is very important for the organisation to have access to accurate financial forecasts in order to be able to make the right management decisions and, in turn, to use its resources in the best possible way. The quality of these forecasts will be given additional attention in 2022.

These improvement projects are set up and implemented in close consultation with the financial departments and the operational managers.

### 2.9.4 Remuneration of executives

The remuneration of WUR's executives and members of the Supervisory Board is established in accordance with the standards of the Standard Remuneration Act for Public and Semi-public Sector Senior Officials (WNT). In compliance with Article 1.1 of the WNT, WUR has summarised the remuneration of the Executive Board members and the Supervisory Board members in Tables 2.12, 2.13 and 2.14.

Table 2.11 Classification

202	1 Classification	WU results	Complexity Points
Α.	Average turnover in 2016-2018 (* in €1,000)	361,044	10
В.	Average number of students 2016-2018	10,761	4
C.	Number of education disciplines or sectors	3	5
	Total		19

The maximum remuneration for 2021 is €209,000.

The sectoral regulation does not apply to WR and the maximum remuneration is €209,000.

**Table 2.12** Remuneration for executives

Overvie	w 2021 (amounts in €)	Fresco	Mol	Buchwaldt
A.	Remuneration	209,000	209,000	209,000
	minus additional tax liability for car	-	-	-
A1.	Remuneration minus additional tax liability	209,000	209,000	209,000
В.	Compensation in the event of termination of contract	-	-	-
C.	Personal expenses			
	Representation costs	2,400	2,400	2,400
	Domestic travel costs	8,129	11,248	19,032
	International travel expenses	216	1,502	0
	Other expenses	0	500	0
C1.	Total personal expenditures	10,745	15,650	21,432
D.	Total expenses	219,745	224,650	230,432
Distribu	ition across components <sup>1)</sup>	Fresco	Mol	Buchwaldt
A.	Remuneration minus additional tax liability			
52.2%	WU	109,098	109,098	109,098
47.8%	WR	99,902	99,902	99,902
В.	Compensation in the event of termination of contract			
52.2%	WU			
47.8%	WR			
c.	Personal expenses			
	WU	9,437	13,339	20,220
	WR	1,308	2,311	1,212

<sup>1)</sup> The Executive Board's commitment is 50% for both WU and WR. Due to the maximum amounts set out in the Standard Renumeration Act for Public and Semi-public Sector Senior Officials for charged-on employees, not all costs are charged on to the WR.

Tables 2.13 and 2.14 contain the consolidated information on the remuneration of the governance union of WUR. These tables give the user of the annual accounts required insight into the total cost of the top-level executives and members of the Supervisory Board. This list differs from statutory statements as the legislation requests information by entity. The statutory statements are included in WU and WUR's annual accounts. These are consistent with the consolidated financial statements attached below.

**Table 2.13** Remuneration of executives (amounts in €) The WNT applies to WU. The applicable maximum remuneration for WU for 2021 is €209,000 (general

remuneration limit).

	L.O. Fresco	A.P.J. Mol	L.A.C. Buchwaldt
Job title	President of the	Executive Board	Executive Board
	Executive Board	member	member
Period of employment in 2021	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12
Extent of employment in FTE	1	1	1
(Fictitious) Employment relationship	Yes	Yes	Yes
Remuneration			
Remuneration and taxable expense reimbursements	185,216.24	185,216.12	185,216.12
Remuneration payable in this term	23,783.76	23,783.88	23,783.88
Remuneration	209,000.00	209,000.00	209,000.00
Individual maximum remuneration	209,000.00	209,000.00	209,000.00
-/- unduly paid amount			
Total remuneration	209,000.00	209,000.00	209,000.00
Reason for exceeding the norm and other notes	n/a	n/a	n/a
Data from 2020			
Period of employment in 2020	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12
Scope of employment in FTE	1	1	1
Remuneration			
Remuneration	179,077.92	179,081.28	179,081.28
Provisions for long-term remuneration	21,922.08	21,918.72	21,918.72
Total remuneration	201,000.00	201,000.00	201,000.00
Individual maximum remuneration	201,000.00	201,000.00	201,000.00

Within our organisation, those who are identified as top level executives with an employment contract do not have an employment contract with any other semi-public (WNT) institution(s) as managing top level executives (who entered employment from 1 January 2018).

**Table 2.14** Remuneration for supervisors (amounts in €, excluding VAT)

	J.R.V.A Dijsselbloem <sup>1)</sup>	M.A. Verhoef	T Klimp	E. Dijkgraaf <sup>2)</sup>	B. Jansen <sup>3)</sup>	P.M. P.M. Herder
Job title	Chair	Member	Member	Member	Member	Member
Period of employment in 2021	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12	1-3 to 31-12	1-3 to 31-12	1-1 to 19-1
Remuneration						
Remuneration	17,745.00	11,829.96	23,097.36	9,811.45	9,858.45	575.49
Individual maximum remuneration	31,350.00	20,900.00	20,900.00	17,521.64	17,521.64	1,087.95
Reason for exceeding the norm and other notes	n/a	n/a	One-off subsequent payment 2020 4)	n/a	n/a	n/a
Payment on termination of employment	n/a	n/a		n/a	n/a	n/a
President of the Executive Board	Chair	Member	Member	Member	Member	Member
Period of employment in 2021	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12	1-3 to 31-12	1-3 to 31-12	1-1 to 19-1
Data from 2020						
Duration of appointment in 2020	1-1 to 31-12	1-1 to 31-12	1-1 to 31-12			1-2 to 31-12
Remuneration						
Remuneration	16,900.00	11,017.40	0.00			10,328.45
Individual maximum remuneration	30,150.00	20,100.00	20,100.00			18,447.54

<sup>&</sup>lt;sup>1)</sup> Remuneration to Dijsselbloem Consultancy.

<sup>&</sup>lt;sup>2)</sup> Remuneration to Dijkgraaf Strategisch Advies BV.

<sup>&</sup>lt;sup>3)</sup> Remuneration to Wellant BV.

<sup>4)</sup> There is an optical excess due to a subsequent payment of the remuneration for 2020 for which the right arose in 2020 and which is attributed to 2020 for the testing of the maximum individual remuneration.

### 2.9.5 Secondary employment activities of Supervisory Board members and Executive Board members

### 2.9.5.1 Relevant side activities as of 31 December 2021 - Supervisory Board

# Mr J.R.V.A. Dijsselbloem (1966) (Chair of the Supervisory Board, effective 1 April 2019) Principal appointment: chair of the Dutch Safety Board

Appointed 1 April 2019, end of current term: 1 April 2023

Committees: Appointments Committee (chair), Audit Committee, and Education and Research Committee

- Chair of the Vereniging Natuurmonumenten
- Chair of the Nationaal Groeifonds (national growth fund) Committee

# Prof. E. Dijkgraaf (1970)

# Principal appointment: Professor of Empirical Economics of the Public Sector, Erasmus University Rotterdam.

Appointed as of 1 April 2021, end of current term: 1 March 2025

Report of the Education and Research Committee

Relevant side activities:

- Chair of the Executive Board of Stewardship Ventures
- Member of the Advisory Board of the Stewardship Foundation
- Member of the board of Noaber Foundation
- Member of the board of Eleven Floawers Foundation
- Owner of Dijkgraaf Strategisch Advies BV.
- Member of the Advisory Board of Van Westreenen
- Member of the Supervisory Board of Acture
- Member of the Supervisory Board of SRK Groep
- Non-executive board member of De Vries en Verburg
- Chair of the Supervisory Board of Lelie Zorggroep

# Mr B.C. Jansen (1959)

# Principal appointment<sup>10</sup>: -

Appointed as of 1 April 2021, end of current term: 1 March 2025

Committees: Audit Committee

Relevant side activities:

- · Chair of the Supervisory Board of Koninklijke Zeelandia Groep B.V.
- Member of the Supervisory Board of Stichting Topconsortium Kennis- en Innovatie Biobased Economy (TKI-BBE)

# Ms T. Klimp (1972)

# Principal appointment<sup>11</sup>: CFO at Vion Food Group

Appointed 1 September 2018, end of current term: 1 September 2022 Committees: Audit Committee (chair), Appointments Committee

# Ms M.A. Verhoef (1959)

# **Principal appointment: Levvel Executive Board**

Appointed 1 January 2017, end of current term: 1 January 2021

Committees: Appointment Committee and Education and Research Committee (chair)

- Member of the Supervisory Board of Nederlands Jeugdinstituut
- Chair of the Associatie voor Jeugd
- · Member of the Audit Committee of the Ministry of Social Affairs and Employment
- Member of the Audit Committee of Social Security Bank
- Member of the Board of Samenwerkingsverband Effectieve Jeugdhulp Nederland (SEJN)

An up-to-date overview of the additional work activities of the members of the Supervisory Board can be found on the website.

 $<sup>^{10}</sup>$  Mr Jansen was chair and CEO of Avebe until 30 September 2021.

 $<sup>^{\</sup>rm 11}$  Ms Klimp was SVP Strategy at Corbion N.V. until 31 October 2021.

### 2.9.5.2 Relevant side activities as of 31 December 2021 - Executive Board

# Prof. L.O. Prof. L.O. Fresco (1952)

Appointed from 1 July 2014 until 1 July 2018

Reappointed as of 1 July 2018, end of current term: 1 July 2022

- · Editorial staff member of De Gids
- NRC column (every 14 days, less during the summer months)
- Member or honorary member of international academies incl. KNAW
- Member of the Ambassador's Council of the National Holocaust Museum in development
- Member of the National Opera and Ballet foundation Supervisory Board
- Syngenta, member of the Board of Directors (non-executive member of the one tier board)
- Trilateral commission
- Member of the World Food Prize Advisory Board (USA)
- Member of the Advisory Board of Artis
- UNL: Member of the steering committee Strategy, Public Affairs & Governance
- Wageningen Ambassadors
- Member of the Advisory Committee of Regio Deal Brainport Eindhoven (2018 2021)
- Chair of 4TU (since October 2019)
- Member of the Management Advisory Group for the Director-General of the Food and Agri culture Organization of the United Nations (FAO)
- Vice-chair of the scientific guidance committee in preparation for the World Summit on Food Systems (September 2021)
- Member of the WHO emergency committee on health and sustainability

# Prof. A.P.J. Prof. A.P.J. Mol (1960)

# Vice-President of the Executive Board and Rector Magnificus of Wageningen University

Appointed from 28 May 2015 until 1 June 2019.

Reappointed as of 1 July 2019, end of current term: 1 June 2023

- Editor Book series New Horizons Environmental Politics (Edward Elgar)
- Member Editorial Board Journal of:
  - Environmental Sociology
  - Current Opinion in Environmental Sustainability
  - Environment and Planning C
  - Nature & Culture
  - Open Environmental Sciences
  - The International Journal of Public Policy
  - **Environmental Development**
- Member of the Stichting 45 Advisory Board
- Member of the Supervisory Board of Wetsus
- UNL:
  - Member of Rectorencollege VSNU
  - Member of the Education and Research Steering Committee
- President Association of European Life Sciences Universities ICA
- Member of the board of 4TU Federation, member of the Education Committee, chair of the Research Committee
- Member of the Board of Euro League of the Life Sciences ELLS
- Member of the Supervisory Board of IHE Delft Insitute for Water Education
- Chair of the Guidance Committee of the Netherlands Environmental Assessment Agency
- Member of Regieteam Groenpact 2.0, a structural consultation between the Ministry of Agriculture, Nature and Food Quality, employers in the green sector, and green education
- Member of the board of the OnePlanet Research Centre Foundation
- Member of the TO2 Federatie Board
- Member of the European Bioeconomy University Board
- Chair of the Board of EWUU Alliantie (Eindhoven University of Technology, Wageningen University & Research, Utrecht University, University Medical Centre Utrecht)
- Chair of the Steering Committee Educational reform with ICT acceleration plan

## Mr L.A.C. Buchwaldt, MBA (1961)

# Portfolio of Finance, Business & Services

Appointed from 1 September 2017 to 1 September 2021

Reappointed as of 1 September 2021, end of current term: 1 September 2025

- Member of Member's Council Coöperatie SURF
- Member of the steering committee Operational Management and Finance UNL
- Member of the DUWO Advisory Board (student housing)
- Member of the Supervisory Committee of the EFRO 2014-2020 Operational Programme, Eastern Netherlands region on behalf of WU, RUN, and UT
- Member of the Economic Board Regio FoodValley
- Member of the Economic Board Arnhem-Nijmegen
- Chair of the Academic Transfer Supervisory Board
- Member of the jury for the Agrarische Ondernemer van het Jaar (Agricultural entrepreneur of the year)
- Member of the Board of the FoodValley.nl foundation
- Chair of the Advisory Council of the Belmonte Arboretum Foundation
- Member of the Board of ACCEZ (ACCelerating Circular Economy Zuid-Holland)
- Member of the Administrative Steering Committee of Th!nk East Netherlands

### 2.10 Economic performance indicators

### 2.10.1 Direct economic value

WUR is a non-profit organisation. Positive returns are added to the organisation's reserves. The table below shows the main sources of turnover for Wageningen University & Research, divided between its two legal entities: Wageningen University and Wageningen Research Foundation. More details and a substantiation of these key figures are described in the annual financial report (Chapter 3).

**Table 2.15** WUR key figures (amounts in € 1 million)

	2019	2020	2021
Turnover from research Wageningen Research (WR)			
Contract research	98.8	88.3	96.5
Top sectors (including LNV part)	60.4	63.5	71.3
Matching market and NWO	27.2	26.6	29.3
LNV (excl. top sectors, incl. PSR, SRT) & NVWA programme	116.8	127.5	136.4
research			
Wageningen University turnover			
Turnover from direct and indirect government funding	298.8	314.8	341.9
Turnover from contract funding	64.1	59.3	68.0
Solvency as percentage of total assets			
Wageningen Research	57.7%	60.6%	62.4%
Wageningen University	52.3%	53.1%	53.2%

### 2.10.1.1 **Pensions**

The pension scheme for the whole of WUR was (compulsorily) placed with ABP. Pension accumulation takes place on the basis of the average earnings system (middelloonsysteem). The current coverage ratio increased from 93.2% to 110.2% in 2021. The policy coverage (the average of the current coverage rates over the last twelve months) increased from 87.6% to 102.8% in 2021. The ABP can index the pensions again if the policy coverage ratio is higher than 110%. It is possible that this limit will be adjusted to 105% in 2022. There was no obligation to make up any shortfall as a result of ABP's coverage ratio. This is why no provisions have been made.

### 2.10.1.2 **Government funding**

WUR receives financial support from the government. The extent of these contributions in 2021 is shown in Table 2.16.

**Table 2.16** Overview of the government's financial contribution to WUR (\*  $\in$  1 million)

Legal entity	Type of funding	Income	Government contribution
Wageningen University	Direct Government Funding	269.8	269.8
	Indirect government funding and research	104.5	38.6
	funding, including targeted subsidies		
	Tuition and course fees	35.7	0.0
	Other income	21.4	1.3
Wageningen Research	Ministries of LNV and NVWA research	181.6	80.1
	programmes		
	Contract research incl. NWO	151.9	15.6
	Other income	38.5	0.0
Total		803.5	405.4

Funding from the central government consists of funding from which it does not directly benefit and that it does not directly control. This includes government funding for education and research of Wageningen University, the contribution from the LNV for knowledge base and top sector research, funding via contract research (NWO), and the TKI supplement for top sectors and other subsidies. LNV applied the TO2 grant conditions to programme research (PSR and SRT), while retaining control over the use of these funds.

### 2.11 Wageningen University Continuity Section

In accordance with the guidelines set out by the Ministry of Education, Culture and Science (OCW), the Continuity Section is part of Wageningen University's Annual Report. For the financial outlook for Wageningen Research in 2022, refer to the annual financial report of Wageningen Research.

**Table 2.17** Key figures for WU, forecast for 2022-2026 (excluding Expat Centre, price index 2021)

	2021	2022	2023	2024	2025	2026
Direct government funding (in € millions)	269.8	290.9	279.0	281.9	284.8	287.8
Tuition fees (in € millions)	35.7	31.7	41.5	41.7	41.8	41.9
Direct government funding and research	104.5	107.5	107.5	107.5	107.5	107.5
funding (including targeted subsidies) (in ${\ensuremath{\in}}$						
millions)						
Housing ratio <sup>12</sup>	9.2	9.5	10.2	10.5	10.3	10.6
Investments	67.3	32.4	54.2	43.4	45.8	34.7
Average number of employees (FTE) and	3,527	3,673	3,668	3,664	3,665	3,678
allocation						
Support staff (%)	5.3	5.3	5.3	5.3	5.3	5.3
Overhead staff (%)	17.2	17.2	17.2	17.2	17.2	17.2
Primary staff (%)	77.5	77.5	77.5	77.5	77.5	77.5
Number of enrolled BSc and MSc students	13,153	13,246	13,467	13,558	13,616	13,692
Number of PhD degrees obtained	294	285	289	294	304	314
Net result excl. sale of assets (in € millions)	11.6	-4.0	-7.1	-6.0	-2.6	-3.6
Net result incl. sale of assets (in € millions)	11.6	-4.0	0.9	-3.7	-2.9	9.3
WU ASSETS						
Capital invested in fixed assets (in € millions)	319.9	317.8	345.7	360.3	372.0	366.0
Internal capital (in € millions)	244.1	240.1	241.0	237.3	234.4	243.7
Total liabilities (in € millions)	458.5	451.6	452.6	448.9	445.9	455.2
Solvency ratio 1 (%) <sup>13</sup>	53.2	53.0	53.1	52.7	52.4	53.4
Solvency ratio 2 (%) <sup>14</sup>	55.8	55.3	55.4	55.1	54.8	55.7
WU LIQUIDITY						
Liquid assets (in € millions)	83.3	91.3	64.4	51.1	36.5	51.7
Current ratio	0.70	0.67	0.53	0.44	0.37	0.45

WU's current ratio is lower than the Ministry of Education, Culture and Science's signalling value (< 0.75). The low current ratio is caused by high advances from providers of finance. The balance of liquid assets is more than sufficient to meet short-term obligations. In the unlikely event that WU's advance payments would cease, WU has sufficient possibilities to attract funding.

### 2.11.1 Principles of the financial policy

WU enters the plan period with a budgeted negative operating result of -€4.0 million. This deficit is mainly due to previously planned expenditure from projects started in previous years, both in terms of staff capacity, and further construction of facilities. These projects are financed from the Van Rijn resources, Natural Sciences and Technology sector plan, quality agreements (QA resources), and expenditure from the reserves that have already been built up (a surplus from previous years). WU

<sup>12</sup> Housing ratio: (depreciation costs buildings and land + housing costs -/- rental of buildings) / total charges.

<sup>&</sup>lt;sup>13</sup> Solvency ratio 1: equity capital / total liabilities.

<sup>&</sup>lt;sup>14</sup> Solvency ratio 2: (equity capital + provisions)/ total liabilities.

uses these four resource categories in a targeted way to reduce the work pressure, improve the quality of education, and keep research growth somewhat in line with the growth of education. The operating result is projected to be negative for the entire duration of the plan period. WU considers this to be justified in view of the surplus realised in recent years and the resulting favourable equity position. Solvency will remain above 50% throughout the entire planning period.

The composition of the operating result in the projections does change due to a number of factors:

- Regular student growth: this is the development of direct income and expenditure without incidental developments as a result of the expected student growth. Within the plan period, this contributes approximately €0.6 - 1.4 million annually to improving the result.
- New programmes post-2022: Two more expansions will be initiated after 2022 within the updated Strategic Plan. This is the expansion of the 4 TU partnership (+€1 million) and the 2nd instalment of the PhD programme financed from the reserves (+€1.4 million). There is also an increase in spending on the Quality Agreements, which cancels out the extra income. An additional amount of approximately €2-3 million is spent annually within the plan period. Possible extensions in relation to the recent coalition agreement (including the Biology and Earth Sciences sector plans) have not yet been added to the projections.
- Expiry of old programmes: this is the reduction of the existing research programme, including the phasing out of many preliminary investments from own resources. This also includes the decline in underinvestments. The latter declines because programmes have picked up steam and then no longer produce a positive result due to delayed start-up. Up to approx. +€7 million per year will be freed up by expiring programming within the plan period.
- The real estate investment (Strategic Housing Plan and some additional large facilities) leads to additional operating costs. These will ultimately weigh on the result after 2022, rising to about -€6 million at the end of the period.
- The remainder is the balance of non-recurring income and expenditure, in particular as a result of the disposal of surplus fixed assets.

The organisation experienced significant growth in 2021, and the average workforce increased by 272 FTE to 3527 FTE. However, the organisation did not yet manage to attract sufficient additional personnel in 2021 to fully realise its 2021 and 2022 plans, in part due to the tight labour market. Scaling up in the current economic situation requires a relatively large amount of time. WU therefore expects another sharp increase in average staffing levels of 146 FTEs to 3,673 FTEs in 2022. In the following years, no major increase in the number of employees is expected, unless additional resources are allocated as part of the new coalition agreement. Based on current projections, personnel costs will increase by about €12 million in 2022, after which they will stabilise.

To accommodate the growing organisation, expanding the research infrastructure, and at the same time making it more sustainable, a number of additional investments have been and will be made. The construction of the Dialogue Center Omnia is in progress (remaining investment 2022: €3.1 million) and investments are being made in the Unifarm greenhouse complex (remaining investment 2022-2026: €20 million). WUR will invest in the Strategic Housing Plan (SHP) to address the need for laboratory facilities and workstations over the long-term as well. With this, WU wants to offer employees and students a good and modern working environment that also anticipates the future trend of "hybrid working", partly at home and partly on campus. In this way, additional investment is made in regular growth workplaces, but not to the extent that growth in employee numbers is and has been taking place. WU expects to invest €46 million in the period 2022-2026 under the SHP. Investments in equipment, inventory, and major building maintenance amount to an average of €29 million per year.

A number of cost components were lower than normal in 2020 and 2021 due to the coronavirus pandemic. Some of the reduced costs, such as travel expenses, would have been charged to project funding providers, so these lower costs did not lead to an improvement in the result. The pandemic also led to shifts between cost components. The multi-year projections assume that both costs and benefits return to the normal pattern.

Wageningen University will continue to create value from surplus real estate. Significant valorisation already took place in 2020, so the previously projected book profit has largely been realised. Some acquisitions with book profits are still expected in the plan period, including the last phase of Kortenoord and de Dreijen. These book profits are partially used to fund Wageningen University's new real estate.

# **WU BALANCE SHEET, 2022-2026 forecast (in € millions)**

	2021	2022	2023	2024	2025	2026
Intangible fixed assets	3.9	3.9	3.9	3.9	3.9	3.9
Tangible fixed assets	313.4	311.3	339.2	353.8	365.5	359.5
Financial fixed assets	2.6	2.6	2.6	2.6	2.6	2.6
Total fixed assets	319.9	317.8	345.7	360.3	372.0	366.0
Inventory	0.0	0.0	0.0	0.0	0.0	0.0
Receivables	55.3	42.5	42.5	37.5	37.5	37.5
Short-term securities	0.0	0.0	0.0	0.0	0.0	0.0
Liquid assets	83.3	91.3	64.4	51.1	36.5	51.7
Total current assets	138.6	133.8	106.9	88.6	74.0	89.2
Total Assets	458.5	451.6	452.6	448.9	446.0	455.2
General reserve	226.4	223.4	225.4	222.8	219.9	229.2
Appropriated reserve	14.3	13.3	12.2	11.1	11.1	11.1
Other reserve	3.4	3.4	3.4	3.4	3.4	3.4
TOTAL EQUITY CAPITAL	244.1	240.1	241.0	237.3	234.4	243.7
Provisions	11.9	9.8	9.8	9.8	9.8	9.8
Long-term debt	4.1	4.1	4.1	4.1	4.1	4.1
Short-term debt	198.4	197.6	197.7	197.7	197.7	197.6
TOTAL LIABILITIES	458.5	451.6	452.6	448.9	446.0	455.2

# **WU PROFIT AND LOSS ACCOUNT, 2022-2026 FORECAST (in € millions)**

	2021	2022	2023	2024	2025	2026
INCOME						
Direct Government Funding	269.8	290.9	279.0	281.9	284.8	287.8
Tuition fees	35.7	31.7	41.5	41.7	41.8	41.9
Research funding and targeted grants	36.4	38.3	38.3	38.3	38.3	38.3
Co-funding and subsidy market	20.2	24.1	24.1	24.1	24.1	24.1
Contract research	47.9	45.1	45.1	45.1	45.1	45.1
Secondary activities and other income	21.4	21.9	21.8	21.8	21.9	21.8
Total income	431.4	452.0	449.8	452.9	456.0	459.0
EXPENDITURES						
Personnel costs	301.5	312.3	311.4	312.5	314.0	316.5
Depreciation	28.7	33.1	35.4	37.0	34.7	35.4
Accommodation costs	28.6	31.9	32.7	32.9	34.3	35.2
General costs	21.3	38.3	38.6	38.6	38.6	38.6
Specific costs	39.8	40.3	38.7	37.8	37.0	36.9
Total expenses	419.9	455.9	456.8	458.8	458.6	462.6
Operating result	11.5	-3.9	-7.0	-5.9	-2.6	-3.6
Financial income and expenditures	-0.1	-0.1	-0.1	-0.1	0.0	0.0
Result from operational activities	11.4	-4.0	-7.1	-6.0	-2.6	-3.6
before tax						
Third-party share and value added <sup>15</sup>	0.1	0.0	8.0	2.3	-0.3	12.9
Net result	11.5	-4.0	0.9	-3.7	-2.9	9.3

 $<sup>^{15}</sup>$  The book profit on sold assets is included in this line in the multi-year planning. This income is recorded in the annual financial report under "other income".

The operating statements included in the long-term plan are derived from the 2022 budget, which was adopted in December 2021. The expected developments mentioned in the starting points have been incorporated into the long-term plan. The actual 2021 result differs from the 2021 forecast on which the 2022 budget and the 2023-2026 long-term planning are based. This has consequences for the starting position of equity capital and liquid assets. These consequences are reflected in the figures for 2022 onwards.

### 2.11.2 Internal risk management

The presence and function of the internal risk management and control system is described in Section 2.9.3.

### 2.11.3 Risks and uncertainties

WU's results will be influenced by a number of uncertain factors, both exogenous and endogenous, in the coming years.

# Pandemic, geopolitical developments and transitions (exogenous factor).

It is uncertain what the longer-term risks of the coronavirus for WU will be, but the effects seem much smaller than initially believed. Due to some research activities being delayed, some PhD contracts may need to be extended. This additional risk will be mitigated by additional resources from the Dutch Organisation for Scientific Research (NWO) (2021) and the direct government funding (2021/2022), and by the possibility to adjust research. The government is not expected to slow down innovation because of the coronavirus. In fact, WU occupies an attractive position in the field of future social transitions (sustainability, climate/energy, health, living environment). Current geopolitical conflicts also have an impact on the organisation's risk profile. Mainly indirectly. The direct interests (specifically financial) with the countries in question (Russia/Ukraine) are manageable. The indirect interests are greater. The indirect consequences include further disrupted production chains (e.g. helium as a by-product of gas extraction), significantly higher energy and material prices, a dormant wage-price spiral and uncertain times in sectors relevant to WUR, such as horticulture. The apparent dependence on gas production does mean that society will focus even more on sustainability. WU occupies a strong position in the market when it comes to innovation. As an organisation, the recent installation of the Thermal Storage System (ATES) is fortunately a timely move towards an upcoming natural gas-free era.

# Development of student numbers (exogenous factor).

The number of incoming Bachelor's students has declined relatively in recent years. Based on the interest of potential students, student enrolment is also not expected to further increase over the first few years. As a result of the increased enrolment in previous years, the total student population will continue to grow modestly for a few years, primarily in the Master's phase. In the plan, an improvement in the result as a result of this limited growth of approximately 0.6 - 1.4 million annually is anticipated. The previous growth in the number of students has already translated into increased investment in education spaces and in the number of lecturers. The third education building, Aurora, was commissioned in 2021. This education building is sufficient to accommodate the currently expected growth in student numbers up to about 13,700 by 2026. A further increase in the number of employees is anticipated in order to reduce the current workload caused by this increase and to accommodate future increases.

# Development of non-EEA student numbers (exogenous factor).

About 10% of the students participating in study programmes at Wageningen University are international, non-EEA students who contribute to the general cost coverage by paying institutional tuition fees that are based on the full costs for this group of international students. The annual income that could be directly linked to these international non-EEA students was €17.1 million in 2021. This equals about 4% of the total income and about 20% of the size of the available liquid assets at the end of 2021. In the event of an unexpected sharp decline in this student category (for example, as part of the new coalition agreement), there may be a few financially more difficult years to come until the costs have been adjusted to the new situation.

# Assumptions used for the additional resource allocation included in the projections (exogenous factor).

- Quality agreements (QA): the increase depends partly on the relative market share of WU. Furthermore, when the current QA programme ends in 2024, this income will be incorporated into the direct government funding, depending on the outcome of the Accreditation Organisation of the Netherlands and Flanders' assessment (=final accountability). Apart from the perceived limited risk of a negative assessment by NVAO, there is a potential risk that the abolition of the loan system will also result in politicians downgrading QA funds in the future after the formal QA programme has ended. This is to balance government funding. This risk is also currently considered to be relatively small. Most of the QA expenses have become structural in nature and are likely to become part of the regular direct government funding at some point. Furthermore, the latest government coalition agreement provides for continued investment in education.
- WU's relative market share: WU has assumed "constant prices" for variable funding. This means that the government adjusts the macro framework to the total population of students. Incidentally, as a result of "van Rijn", the fixed part of the funding has been increased at the expense of the share of variable funding. This somewhat mitigates the risk of increasing or decreasing student numbers.
- Continuation of the Natural Science and Technology Sector Plan: WU has assumed that these funds will be incorporated into the direct government funding after the programme ends in 2025.
- New initiatives: in line with the new coalition agreement, new sector plans for Biology, Earth and Environmental Sciences, Social Sciences, and Humanities and Design Engineering are being developed, in which WU has a significant share. There is also mention of awarding rolling grants for the universities and possibly additional funding for the knowledge and R&D&I pillars of the Growth Fund, in which WU (and WR) may also be able to participate. Furthermore, the sector plans may also require substantial individual contributions in the final allocation, which will not be fully funded. These three categories of additional resources were not included in the projection due to too much uncertainty. Apart from what the coalition agreement means in terms of additional initiatives for WU, there are also numerous new potential partnerships. The latter usually also require the contribution of own resources.
- Government funding redistribution issues: There is an issue with redistribution of funds among universities (redistribution of compensation for 1st year tuition fees). WU may have to submit a one-off sum of approximately €3-4 million in direct government funding in 2022 for the period 2018-2022. This has not yet been taken into account in the projection. The likelihood of this happening is high.
- The OCW funding model includes the 2% profiling funds. In principle, these funds have temporarily been added to the lump sum for the universities and may possibly be used for new sector plans from 2023. This means that the funding would be transferred from "freely available" to "specified funds". In addition to the fact that the scope of this specific part is still uncertain, such a shift puts extra pressure on the internal allocations. For WU, this involves a figure of approximately €1.8 million.
- Risk of declining student numbers: The current growth is still mainly the result of the MSc student number increases. The number of incoming BSc students is getting lower and may be a sign of decline if further enrolment is disappointing. The development of the number of non-EEA students is relatively stable, but due to the level of the institutional tuition fees (ca €19k), a decrease in the number of students does have a direct impact on the development of income.

# Valorisation of real estate in the planning period (endogenous factor).

The developments in the property market may lead to the accelerated sale and valorisation of the surplus of fixed assets during the plan period. Three significant valorisations are scheduled and have been included in 2023, 2024, and 2026. There are still uncertainties regarding both the pace of the realisation and the amount of the valorisations. If the planned valorisations do not happen in the planned years, then the cumulative result over these two years will be €23.1 million less. For each major investment, the impact on solvency, the result and liquidity will be included in the decisionmaking process at that point in time and, if developments in the external environment warrant it, the investment may be adjusted.

# Underinvestment of funding (endogenous factor).

There is a possibility that in 2022, WU will once again be unable to spend the funding designated for upscaling, as broadly set out in the autumn 2019 plan, due to the previously mentioned saturation in the labour market. This risk has already been captured in the budget and in the long-term projections by including a significant "underspending" item in the operations budget. This will make the projections more realistic, but it will also increase the risk profile. However, the risk of underspending on the 2022 plan (drafted in autumn 2021) is estimated to be lower than in previous years. The item underinvestment of funding has been adjusted accordingly.

### 2.12 Report criteria and scope

With regards to the accountability for WUR's societal impact, the materiality analysis was leading in setting the limitations and scope of this report. In the analysis, relevant and material topics for WUR were determined on the basis of the 2019-2022 Strategic Plan. Through the Identification, Prioritisation and Validation steps, these topics were then assessed on the basis of their significance for WUR and stakeholders. This Annual Report focuses on these material topics. These topics form WUR's CSR agenda see Figure 2.1 of Section 2.3.3.

This report covers the 2021 financial year. Because the majority of the activities of WU and WR take place in the Netherlands, the sustainability reporting focuses on activities in the Netherlands.

# Specific Ministry of Education, Culture 3 and Science accountabilities

### 3.1 Quality Agreements report 2021

### 3.1.1 **Process**

The Quality Agreements 2019-2024 were established by the Executive Board, and approved by the coparticipation council of WUR 'Student Staff Council' and Supervisory Board in 2019. For three years now, we are implementing the Quality Agreement programme to strengthen the quality of our education. The results of these efforts have been periodically summarised in a dashboard. Using these dashboards, the steering group managed, monitored and reported on the implementation, and the Executive Board, Student Staff Council and Supervisory Board evaluated and discussed the progress. The last version of the dashboard is also made publicly available via the Wageningen University website.

Overall, the realisation of the Quality Agreements is well on track. Despite the corona pandemic, all projects have achieved their objectives successfully. All projects remain to be very relevant, also in the changed situation due to the corona pandemic. Therefore no changes were necessary in 2021. The marginal changes in 2019 and 2020, established by the Executive Board and approved by the Student Staff Council and Supervisory Board, are realised and integrated into this report on the Quality Agreements.

The funding we receive from the ministry Education, Culture and Science (OCW) is fully spent in 2021 according to the established Quality Agreements 2019-2024. With the overspending in 2021 we compensate some of the underspending of additional own resources in the years 2019 and 2020. The financial table in Chapter 1.3. shows that WUR fully spent the total funding received from OCW in the period 2019-2021.

### 3.1.2 **Progress**

Wageningen University invests in five of the six quality themes. For each theme, different projects have been defined with concrete goals and budgets. For each project we give an overview of the progress, along with an explanation and some reflections. According to our Quality Agreements plan 2019-2024, we do not invest in the theme 'study success of students'. Our high study success rates make additional investment less urgent.

WU also evaluates the effectiveness of the measures. This impact analysis is used for internal discussions and can lead to changes in projects to increase the impact when necessary. The positive impact analysis of February 2021 did not result in adjustments of the plans for 2021 or for the period 2022-2024.

### 3.1.2.1 **Small-Scale Education**

Project	Annual objective 2019-2021	Objective achieved?
Thesis Supervision	All chair groups will maintain intensive thesis	Based on the positive outcomes of 10 random
	guidance despite the growing student numbers.	interviews per year with chair holders we
		conclude that <b>all chair groups</b> have retained
		or implemented intensive guidance.
Sciences Groups	In total, the Sciences Groups will take on	In total, the Sciences Groups have taken on
Measures	7.3 additional FTE for intensive small-scale	7.3 additional FTE for intensive small-scale
	education.	education.
<b>Additional Teaching</b>	11.1 FTE additional staff will be appointed by	11.1 FTE additional staff is appointed by
Staff for Chair Groups	37 chair groups.	37 chair groups.

The chair groups and sciences groups notice a clear relief in the tasks of the lecturers, who now have more time for education and their students. With the extra time they strengthened and increased small-scale education in our bachelor and master programmes.

Chair groups hired extra staff to intensify thesis supervision, partly funded by extra Quality Agreements funding for thesis supervision. The additional staff to unburden thesis supervisors enables them to supervise their students more intensely. An additional effect is that many chair groups invested in improving the thesis coordination, procedure and process. Many chair groups started thesis rings or other forms of support by lecturers for groups of thesis students on a variety of topics like writing, motivation, thesis planning, progress and stimulating students to help each other. Other chair groups intensified the supervision of thesis students in lab work. Students also needed more support and guidance in dealing with the Covid restrictions. In general, many chair holders experience that students are more satisfied with their thesis supervision. The student satisfaction about the thesis supervision supports this conclusion. The survey shows a further increase of student satisfaction about the quality of the thesis supervision and a continuous high satisfaction score for the availability of thesis supervisors. The overall student satisfaction about thesis supervision increased from 3.9 in 2018 to 4.3 in 2021 on a 5-point scale.

The extra staff (7.3 FTE) hired by the science groups facilitate and support small-scale education as they implement the detailed plans of the science groups. The extra staff continues to unburden teaching staff by helping them to design, organise and offer intensive (online/blended) courses. The support offered by the extra staff is tailored to the needs of chair groups and lecturers, and is evaluated at least once a year with the teaching staff.

In 2020, the target for the additional teaching staff for chair groups increased to 11.1 FTE. As from the beginning of 2021, the adjusted objective has been realised. The 37 chair groups report about the realised small-scale education. With the extra staff the chair groups were able to increase supervised groupwork or individual assignments, or decrease the group size in group work, lab work or excursions in order for the lecturer to guide the students more intensively. Some chair groups also redesigned courses to be more intensive.

### 3.1.2.2 More and better study guidance

Project	Annual objective 2019-2021	Objective achieved?
<b>Dealing with Stress</b>	Organise a mental health week and at least	All activities have been organised, including
Campaign	4 other activities. Continued presence of	the 'Surf-Your-Stress' week. Since 2018, a
	additional student psychologist (0.4 FTE)	coordinator has been appointed for 0.4 FTE to
	organising the events.	organise the activities.
More study advisors	4.7 FTE additional study advisors.	5.6 FTE additional study advisors appointed.
More student	2.4 FTE additional student psychologist.	2.0 FTE additional student psychologist
psychologists		appointed (of which 0.4 FTE flexible capacity)
		and <b>0.4 FTE</b> unburdening support for
		psychologists so they have more time for
		students.
Student initiatives	4 student initiatives funded.	10 student initiatives were funded. In total,
for students		13 were approved of which 3 were cancelled
		due to covid restrictions (2) and other
		reasons (1)
Virtual Training	Coordinator is hired. Further improving and	Coordinator has been appointed. The website
Centre	promotion of website.	'Student Training & Support' has been
		promoted and updated.
Training for staff	At least 2 training courses per year to	9 sessions were offered by student
	recognise problems that students face and	psychologists.
	guide them.	

As from 2019, students can attend the events and activities offered through the stress-prevention campaign, including the 'Surf-your-Stress week'. Students are involved in organising and developing the activities, ensuring that the activities match with the needs of students. Due to the Covid

restrictions multiple events had to be rescheduled or cancelled, and in some activities maximum 75 participants were allowed. Nevertheless, the objective has been realised. The activities and the Surf-your-Stress week were well attended. Due to the increased stress among students, the stressprevention activities have become even more relevant. The evaluation surveys show that students greatly appreciate the activities.

In 2021, more extra study advisors were hired to support students. The extra study advisors are funded with the available budget due to the underspending in the two previous years. All study programmes, and therefore all students, benefit from the extra study advisors. This extra help was much-needed, as students had to face the consequences of the Covid restrictions on their education, study planning and career preparation.

Students with issues can also ask help of an expanded group of student psychologists. The number of students that requested support increase with 20-30%. This increase is related to the covid pandemic. The flexible deployment of 0.4 fte enables us to deal with peaks in the demand of students. When the waiting lists increases, the extra staff allows us to reduce the waiting time again. The student psychologist adjust their services and support to students based on the needs they signal. In September 2021, they started with brief walk-in consultations. The psychologist also offered 19 group training courses on specific issues students are confronted with. These courses also help to prevent significant well-being issues.

Students realised 10 projects to support other students to increase their mental well-being. Five students and a staff member form the assessment committee that approves the project proposals. A wide range of activities was organised either online or when possible onsite. When activities had to be organised online due to the covid restrictions, less costs or even no costs were made. An increasing number of students participated in the projects. The evaluation reports show that all participants were satisfied. We see a trend of underspending. Therefore the approach of the project for 2022-2024 will change to ensure more students projects are initiated and realised.

The extra promotion of the Student Training & Support platform among students resulted into a 23% increase in users and 17% additional unique page views. The website and training courses are continuously improved based on evaluations of the advisory committee with representatives of students and staff.

In 2021, the student psychologist offered 9 sessions for lecturers about student issues. They give a presentation about how to signal student issues, what lecturers can do themselves and who they can approach for help. After the presentation, the questions and cases of lecturers are discussed. In total 416 lecturers joined the sessions and positively evaluated the sessions in the survey. The questions and feedback of lecturers are used to further develop and improve the sessions. In addition, the trainers of all the pedagogical training courses for lecturers are informed and advised how to pay attention to student issues and differences between students.

### 3.1.2.3 **Education differentiation**

Project	Annual objective 2019-2021	Objective achieved?
Student Challenge	WU organises at least 1 student challenge	2 student challenges have been launched.
	per year	
Skills development	New skills implemented in study	All programmes started implementing the
	programmes, supported by instructional	skills trajectories. As from November 2020, a
	designers.	coordinator is hired to implement this project.
	<b>6 training courses</b> for student assistants.	
	Expanding digital learning environment on	11 training courses were organised for
	skills.	student assistants.
		The use of the digital learning environment
		and digital tools for skills education is
		expanded.
Expand	Increase in Career Service Centre activities	More activities by Career Service Centre and
Extracurricular	and appoint 1.0 FTE for career coaching.	1.0 FTE career coach is hired.
Activities	Tailor made 'Bildung' programme for multiple	'Bildung' pilots implemented in
	study programmes.	6 programmes.
	More extracurricular workshops/training	5 new training courses available for students
	for all students: at least 5 extra.	via the virtual Student Training & Support
		centre.

The two 'student challenges' were positively evaluated by both students and involved stakeholders. Students indicated that the challenge gave them the opportunity to network and co-create solutions with industry leaders. External partners indicated that the challenges were a great opportunity to get access to new ideas and meet students with a strong entrepreneurial mindset. From the 12 finalists of the ReThink Protein 2 Challenge, 10 indicated that they plan to continue developing their innovation. Several have registered as a company or are in the process of doing so.

All programmes started implementing the skills trajectories, finishing the first phase of making an elaborate inventory of all skills taught in the programmes and individual courses. Good practices were shared and plans for improvements developed. Additional pilots in three programmes are fully realised and positively evaluated by students. Lecturers have increasingly been working with tools and possibilities in the digital learning environment. Their feedback is used to further develop the digital learning environment.

Continuously student assistants are trained to support lecturers in offering their on campus or online / blended education. This year lecturers requested 11 specific training workshops for the student assistants in their courses. In addition student mentors in the introduction days received an additional training on how to introduce new students to Brightspace and how to give advice.

6 study programmes participated in the extracurricular 'Bildung' reflection programme. These tailormade programmes are designed with the input of students from the studies in question. Participating students evaluated these pilots very positively and indicated that these Bildung programmes have filled a niche which does not exist in any other aspect of their curriculum. Also the Student Career Services has organised several extra and new on-campus and online additional extracurricular activities. In 2021, 67 career activities were organised compared to 25 activities in 2020 (including those funded by the extra funding from the National Programme Education). Again more students are reached and the activities are positively evaluated.

In addition, WUR also offered 58 extracurricular training courses and support, of which 5 new courses, on the topic well-being and development. These training courses aim at helping students in their development, well-being, and to prevent students issues and problems. Due to the Covid pandemic the need increased for training courses in study skills, stress management and presentation skills. Instead of offering the trainings 2-3 times a year they were offered 4-5 times a year. Most training courses are fully booked and they are all evaluated very positively by students. Students and other internal and external stakeholders are consulted to keep the portfolio of training courses up to date.

### 3.1.2.4 Lecturer Professionalisation

Project	Annual objective 2019-2021	Objective achieved?
Training for PhD	At least 140 PhD candidates in a teaching role	171 PhD candidates in a teaching role have
Candidates	will receive didactic training.	received didactic training.
Professionalisation	At least 15 request for compensation funded.	23 compensations requests were funded.
Fund	At least 4 peer reviews (of a cluster)	17 (cluster of) courses were peer reviewed
	compensated.	funded by the Quality Agreements.
Unburdening and	10.5 FTE additional staff to unburden lecturers	10 FTE additional staff has been appointed. In
support lecturers		2022, the extra 0.5 FTE will be hired.

In 2021, more PhD candidates participated in the education training courses, which were offered online and in real-life when possible. The majority of the PhD candidates participated in the training course 'Supervising BSc and MSc thesis supervision'. On average the training courses were evaluated very positively by the PhD-candidates.

Lecturers made additional efforts in improving their didactic skills as well. In addition to the compensation requests, extra training courses and on-the-job trainings were offered to lecturers on blended and online education and online examinations. Two trainers for study advisors were hired to further train and professionalise study advisors, tailored to their needs.

Lecturers were unburdened by the extra staff hired by science groups. Multiple science groups organised education support hubs with staff available to help, support and facilitate lecturers in their education. The unburdening enabled lecturers to spend more time on the transition to online education and implementing necessary new online tools and innovation. The latter resulted in further professionalisation of our teaching staff. The number of staff hired by science groups was a little lower than planned, because one science groups 'saved' some funding to hire extra staff next year and another science group did not implement a project because a better alternative was offered for the whole university. An alternative project started in the last few months of 2021.

### 3.1.2.5 **Education Facilities**

Project	Annual objective 2019-2021	Objective achieved?
<b>Bring Your Own</b>	Available WUR app store	WUR app store is available, expanded and used
Device = Study		by students.
<b>Anytime Anyplace</b>		

The WUR app store is further expanded and more than 1500 additional students installed the app store. All software students need for online computer practicals is available through this platform. At the moment 190 apps are offered in the WUR app store and further improvements were made to make installation more easy. After a peak in 2020, the total number of purchased CANS articles to prevent RSI that student can purchase with a discount decreased in 2021 with more than 60%. Also less students made use of the offer to buy laptops with a discount.

### 3.1.3 Budget

WU received for the year 2021, including wage compensation, a total of €6,689,000 from the Ministry of OCW (Education, Culture, and Science) for the Quality Agreements. This is an increase of around €2,7 million in comparison to the OCW funding in 2020 (excluding wage and price indexation. The financial resources have been spent entirely in 2021. In doing so, WUR has complied with the financial agreements in the Quality Agreements.

In the leading principles approved by the Student Staff Council and Supervisory Board, we established what part of the underspending can be used to compensate overspending in other projects and what part of the underspending will be moved to future years. The objectives for the year 2021 are fully

realised, therefore the overspending in 2021 may compensate underspending for some other projects in 2021 and for the past.

In the period 2019-2021 Wageningen University spent € 15,5 million so far. This is on the one hand almost € 2,0 million more than received from OCW so far. But on the other hand it is € 0,9 million less than planned, mostly due to committed/planned own contributions in 2019 and 2020 that were not fully effectuated. Wageningen University decided, based on the 'principles', to compensate underachievement from 2019 (€ 0,7 million) and 2020 (€ 0,3 million). In 2021, Wageningen University managed to compensate already € 0,2 million Wageningen University will do a best effort to balance the remainder in 2022-2024.

In the table below, the financial reporting on the use of the quality agreements is listed for the whole period 2019-2024, in accordance with the monitoring criteria for the quality agreements.

		Qua	ality Agreeme	nts 2019 – 2024						
In € 1.000		2019		2020		2021	Total <b>`19-</b> '21	2022	2023	2024
1. Small-scale intensive education	Budget	Realisation	Budget	Realisation	Budget	Realisation				
1.1 Thesis Supervision	1,700	1,799	1,700	1,907	2,113	2,113		2,283	2,592	2,730
1.2 Science Groups measures	500	500	500	500	513	513		-	-	_
1.3 Additional Teaching Staff for Chair Groups	810	127	990	959	1,322	1,329		2,820	2,820	2,820
Total Small-scale intensive education	3,010	2,426	3,190	3,366	3,948	3,955		5,103	5,411	5,550
2. More and better study guidance										
2.1 Dealing with stress campaign	50	50	50	68	51	53		52	52	52
2.2 More study advisors	30	30	272	153	478	<i>547</i>		486	486	486
2.3 More student psychologists	50	50	200	185	205	207		209	209	209
2.4 Student initiatives for students	5	5	20	8	21	11		42	52	52
2.5 Virtual training centre	10	10	50	88	51	51		52	52	52
2.6 Training for staff on student issues	55	24	40	10	41	34		42	42	42
Total More and better study guidance	200	169	632	510	847	903		883	893	893
3. Education differentiation										
3.1 Student challenges	300	300	300	300	308	308		313	313	313
3.2 Skills development	225	143	285	164	328	350		360	365	365
3.3 Expand extracurricular activities	75	57	130	131	323	348		355	360	535
Total Education differentiation	600	500	715	595	959	1,005		1,028	1,038	1,216
4. Professionalisation										
4.1 Training for PhD Candidates	75	73	75	31	77	64		78	78	78
4.2 Professionalisation Fund	25	-	105	110	179	181		222	313	300
4.3 Unburdening and support lecturers	75	75	300	218	718	638		1,423	1,423	1,423
Total Professionalisation	175	148	480	359	974	882		1,733	1,823	1,810
5. Adequate facilities										
Bring your own device	200	200	320	320	205	191		104	52	_
Total Adequate facilities	200	200	320	320	205	191		104	52	-
TOTAL EXPENDITURE	4,185	3,443	5,337	5,151	6,933	6,935	15,529	8,851	9,218	9,466
Budget of OCW ('22-'24 indicative)	3,010	3,010	3,835	3,835	6,705	6,689	13,534	8,168	8,624	9,734
Expected wage indexation ('22-'24)			-,	-,	.,			143	151	171
Planned own contribution	1,175	1,175	1,502	1,502			2,677			
Compensational funding previous years					228	246	244	540	443	-438
TOTAL FUNDING	4,185	4,185	5,337	5,337	6,933	6,933	16,455	8,851	9,218	9,467
Under/overspending to OCW Funding	.,233	433	5,557	1,316	3,233	246	1,995	540	443	-438
Under/overspending to plan		-742		-186		2	-926	3.0		130
Compensational funding balance		-742		-260		244	-758	540	443	-438
Compensational randing balance		772		200		277	-750	340		

### 3.1.4 Student Staff Council and Supervisory Board

The progress of the Quality Agreements, presented in the monitoring dashboard, is regularly discussed by representatives of the steering group with the sounding group of the Student Staff Council (at least four times a year), by the Executive Board with the Student Staff Council (at least twice a year) and by the Executive Board with the Supervisory Board (at least twice a year). WU consists of one faculty and therefore has one central co-participation council called the Student Staff Council. With the sounding group of the Student Staff Council the progress of all the projects are regularly discussed in detail. The Board of Education also receives the monitoring dashboards three times a year and the board can discuss the outcomes with the chair and secretary of the steering group. Based on the input of these bodies the steering group can strengthen the projects. Remarks also contributed to the further improvement of the dashboard reports.

In 2021, both the Student Staff Council and the Supervisory Board approved the update of the official appendix of the Quality Agreements. This appendix contains the specific goals per project per year. In 2019, the goals per project were established for the period 2019-2021 and an indication for 2022-2024. Together with the Quality Agreements Plan, the appendix was approved and audited. In 2021, the goals per project for the period 2022-2024 were defined. These goals were largely a continuation of the previous set goals, as there were no major changes in the Quality Agreements Plan only some smaller adjustments in the set goals.

Every year, the steering group also presents an impact report, with a more in-depth analysis of the evaluations and results of the projects based on evaluations and the input of project leaders. This impact report is discussed internally. The steering group, together with the project leaders and sounding group of the Student Staff Council, concluded that based on the positive outcomes of the projects in the impact report no major chances were necessary in the plans for 2022-2024.

The project leaders also ensure and report on the involvement and contribution of students and staff in the project realisation. In all projects students and/or staff participate through committees or broader evaluation surveys.

Annually, new member of the Student Staff Council are offered a workshop or introduction training on the Quality Agreements. In 2021, the new students in the Student Council participated in this introduction training. Members of the Student Staff Council or any other body within WUR can request information about the Quality Agreements or a meeting with members of the steering group.

The reflections of the Supervisory Board on the quality agreements are integrated in their reflections on the annual report of WUR. In the next section, the reflection of the Student Staff Council is presented.

### 3.1.5 Reflections of the co-participation council of WUR the Student Staff Council

From: The Student Staff Council, the co-participation council of WUR. WUR is one faculty and has therefore one co-participation council and no 'decentral' co-participation councils.

Date: 1 March 2022

# 1. Involvement Student Staff Council in Quality Agreements

How the Student Staff Council is involved in Quality Agreements

The Student Staff Council (SSC) has formed a sounding group to be a sparring partner for the steering group of the Quality Agreements. The sounding group for the Quality Agreements (QA) consists of a delegation of the SSC, containing staff and students. Every two months, the sounding group meets the steering group to discuss the QA. In these meetings, a delegation of the steering group is present.

The meetings between the SSC and steering group involve discussions concerning the implementation of the plans, including the realisation and the monitoring of, and modifications to, policy actions and processes. The SSC is also involved in the early stages of QA procedures, developing new ideas and amendments of action plans. The SSC receives this relevant information from the steering group

through impact reports, dashboards, annual reports and other useful reports such as the 'consequences of COVID-19'.

The steering group organized a transition meeting with the newly elected Student Council (SC) members at the beginning of the year. Most importantly, the transition meeting provided SC members in the SSC with relevant background information to work with the steering group during the year.

In the structure of the WUR there is only one central university council for the university (Student Staff Council), which contains students, staff and researchers. There are no decentral councils in the structure of WUR, because WUR consists of one faculty.

# Reflection on SSC involvement

The transition meeting was exemplary of the transparency demonstrated by the steering group. This transparency is key for the university remaining accountable to staff and students in how they spend the budget. The SSC was informed of the money spent in the first 2 years of the QA expenditures, which was below the budgeted amount. Hence, the steering group is more careful in budgeting funds for the year and in monitoring to ensure the budget is actually spent, which we as SSC are happy to see.

A positive development is that the steering group has taken active steps to engage student associations and help them to budget and make judicious use of allocated funds. In previous years, student associations had the access to apply for funding from the project 'Student initiatives for students', (projects from students to help students build a support network), but they did not know the exact and clear procedure of it which makes training of student associations a thoughtful process to be financially responsible. Additionally, the steering group adjusted the procedure to attract individual or groups of students and student organisations to apply for funds. This made it easier to apply, resulting in more applicants. Overall, we appreciate the efforts to ensure students and employees- beyond the formal representation of the SSC and SC - have an active role in how the QA budget is being spent.

Furthermore, the SSC received the 'Appendix Results Quality Agreements Per Project per Year 2022-2024'. This report is the yearly plan which focuses on how the university spends the budget in the different projects in 2022-2024 period. This report was received with approval rights, because there were some changes in the previous budget and in how funds were used. These procedures went very well, and the SSC was given sufficient time and space to give input and ask questions. Consequently, the SSC gave their approval on this dossier. Overall, the SSC is happy to be well informed and involved in the QA processes. The steering group carried out the QA procedures while being accountable and transparent. The SSC is pleased about the allocated time available for the SSC by the steering group to review documents and make thoughtful decisions. In a nutshell, the SSC feels like a worthy interlocutor in the QA process and is also happy with how the QA funds are being spent.

# 2. Progress Quality Agreement

We are glad to see that the full budget is spent this year and look forward to seeing the future achievements. We are also happy to see that more projects were targeted directly at supporting students, for example by stimulating student initiatives and by making funds available for additional student psychologists. Students have been sufficiently involved in the realisation of the Quality Agreements. Students were for example updated on the amount of student psychologists that were hired and what their working arrangements are. Altogether, we feel that the separate projects where the Quality Agreement funds are being spent are well chosen and appropriate. In general, the goals that were set by WUR were met and we are satisfied with the way WUR is spending the QA funds.

### 3.2 National Program Education / Corona paragraph

In the corona paragraph, WUR is asked to report for WU on 1) the impact of the Covid pandemic and restrictions, 2) on the progress and expenditures of the National Programme Education and on 3) realised measures with received funding from specific subsidies. The guidelines for reporting on the Corona Paragraph are followed. In the National Programme Education, Wageningen University (WU)

receives funding from the corona envelop for education and from the support programme for repair and perspective for researchers.

The National Programme Education (NPE) is a nationwide programme for all levels and forms of education with the aim to repair what has been missed during the Covid-19 period, to support those who have been adversely affected and to offer prospects for the future. The funding is available on a temporary basis for 2021 and 2022, with the possibility to spend the funding also in 2023. Universities are asked to establish a plan for the funding aimed at student well-being and study progress, and at compensating for delays in the work of researchers with temporary appointments. Wageningen University & Research has drawn up a single integrated plan for both education and research. The NPE plan for Wageningen University & Research is formulated at institutional level, leaving room for diversity at chair group and study programme level. In this chapter, WUR reports on the realisation of the ambitions and budget established in the NPE plan of WUR, according to the monitoring framework provided by the Ministry of OCW.

### 3.2.1 Impact of Covid

The Covid restrictions have had severe consequences for education, research and the well-being of our students and staff. Although we have been able to offer our education online or blended, we have not been able to offer students the typical Wageningen University learning experience. Many researchers were confronted with delay in their research, affecting both their career and the continuation of their research. With the NPE funding and own efforts we could help solve some of the issues students, lecturers and researchers faced, or could compensate researchers when it was not possible to prevent delay.

In this annual report, we give an elaborate account on all the consequences of the Covid restrictions for our education and research, but also regarding facilities, finances, personal, IT and many other important aspects of our organisation. We will not repeat this reporting in this chapter, but refer to the rest of the annual report to learn more about the impact of the Covid pandemic.

### 3.2.2 Planning and monitoring process NPE

In the summer of 2021, the WUR NPE plan has been established by the Executive Board and approved by the co-participation council 'Student Staff Council'. It has also been discussed with the Education and Research Committee of the Supervisory Board. The NPE plan is the result of an interactive process between academic staff, students, the Student Staff Council, the steering board and the Executive Board. The plan how to develop the NPE Plan was discussed by the Executive Board and with the Student Staff Council. The Executive Board formed a steering group to oversee the process and two working groups who would develop concrete proposals for the NPE plan. One working group developed a plan for the NPE funding for research and another working group for the NPE funding for education. In these two working groups the involved internal stakeholders were represented, including students, lecturers, PhD candidates, researchers, study programme directors, and study advisors. The two working groups consulted researchers, lecturers and students and used their input to formulate plans that would meet the needs in our education and research. The Student Staff Council assigned their own committee to act as the sparring partner for the steering group. Together, all these stakeholders safeguarded the feasibility of the plan and its fitness to our organisation.

After the final approval of the NPE plan in August 2021, the realisation started full speed. It is our ambition to make sure researchers and students benefit from the NPE funding as soon as possible. Two project coordinators, one for research and one for education, manage the realisation together with the project leaders of individual projects. The project coordinators report to the steering group about the progress. The steering group meets every 6-8 weeks, to discuss the progress. The steering group also informs the member of Executive Board with portfolio education and research. The realisation is regularly discussed with the committee of the Student Staff Council.

Significant changes to the NPE plan will first be proposed by the steering group to the Executive Board. These changes are also discussed with the Student Staff Council, and after the Executive Board established the change, the Student Staff Council is asked for their approval. There were no significant changes in 2021 and no proposed changes for the plans for 2022.

### 3.2.3 Realisation progress Education

The NPE plan for education consists of various ambitions and projects. This section provides an overview and account of the progress of the different projects and the expenditures. All the measures in the NPE plan are being executed. The NPE plan and specific objectives for 2021 and 2022 have not been changed or adjusted since it has been established in August 2021.

In the NPE plan of WUR, projects were established for the three themes in the NPE protocol for education and the letter from the inspection: 1) Transitions and study progress (3.2.3.1) and 2) Student well-being and social cohesion (3.2.3.2.) and 3) Teaching training programme (3.2.3.3). WUR does not receive funding for other themes and topics as they do not apply to universities or WUR. Per project the measure / ambition in our NPE plan for 2021 and 2022 are summed, followed by information about the accomplished results in 2021. In the last section of this chapter, an overview of the expenditures is provided.

### 3.2.3.1 Theme Transitions and study progress

Subtheme: Enough thesis positions and internship supervision

Project	Objective 2021 and 2022 NPE Plan	Results 2021
a. Thesis	Chair groups offer thesis and internship	50 chair group requested and received funding for
Supervision	supervision to more students to deal with	2021 and 2022 to offer thesis supervision to
	the expected increase in the period September	340 extra students and internship supervision to
	2021 to May 2022.	230 extra students.
		Realised. In period 2 of the academic year 2021-
		2022 (November – December), the 50 chair groups
		together offered supervision to 270 extra thesis
		students and 135 extra internship students.
b. Writing lab	Additional services of the writing	<u>Delayed.</u> Additional/services are developed by the
	lab to support Master's students in writing	writing lab but not yet offered to students. New and
	their thesis.	additional services will be offered in 2022.
c. Finding	Increased support from the Student Career	Realised. The Student Career Services found and
internships	Services to help students find an internship.	promoted more internships, and offered more one
		to one meetings with students to help them find an
		internship.

# a. Thesis supervision

The project thesis supervision targets the increased demand of thesis and internship supervision. Due to the consequences of the Covid restrictions, students changed their study planning, were delayed or want to do an extra thesis or internship. Therefore more students need a thesis position or an internship in the period September 2021 to May 2022. We enabled 50 chair groups to hire extra staff, extend contracts of current staff or take other measures that result in more capacity for thesis and internship supervision. The funding was granted by the steering group to all the chair groups that applied. Their proposals met the set criteria. Already many additional students are offered a thesis position and internship supervision. This project is finished in the summer of 2022.

# b. Writing lab

The writing lab supports thesis students in writing their thesis in these challenging covid times, and unburden supervisors who can focus more on supervising on the content and less on the writing. As from September 2021, there was no increase in students that requested an individual tutor meeting or joined the workshops. It is expected that the increased and improved promotion in 2022 will result into more students making use of the services of the writing lab. With the extra capacity, the writing lab will offer more (specific) writing weeks and new workshops in 2022. The new workshops target the

specific needs of thesis students and covid-related issues like motivation and planning. We aim to finish this project in December 2022.

# c. Finding internships

Due to the covid restrictions students encountered problems finding an (international) internship, which is a mandatory component of many programmes. Students have postponed their internship or were delayed in finding an internship. That is why the Student Career Services hired more staff to offer extra support to students and internship coordinators of the chair groups in finding an internship. The Student Career Services offers extra help by:

- Proactively finding and promoting internships on the new career platform for students: in 2021 they promoted 279 internships.
- One to one meetings with students about finding an internship or job: in 2021 454 students were supported in these one to one meetings and these students positively evaluated the support.
- Providing information to all students about how to find an internship.
- Offering application workshops, also relevant for applying for internships.

The total number of students who contacted the Student Career Services increased rapidly in 2021, showing that more students make use of the support that is offered. Also in 2022, we will continue with the extra support we offer.

Subtheme: More excursions and contact with the professional field

Project	Objective 2021 and 2022 NPE Plan	Results 2021
a. Study associations	Increased funding and support for study	Realised. 14 of the 19 study associations
	associations to organise more excursions and	applied for the fund and received around
	interaction with the professional field via the	3k euros each in 2021. Budget is spent in the
	Study Association Fund (now called Kick-start	academic year 2021-2022.
	Career fund)	
b. Studium Generale	Additional FTEs for Studium Generale to deal with	Realised. In the second half of 2021, the peak
	the peak of <b>Bildung Reflection Programmes</b> in	of six Bildung Reflection Programmes was
	the second half of 2021 and to offer an extra	successfully realised with the extra capacity.
	programme in 2022.	
c. Student Career	Extra capacity of Student Career Services to	Realised. Student Career Services organised at
Services	organised more opportunities for students to	least 10 extra opportunities/events for students
	meet the professional field.	with the extra capacity.
d. Soft skills	An inventory and overview of available soft	Realised. The inventory and overview are fully
	skills courses to inform students about the	realised in 2021. The overview is shared with
	possibilities for gaining more experience in	all students of WUR via our website.
	practising those skills, thus boosting their	
	confidence. No objective for 2022.	

# a. Study associations

Fourteen study Associations receive funding, according to the procedure and criteria set up by an assessment committee of students and staff. The intermediate monitoring survey shows that the study association organised more excursions and interaction with the professional field. Due to the lockdown in December 2021 and January 2022, some activities could not take place or needed to be adjusted. The Student Career Services offers advice to the study associations on organising the activities.

# b. Studium Generale

Studium Generale offered six Bildung Reflection Programmes together with (six) study programmes. In these programmes the academic and personal development of students is stimulated and they are supported in developing reflective competences on themselves, their environment, the world and science. With the funding for extra staff the delayed Bildung Reflection Programmes could be offered in the period September to December; enabling a major peak for the Studium Generale staff. In 2022, an extra Bildung Reflection Programme will be offered. We aim to finish this project in December 2022.

### c. Student Career Services

The extra staff of the Student Career Services help students find an internship, but also organise various additional events and activities for students to interact with the professional field. Examples are (online) career days and networking drinks with employers and alumni. More students are reached in 2021 and the activities were positively evaluated by students. In 2022, we will continue with the extra activities.

## d. Soft skills

In the Summer of 2021, an overview of all the available soft skills courses for students was provided to all students of WUR. Students who didn't feel well prepared or skilled yet in specific soft skills, as a consequence of the lack of opportunities to practice due to the covid restrictions, know now how they can learn more about and practice those skills.

Subtheme: More guidance on study progress and transition

Project	Objective 2021 and 2022 NPE Plan	Results 2021
-		
<ul> <li>a. Peer guidance</li> </ul>	Additional support for study programme	<u>Delayed</u> 8 of the 19 programme teams have
	teams to increase opportunities for students to	organised additional forms of peer guidance
	receive peer guidance.	opportunities for the students of their study
		programmes.
	All study programme offer some kind of peer	
	guidance opportunities to their students.	
b. Prior knowledge	Programme teams inform their students	<u>Delayed</u> . The majority of the programme team
	about how they can strengthen their prior	have informed their students, but not yet all
	knowledge to feel more confident.	programme teams.

Both projects are implemented by the programme teams of all our bachelor and master programmes. The study programmes offer a form of peer guidance and they pay special attention to first-years students.

# a. Peer guidance

The programme teams use the funding for hiring student assistants and other costs to organise and facilitate the peer guidance. Large programmes receive more funding than smaller programmes The realisation of the project has been delayed due to the high workload of the programme teams in combination with the covid restrictions for education. All programme teams developed plans for the additional peer guidance in the programme, and eight programmes did start with the realisation. Two programme teams indicated they already have very intensive peer guidance in their study programmes, and no additional peer guidance was wanted by students.

# b. Prior knowledge

The majority of the programme teams offered information about refreshing prior knowledge tailored to the needs of the students in their programme. Two Programme teams indicated that lecturers or students indicated there was no need for additional information.

### 3.2.3.2 Theme Student well-being and social cohesion

Subtheme: Increase training and facilitate interaction

Pro	oject	Objective 2021 and 2022 NPE Plan	Results 2021
a.	Training courses and support	Additional capacity to increase the number of workshops and initiatives to improve student wellbeing.	<u>Realised.</u> More than 12 extra activities and training workshops were realised for students.  In addition, life coaching and coaching by peers was offered to students.
b.	Social activities	Facilitating student organisations to organise more activities to connect students.	Partly realised. 41 student organisations received funding based on their approved proposals. Various activities were organised, but some have been delayed due to the covid restrictions.
c.	Sport activities	More frequent sport events on campus supported by the 'Bongerd' Sport Centre.	<u>Partly realised</u> . Part of the planned extra activities was organised. Delay was caused by the covid restrictions.
d.	Outside facilities	Enhanced optimal use of the campus by creating more outdoor meeting places with tables and seats.	<u>Delayed</u> . Facilities ordered but will be delivered in 2022.
e.	Communication and coordination	Better inform students about opportunities to meet others and improve their well-being.	<u>Realised</u> . Activities funded by NPE promoted and communicated. A more integrated overview will be realised in 2022.

# a. Training courses and support

More training courses and support is offered to students focusing on their well-being and social network. In the summer and winter holidays, more than ten social activities were organised, with special attention for students that could not go home due to the covid restrictions. Two new training courses on self-awareness and self-management were offered. In addition, around 310 students received peer coaching by other trained students or life coaching by professionals. Many students signed up for the newly introduced health platform "healthy business" (Gezondeboel) and participated in their self-help programmes or a programme under supervision of a student psychologist. International students could also participate in a webinar about the health system in Wageningen and the support offered by WUR.

# b. Social activities

Student organisations could apply for funding to organise extra social activities to support students build their social network. In total 41 proposals of student organisations were approved by the assessment committee of students and staff. They have six months to realise the activities, until March 2022. New activities were organised or the participation fee for students to join the planned activities was lowered to stimulate students to come. Due to the lockdown in December 2021 and January 2022, some activities could not take place or needed to be adjusted. The funding not spent in 2021 will be added to the second round of funding in 2022.

# c. Sport activities

As from December 2021, more social and fun sport activities are organised by the sport centre of WUR. The ambition is to make participation accessible to all students, offering the activities in the lunch breaks on the campus.

# d. Outside facilities

On the campus we also facilitate interaction between students with more outdoor meeting places. The 14 pick-nick tables and 39 seats are ordered, but will be delivered in 2022.

# e. Communication and coordination

Part of the NPE funding was used to communicate about and promote all the activities to students. All projects are now running, which enables us to provide an integrated overview to students in 2022. Reaching students remains a challenge that requires extra efforts.

In 2021, the universities also discussed national projects on student well-being and the transition between pre-education and university. Lessons were learned from other universities and tools and knowledge were shared. This did not result in significant extra costs. For 2022 a plan is developed to help students and future students learn to learn, so they are well prepared for their study programme.

### 3.2.3.3 Teaching training programme

Together with Radboud University, WUR offers a teaching training programme. For the contribution of WUR to this programme WUR also receives some funding from the NPE funding. The €14k per year is used to fund an extra staff member to offer extra guidance and supervision to the students of the teaching training programme aligned with the increased needs for guidance.

### 3.2.3.4 Financial realisation NPE Education

WUR receives a total accumulated funding of €2,660,000 over the years 2021 and 2022 from the Ministry of Education, Culture, and Science for the education projects in our established NPE plan. In 2021, WUR received a total of €1,253,000. The 2021 budgeted expenses amount to €1,330,000 and is higher than what we received in 2021. The realisation started as of August 2021, after the NPE plan was approved. In the last five months of 2021, WUR spent €846,000 which is below the received government means. The remainder will be planned as additional compensational expenditure, in addition to the original budget for 2022. The compensational spending 2021 will be used in 2022 for the projects under theme 1 and 2.

WUR NPE Education 2021-2022				
In € 1.000	Budget	Realisation	Budget	Total 2021-
	2021	2021	2022	2022
Theme 1. Transitions and study progress				
1. Sufficient thesis positions and internship supervision	660	405	660	1065
2. More excursions and contact with professional field	125	111	125	236
3. More guidance on study progress and transition	200	39	200	239
Total theme 1	985	555	985	1540
Theme 2. Student well-being and social cohesion				
2.1. Increase training and facilitate interaction	315	277	315	592
Total theme 2	315	277	315	592
Others				
Teacher training programme WUR & RU	14	14	14	28
Miscellaneous funding	16		16	16
Compensational spending 2021			484	484
TOTAL planned / realised expenditure	1,330	846	1,814	2,660
Total underspend in relation to the 'budget 2021'		-484		
Funding Ministry of OCW				
Teacher training programme HE / Lerarenopleiding WO	14	14	14	28
Corona envelope	1,239	1,239	1,394	2,633
TOTAL funding	1,253	1,253	1,407	2,660

### 3.2.4 NPE Research

### 3.2.4.1 Introduction

The NPE provides funding to allow researchers with a temporary appointment, whose research is delayed due to the Covid crisis, to complete their research. This is also important for tenure track researchers finishing PhD and postdoc projects because the research carried out by the PhD candidates and postdocs in their teams form part of the criteria in their tenure track evaluations (research output, management output). The needs of researchers are divers and therefore the funding is used for tailored solutions to solve or prevent delay within the criteria of the NPE.

Wageningen University & Research expected 20 to 25 percent of the PhD candidates to experience some degree of delay due to Covid restrictions. Think of fieldwork or experiments that cannot be carried out, courses that have been postponed or employees who were at home with the children. In all cases, supervisors and managers were encouraged to look for possible solutions within the resources of their chair group and department, such as adapted work schedules, so that the project can be completed within the original time frame. WUR also took measures to help and support the chair group. Nevertheless, the NPE funding is much needed to compensate the financial costs for temporary researchers to finish their research.

WUR receives a total budget of around € 2,673,000 both in 2021 and 2022 (total accumulated funding of €5,346,000). This funding is made available for temporary researchers via internal calls. Chair groups can apply for NPE funding for temporary researchers in their group. They can use the funding for contract extensions and to compensate research costs. The proposals of chair groups that apply for the funding are assessed on the basis of the NPE criteria for research.

### 3.2.4.2 NPO measures and budget depletion in 2021

WUR receives €5,346,000 from the NPO research fund of which €2,870,000 has already been allocated to chair groups via a call in 2021.

In July 2021, a call has been issued for PhD candidates and postdocs whose research project ends in 2021 or 2022 to obtain a maximum of 6 months compensation for the delay caused by the corona measures. The call was distributed via the graduate schools, PhD councils and, insofar as these existed, postdoc councils. In October 2021 the chair groups received information about the funding they would receive.

When the chair groups spend the funding depends on the planning of the final phase of the delayed research of temporary researchers. Most of the awarded applications concern project ending in 2022 since many of the projects that ended in 2021 were already compensated by the skimmed NWO budget. Therefore the total expenditure and number of supported researchers in October to December in 2021 is lower than the granted applications and funding. In addition, chair groups first used the skimmed NWO budget first to support delayed research projects ending in 2021.

In 2021, a total of 317 k€ is spent supporting 17 researchers who finish their project. The remainder of the NPO budget will be spent after 2021. The total granted funding of €2,870,000 will help 116 researchers to finishing their project in 2022.

A second call will be issued in 2022 for research projects ending and contracts expiring in 2022 or 2023 (and maybe in 2024). This concerns research or temporary researchers that did not yet receive compensation in the previous call. In this second call, the remaining €2,476,000 will be allocated.

Summarizing table for 2021 according to the NPO protocol:

WUR NPE Research 2021		
	Number supported researchers	Total costs (k€)
a. NPO support program for recovery and	116 researchers supported by	2,870
perspective researchers	granted funding	Funding granted
	17 researchers already supported	
	with spent funding	317
		Expenditure 2021
b. Own resources and financial and non-financial	See qualitative description of	See qualitative description of
measures (approximate)	measures in 3.2.4.3	measures in 3.2.4.3

### 3.2.4.3 Other financial and non-financial measures

## **Financial measures**

# a. Skimmed NWO budget

In 2021, part of NWO's budget was transferred to the universities in order to mitigate the consequences of the covid pandemic. Via an internal call, Wageningen University has allocated these funds to extend contracts of PhD students and postdocs whose project ends in 2021 and who were delayed by a maximum of 3 months. Of these supported researchers, some were supported again with the NPO research budget causing some overlap between supported researchers of these calls. Almost all submissions could be granted and 75 PhD candidates and postdocs were supported.

# b. 0.45% salary space regulation

In 2020, the new Collective Agreement Universities has been established. In the new agreement, all involved parties agreed upon a 0.45% salary space reservation for the extension of temporary contracts of academic or support staff that could not finish their work due to the corona crisis. With this 0.45% scheme funding WUR extended the contracts of 21 temporary researchers.

# c. Compensation of scholarship PhD candidates

Scholarships PhD candidates cannot benefit from the NPE funding, skimmed NWO budget or 0.45% salary space regulation. WUR aims to treat all PhD candidates equally, whether employed or scholarship PhD candidates. Following this aim, WUR provided own budget for all the financial measures to complement the internal calls for employed PhD candidates with internal calls for scholarship PhD candidates. With the own additional funding 12 scholarship PhD Candidates could benefit from the 0.45% salary space regulation and 50 scholarship PhD candidates were supported through the skimmed NWO budget call. 30 Scholarship PhD candidates were granted funding in the NPE call for 2021 and 74 scholarship PhD candidates for 2022, funded with own resources of WUR.

# d. Support for remote working

In addition an a one-off amount of €300 net was financed from this scheme to support all employees with remote working. This benefit has been paid to all employees who were employed by the university on November 1, 2020 and therefore also to all researchers with a temporary contract of employment at the university.

## Non-financial measures

The non-financial measures that WUR has taken centrally and locally to mitigate the negative effects of the corona-measures are described in more detail in the 2020 and 2021 annual report of WUR. The measures include the Matchpoint to divide workload, IT services such as the accelerated introduction of MS Teams, the vitality programme, extended test facilities, online (PhD) education, and flexibility in research project set-ups and Tenure Track assessments. The measures were available to all researchers and helped them to finish their research. Due to the variety and amount of measures it is hard to specify and trace to what extend the measures prevented delay.

#### 3.2.5 Regulation Corona jobs (extra help in the class 2021)

WUR used the funding from the regulation 'corona jobs / extra help in the class' to support lecturers in offering education. Lecturers hired student assistants to support them in organising and offering courses, and changing their on-campus education to online or blended forms of education. The changed criteria in the second round made the corona jobs better aligned with the needs of lecturers for student assistants with more experience. In the first round in 2021, we did not use all the available funding. In total 133k was spent. Better promotion resulted in a lot of requests for funding in the second round. In the second round in 2021, 458k of the available 462k was used for extra support for lecturers. In the G1 model in this annual report the expenditures are presented. The funding for the corona jobs in 2021 was not part of the NPE plan or NPE funding, therefore the expenditures are not integrated in the financial realisation in Chapter 2.

#### 3.3 Wageningen University & Research Profiling Fund

A number of regulations for supporting students financially have been incorporated into the WU Profiling Fund:

- 1. the Student Financial Support Regulation (FOS Regulation) for force majeure, including informal care, recognised administrative activities and professional sport;
- 2. Wageningen University study financing for students following a two-year Master's programme in Social Sciences who are entitled to Dutch study finance (MCS, MDR, MID and MME);
- 3. Wageningen University Fellowship Programme (WUFP), scholarships/grants/tuition waivers for non-EEA students;
- 4. Emergency Student Funding.

Table 3.1 Overview of Wageningen Financial Support 2021

Category	Number of	Number of	Total	Average	Total	Average
	applications	allocations	allocations	payment	duration	duration
			(€)	(€)	(months)	(months)
<ol> <li>FOS regulation¹)</li> </ol>						
1.1 Force Majeure	134	134	136,511	1,019	381	2.8
1.2 Administrative/participational	446	446	675,210	1,502	1,841	4.1
1.3 Participation as a top athlete	5	5	6,689	1,338	20	4.0
Total FOS regulation	585	585	818,410	n/a	2,242	n/a
2. Social Sciences masters,	21	19	69,375	3,651	228	12
2-year²)						
3. Fellowships <sup>3</sup> )						
3.1 WUFP grants <sup>4</sup> )	n/a	87	1,489,805	17,124	966	11
3.2 WUFP tuition fee waivers <sup>4</sup> )	n/a	235	342,379	1,457	1104	4.7
4. Emergency Student	0	0	0	0	n/a	n/a
Funding¹)						
Total incl. WUFP	n/a	926	2,719,969	n/a	n/a	n/a
WUFP	606	604				

<sup>1)</sup> EEA + non-EEA.

### Comment:

- 1. A total of 585 students utilised the FOS regulation (Student Financial Support), including 18 non-EEA students: 6 due to circumstances beyond their control and 12 due to administrative activity. The application process is organised in such a way that only students who are actually eligible for the regulation can apply (student dean, head of the university sports centre).
- 2. A total of 19 students successfully applied for the "Social Sciences Master's regulation".

<sup>2)</sup> FFA.

<sup>3)</sup> Non-EEA.

<sup>&</sup>lt;sup>4)</sup> WUFP: selection of accepted MSc students.

- 3. Only non-EEA students are eligible for the WUFP. In 2021, 23 new grants for a maximum of the institutional tuition fees were awarded to talented students, totalling €433,100, and ten full grants were awarded to talented African students, totalling €328,600. The figures mentioned apply to the first year. Additional payments were for ongoing grants (a total of 26) that started in 2020. Total expenditures from the WUFP were €1,832,184 in 2021. This includes discounts and top-ups for scholarship programmes and bilateral agreements.
- 4. The grants from the Social Emergency Fund were disbursed due to unforeseen costs relating to serious family circumstances. The Emergency Social Fund was not used in 2021.

#### 3.4 Clarifications

Outsourcing of one or more components of CROHO Registered Study Programme(s) to a Private Organisation (+ costs)

Wageningen University does not outsource activities in the sense referred to above. Any outside expertise contracted for teaching (for example, as a consequence of the earlier "division of duties and concentration" operations) is contracted from higher education institution partners and not from private institutions.

### Customised programmes for companies/organisations

Wageningen University does not provide any customised programmes for companies and/or organisations in the form of CROHO registered courses leading to a certificate. Under the Wageningen University & Research umbrella, customisation in the form of post-initial courses is provided by the Wageningen Centre for Development and Innovation (WCDI) and Wageningen Academy (WA).

### **Exchange agreements**

Wageningen University has 255 exchange agreements with 206 institutions. The total number of incoming students is 436 and the total number of outgoing students is 518.

### Allocation of direct government funding for private activities

Wageningen University allocates a small portion of the direct government funding to the following private activities:

- post-initial education relating to establishing new study programmes and transferring knowledge to society;
- Student facilities such as sports facilities, training activities, and facilities;
- Student accommodation for international Master's students. Although the provision of student accommodation is not one of the university's primary duties, the acute accommodation needs nevertheless resulted in the Executive Board's decision in 2009 to invest in temporary accommodation for international students. The Supervisory Board agreed to this, in light of the state of Wageningen's housing market, particularly for students. Accommodation is rented out at fair market prices. The objective is to achieve break-even operations with these investments. No investments were made in temporary student accommodations in 2021.
- facilities to support start-ups by students or recent WU graduates.
- WU conducts projects and commissions on behalf of third parties (contract research) and uses publicly funded resources for this purpose. WU charges at least cost-effective rates for these activities. This policy rule does not apply to grants obtained from third parties, such as the Dutch Organisation for Scientific Research grants and the EU framework programmes. WU does not consider the projects covered by these funding schemes as private activities.

WU invested 8,000 in the Innovation Industries interests investment fund in 2021. A total of €88,000 has been invested in this fund in 2021.

WU is currently reporting qualitatively in the spirit of the policy rule investing using public funding in private activities, which came into effect on 15 April 2021. WU is of the opinion that all activities that fall within the scope of this policy rule make a substantial contribution to the quality of the funded activities to be realised and make a proportionate claim on public resources at acceptable risks. WU is currently consulting with the Universities of the Netherlands and the auditor on the interpretation of

the criteria in the policy rule on market distortion and cost-effectiveness as well as those on accountability in the annual report require further consultation through the sector with the Ministry.

#### 3.5 Treasury Policy

Wageningen University has incorporated the conditions of the 2016 OCW Investing, Borrowing and Derivative Regulations in its Treasury Charter. Temporary surplus liquid assets will be deposited into savings accounts or held in deposits with financial institutions that at a minimum have an A rating from two of the three large rating firms, and that have headquarters in an EU member state. No liquid assets were held in term deposits from 31 December 2021. WU has no investments and did not negotiate any derivatives. This is equivalent to the situation on 31 December 2020.

# Abridged WUR Annual Financial 4 Report

#### 4.1 Wageningen University

#### 4.1.1 Result development

WU recorded a positive result of €11.6 million in 2021, which is a decrease of €8.9 million in comparison to 2020, but €20.6 million better than was expected in the budget.

Over the past few years, WUR has experienced significant growth in FTE and turnover. In particular, the direct government funding has increased in recent years due to the transition to the Ministry of Education, Culture and Science (OCW), quality agreements, Van Rijn resources, science & technology sector plan resources, and increased student numbers. The direct government funding has also increased further compared to 2020. This concerns the previously awarded reference framework contributions (€6.8 million) from the NPO that had not yet been accounted for in the budget. The halving of the statutory tuition fees for 2021-2022 is compensated by additional direct government funding. Additionally, the turnover from research and contract funding has recovered from a decline in 2020. Opposite the additional income (€38.5 million excl. incidental income) are higher operational expenses of €40.1 million. The departments strive to translate the growth in funding into additional manpower. In practice, filling vacancies is on average lagging behind the budgeted progression. However, looking forward to 2022, WU did experience a growth spurt in FTEs in the last six months of 2021 (approximately +125). As a result, the departments ended up exceeding the final budgeted position for 2021.

The coronavirus pandemic has resulted that the departments had lower expenses than budgeted. The expected decline of tuition fees as a result of the coronavirus pandemic was less negative than initially expected. Due to higher numbers of incoming non-EEA students, tuition fees were higher than previously expected. The costs for corporate staff were higher as a results of the coronavirus pandemic. They are covered by additional government funding.

The specific additional resources for education and research that became available in the spring from the Nationaal Programma Onderwijs (NPO) (€3.9 million) have not yet been fully spent. The remaining funding from this NPO coronavirus envelope (€2.8 million) will not lead, deviating from the generic rule, to increased results for 2021. The remaining specific NPO funding will be used in 2022 for the objectives as set in the previous year, and possibly a remainder in 2023.

Table 4.1	WU's result	(in € millions)
-----------	-------------	-----------------

	2021	2020
Departments	11.9	14.1
Central departments		
- Operational result	1.2	-6.5
- Incidental result	2.9	10.2
- Addition made to the appropriated reserve for project costs in later years	-4.4	2.7
Operating result based on the reporting guidelines for educational institutions	11.6	20.5

The departments achieved a positive joint annual result of €11.9 million, which is a decrease of €2.2 million in comparison to 2020. All departments, with the exception of the Department of Animal Sciences, achieved a positive result. These positive results are mostly due to the abovementioned factors.

The operating result of the central departments amounted to €1.2 million. This is €7.7 million higher than in 2020. This is mainly due to the increased direct government funding as a result of bringing forward the reference frameworks and the price compensation received. The additional funding could only be spent to a limited extent in 2021.

The incidental results of the Executive Board mainly consist of fiscal effects over the period 2016-2020 (€5.0 million), mainly due to an additional VAT refund over the years 2016-2020 as a result of the Dutch Supreme Court ruling on the inclusion of the direct government funding in the pro rata calculation, additional depreciation (-£1.6 million), and additions to provisions (-£0.5 million). The Executive Board and corporate staff also processed a number of result items amounting to -€4.4 million that were offset by positive results in previous years. This concerns the funding allocated in 2019 and 2020 on the basis of the Van Rijn Committee report and the additional funding for science and technology research (€4.5 million) that was spent in 2021 as well as the expenditures for internal projects which will be made in the coming years (-£0.1 million). It was no longer possible to fully utilise the Van Rijn funding and the science and technology research funding in 2020. However, the annual reporting guidelines do require that this income be properly accounted for in the year of receipt in the income statement. The funding was party spent in 2021, and will lead to a lower result. Wageningen University has formed an appropriated reserve for these funds.

As the guidelines prescribe, Wageningen University provides accounting for the government funding in the year in which it was received as income. Income related to project costs that will be incurred in later years is calculated as income in the reporting year and a write-down in later years. The distortion this causes is neutralised via the appropriated reserve. In accordance with this approach,  $\in 0.1$  million of the result was added to this appropriated reserve in 2021.

#### 4.1.2 Development of turnover and costs

Income increased by €26.2 million in 2021 in comparison to 2020. The basic funding (government funding excluding targeted subsidies and tuition fees) rose from €281.1 million to €305.4 million.

WU will also be funded by the Ministry of Education, Culture and Science (OCW) from 1 January 2018. During the "harmonisation" of Wageningen University's funding in 2019 in line with the OCW funding model, the "capping rule" was abolished. This funding limit regulation, which was part of the funding system of the Ministry of Economic Affairs, meant that the government contribution to Wageningen University could not rise or fall by more than 2% annually. In addition to the cancellation of the capping rule, Wageningen University, in the context of the harmonisation, received additional resources in 2021 in accordance with earlier planning (approximately €2.8 million) in the fixed components of the funding to compensate for part of the arrears previously accumulated. Due to the higher input parameters – in this case the number of funded registered students, degrees, and PhD graduations – government funding increased by approx. €4.3 million.

The "Wissels om" report was presented by the advisory committee "Van Rijn" in 2019. This report provides various recommendations concerning the funding of higher education. On the basis of this report, the 4TU and other exact sciences faculties already received additional funding in 2019 for science/technology education and, effective from 2020, various changes have been made to the Dutch Ministry of Education, Culture and Science funding methodology. Compared to 2020, the additional government funding for "Van Rijn" for WU increased by €0.4 million to €4.0 million in 2021. The resources for the Quality Agreements also increased by €2.7 million.

The additional funds that have been made available in the context of the NPO represent an amount of €12.2 million. The normative part of this (€11.1 million) stems from additional resources related to the increased intake in university education (€6.8 million) and the compensation for the 50% reduction of the statutory tuition fee in the 2021/2022 academic year ( $ext{ } ext{ } e$ this ( $\in$ 1.1 million) has been used for specific objectives related to education and research. Finally, the compensation for increased wages and prices led to an adjustment of €5.8 million.

The income from work for third parties increased by 12% from €93.0 million to €104.5 million. This income consists of programme research funding (research funding and targeted grants), which increased by 8% to €36.4 million; co-funding projects and matching market funding, which decreased by 7% to €20.2 million; and turnover from contract research and top sectors, which increased by 18% to €47.9 million. The increased turnover from the projects is compensating the decrease that occurred in 2020 as a result of the coronavirus pandemic. Adjusted for price increases, the turnover for projects financed by external parties is a little higher than in 2019 (€98.5 million).

In comparison to 2020, staff expenses increased by €28.6 million to €301.5 million. This was due to a higher number of employees (+272 FTEs, €20.3 million), 3.4% higher salary costs per FTE (€8.8 million) as a result of CAO adjustments, increases in pension contributions and higher average grading, and a €0.5 million decrease in other personnel costs due to lower allocations to the personnel provisions. In 2021, the number of staff increased from 3,255 FTE to 3,530 FTE.

The income was €4.0 million higher than budgeted. This is partly caused by the higher direct government funding (€13.7 million). Tuition fee income was €3.0 million lower than budgeted due to the 50% reduction in tuition fees for the 2021-2022 academic year. This lower income was compensated for in the direct government funding. Income from work for third parties was also €1.1 million lower than budgeted and income from secondary activities and other income excluding sales proceeds from fixed assets was €5.5 million lower than budgeted.

Costs were €16.5 million lower than budgeted. The once-off tax refund of €5.0 million and the effort it takes to fill vacancies on time played a role in this.

#### 4.1.3 Development of balance sheet items

WU's liquidity decreased from €104.2 million in 2021 to €83.3 million. The factors that affected this drop in liquidity are listed in Table 4.2

<b>Table 4.2</b> Wageningen University liquidity overview (*in €millions)	Table 4.2	Wageningen	University	liquidity	overview	(*in €millions)
---	-----------	------------	------------	-----------	----------	-----------------

	2021
Result excl. participating interests	11.5
Cash flow from fixed assets (cash flow from investments less depreciation and sales)	-34.3
Increase in short-term receivables	-10.2
Increase in short-term debts	12.0
Decrease in provisions	-1.1
Increase in long-term debt and decrease in long-term receivables	1.2
Total	-20.9

The increase in fixed assets is caused by investments in land and buildings (€44.3 million, mostly for the third education building), equipment and inventory (€20.7 million), and intangible fixed assets (€2.1 million). The increase in short-term debts is due to the increase in paid advances. The total liquidity of €83.3 million includes advances and prepaid amounts of €133.6 million, of which €6.9 million are funds to be passed on to partners. These funds to be passed on to partners were received due to Wageningen University being the lead party for a number of consortia. These funds will be passed on to partners in 2022.

WU's solvency as of 31 December 2021 was 53.2%. This was 53.1% on 31-12-2020.

### Changes in the legal structure and capital stake

There were no changes in the legal structure and capital stake in 2021.

#### 4.1.4 Outlook for 2022

Wageningen University has budgeted an operational result (before income from exceptional valorisation) of -€4.0 million in 2022. The result will decrease compared to 2021 due to the additional expenses in relation to the continually increasing number of students. Even though enrolment is down compared to the previous year, the total number of students enrolled is still growing as more students are enrolling than leaving. The additional staff, which were recruited over the course of 2021, will be fully included in the budget for 2022.

Turnover is expected to increase to €452.0 million in 2021. This €20.8 million increase is caused by an increase in basic funding of €17.2 million to a total of €322.6 million and a decrease in research funding and contract research funding of €3.0 million to a total of €107.5 million. The other income and secondary activities will increase by €0.4 million to €21.9 million.

Government funding will increase by €21.1 million to €290.9 million. Of this, €4.9 million relates to the compensation for the 50% reduction in the statutory tuition fee that applies for the 2021-2022 academic year on the basis of the NPO, €0.7 million relates to the increase in the funding variables, and €3.9 million relates to an anticipation of additional resources to be received to cover wage and price increases. The OCW has also made additional funding (€2.7 million) available to partially offset the existing funding cap during the transition from LNV to OCW. The effect of the Van Rijn funding, the Quality Agreements, and the Science & Technology sector plan totals €6.4 million. The other effects are €2.4 million.

Tuition fees will decrease by €4.0 million to €31.7 million due to the 50% reduction of the statutory tuition fees for the 2021-2022 academic year (-€4.4 million). This will be partly compensated by a small increase of the number of students from non-EEA countries. The total student population (BSc + MSc) will stabilise at an estimated 13,200 students in October 2022.

Direct personnel costs will increase by €11.8 million to €312.3 million. This is caused by an increase in staffing levels by 146 FTE to a total of 3,673 FTE, a decline in other staff expenses by €7.8 million due to a decrease in the number of temporary employees and a 3.0% rise in average salary expenses due to increases and wage cost developments.

Liquidity will increase by €6.7 million to €90.0 million. With this cash position, the continuity of business operations in 2022 is guaranteed. However, should an additional need for liquidity arise, Wageningen University also has the option of requesting collegial funding from Wageningen Research or provide access to treasury banking.

Investments are budgeted at €32.4 million. The investments in buildings and infrastructure mainly concern investments in Omnia (€3.1 m), Zodiac (€1.9 m), thermal energy storage (€1.9 m), and other investments in buildings (€3.9 m). Facilities and Services will invest €12.5 million, mainly in IT hardware, expansion of data storage, and inventory. Decentralised investments are budgeted at €7.5 million. Of this amount, Shared Research Facilities will invest €2.5 million and Agro Technology and Food Sciences will invest €3.1 million into laboratory equipment.

For further information on the development of the results in the coming five years, we refer to the continuity section in the management report.

#### Abridged Wageningen University Annual Financial Report 4.1.5

# CONSOLIDATED BALANCE SHEET AFTER THE ALLOCATION OF THE NET RESULT (\* in $\ensuremath{\mathfrak{e}}$ 1,000)

	31-12-2021	31-12-2020
ASSETS		
FIXED ASSETS		
Intangible fixed assets	3,926	3,232
Tangible fixed assets	313,390	278,932
Financial fixed assets	2,590	2,914
Total fixed assets	319,906	285,078
CURRENT ASSETS		
Inventory	5	5
Receivables	55,367	48,321
Liquid assets	83,329	104,198
Total current assets	138,701	152,524
TOTAL ASSETS	458,607	437,602
CAPITAL AND LIABILITIES		
EQUITY CAPITAL		
General reserve	226,527	210,929
Statutory reserve	3,366	2,896
Designated reserve	14,262	18,693
EQUITY CAPITAL	244,155	232,518
PROVISIONS	11,920	12,998
LONG-TERM DEBT	4,083	3,120
SHORT-TERM DEBT	198,449	188,966
TOTAL LIABILITIES	458,607	437,602

# CONSOLIDATED PROFIT AND LOSS STATEMENT (\* in $\[ \epsilon 1,000 \]$ )

	Results for 2021	Budget for 2021	Results for 2020
INCOME			
Direct Government Funding	269,756	256,100	241,907
Tuition fees	35,677	38,700	39,153
Research funding and targeted grants	36,429	37,200	33,708
Co-funding and matching market revenue	20,160	21,500	18,883
Top sectors	3,804	4,300	2,844
Bilateral market	44,077	42,600	37,594
Secondary activities	16,620	19,200	14,679
Other income	4,859	7,800	16,398
Total income	431,382	427,400	405,166
EXPENDITURES			
Personnel costs	301,524	284,000	272,914
Depreciation	28,758	26,700	26,339
Accommodation costs	28,622	34,500	24,858
General costs	21,120	47,200	28,418
Specific costs	39,764	43,900	32,149
Total expenses	419,788	436,300	384,678
OPERATING RESULT	11,594	-8,900	20,488
Financial income and expenditures	-56	-100	-53
RESULT FROM OPERATIONAL ACTIVITIES BEFORE TAX	11,538	-9,000	20,435
Taxation on operational activities	0	0	0
Result from participating interests	99	0	28
RESULT FROM OPERATIONAL ACTIVITIES	11,637	-9,000	20,463
AFTER TAX			
Third-party share	0	0	0
Exceptional income and expenditures	0	0	0
NET RESULT	11,637	-9,000	20,463

# **CONSOLIDATED CASH FLOW STATEMENT** (in €1,000)

	2021	2020
OPERATIONAL ACTIVITIES		
Operating result	11,594	20,488
Adjustments for:		
Sale of assets	2	-12,235
Depreciation and impairments	28,758	26,339
Changes in provisions	-1,078	1,123
_	39,276	35,715
Changes in working capital:		
Change in inventory	0	47
Change in receivables	-10,296	-2,157
Changes in short-term debt	12,033	7,120
Cash flow from business operations	41,013	40,725
Interest received	1	3
Interest paid	-57	-56
Cash flow from operational activities	40,957	40,672
INVESTMENT ACTIVITIES		
Investments in intangible assets	-2,138	-2,972
Divestments in intangible assets	0	. 2
Investments in buildings and land (incl. WIU)	-44,321	-43,542
Investments in other tangible assets	-20,899	-21,706
Divestments of tangible assets	4,245	21,234
Investments in participating interests and members' capital		-8
Divestments of financial fixed assets	49	10
Cash flow from investment activities	-63,064	-46,982
FINANCING ACTIVITIES		
Change in long-term receivables	275	-2,425
Changes to equalisation account investment	963	-1,275
subsidies		
Cash flow from financing activities	1,238	-3,700
CASH FLOW	-20,869	-10,010
CHANGE IN LIQUID ASSETS		
Balance of liquid assets on 1 January	104,198	114,208
Balance of liquid assets on 31 December	83,329	104,198
Change in liquid assets	-20,869	-10,010

#### 4.1.6 Accounting Principles

### General

WU is a legal entity on the basis of the Higher Education and Research Act. WU is located in Wageningen and registered with the Chamber of Commerce (KvK) under the number 9215846. The annual financial report was prepared and validated by the Executive Board on 19 April 2022 and approved by the Supervisory Board on 17 May 2022. The annual financial report was prepared in accordance with the below accounting principles. Any departure from these principles is stated alongside the relevant financial information.

The settlements and debt ratios between the various members of the group (which are referred to as inter-group payments) have been eliminated. The figures for the previous financial year are in accordance with the figures in the annual financial report of the relevant year. Variations may arise as a result of corrections, shifts between items or changes in the rounding-off method. Variances of relevant significance are indicated in the annual accounts.

### General accounting principles for the preparation of the annual financial accounts

WU is part of a group in accordance with RJ940 that also comprises WU Holding BV, ISRIC Foundation, and Expat Center Foundation.

Receivables and payables are stated at fair value plus transaction costs on initial recognition after which they are stated at amortised cost minus any necessary provision for uncollectible debts. The amortised cost generally matches the nominal value.

The amortised cost is the amount at which a financial asset or financial liability is stated in the balance sheet on initial recognition, minus principal repayments, increased or decreased by the cumulative amortisation calculated on the basis of the effective interest method of the difference between the initial amount and the instalment, and minus any write-offs (either direct or by making a provision) due to impairments or uncollectible debts.

Monetary assets and liabilities in foreign currencies are converted at the exchange rate on the balance

Exchange rate differences are included in the profit and loss statement. Income and expenses in foreign currency are included in the profit and loss statement at the exchange rate on the date of receipt or payment.

The annual accounts were prepared pursuant to the Netherlands Civil Code, Book 2, Title 9, and the accounting standards issued by the Dutch Accounting Standards Board.

### **Use of estimates**

The preparation of the annual financial accounts demands that the board draw conclusions and makes estimates and motivations that affect the accounting principles and reported value of fixed assets and obligations, as well as of income and expenditures. The actual outcome will deviate from these estimates. The estimates and underlying motivations are continually evaluated. Adjustments to estimates are implemented in the period during which the adjustment is made as well as the following periods that are affected by this adjustment. The principal items subject to estimates are:

- valuation and life span of fixed assets;
- provisions for receivables and projects;
- provisions;
- claims.

### Consolidation

The consolidated reports incorporate the annual financial accounts of the institution, its subsidiaries and other organisations over which the institution exercises control (pursuant to the actual situation) or central management. The subsidiaries are legal entities directly or indirectly controlled by DLO Foundation, given that the institution possesses the majority of the voting rights or can control the

financial and operational activities in some other manner. Also taken into account are potential voting rights that may be exercised directly on the balance sheet date.

The annual accounts of WU, its subsidiaries and other organisations over which the institution exercises control (pursuant to the actual situation) or central management are fully incorporated into the consolidated financial report. Third party shares with respect to the group capital and the group result are reported separately.

**Table 4.3** Consolidated participating interests

	Shareholder	Registered office	% 31-12-2020	% 31-12-2021
Wageningen University Holding B.V.	Wageningen University	Wageningen	100	100
ISRIC Foundation	n/a	Wageningen	n/a	n/a
Expat Center Foundation	n/a	Wageningen	n/a	n/a

**Table 4.4** Non-consolidated participating interests

	Registered	%	%
	office	31-12-2020	31-12-2021
Ceradis B.V.	Wageningen	2	2
Bio-Prodict B.V.	Wageningen	5	0
Green Dino B.V.	Wageningen	11	11
A-Mansia Biotech SA	Louvain-la-neuve	9	5
Innovation Industries	Amsterdam	0	0
Caribou Biosciences Inc.	Delaware	0	0
Scope Biosciences Holding B.V.	Wageningen	0	10
Plant Meat Makers B.V.	Ede	5	5

### Accounting policies for the valuation of assets and liabilities

### Intangible fixed assets

Intangible fixed assets are valued at acquisition price or production price less cumulative amortisation and, if applicable, cumulative impairments. Development costs, patents and licenses, software, goodwill, and production rights are activated if the conditions established for them are met. Intangible fixed assets are valued at acquisition or production cost. Depreciation takes place on a linear basis over five years. Pursuant to statutory obligations, a statutory reserve is maintained for the capitalised amount of development costs. Write-offs as a result of permanent impairment, sale, loss or discontinuation are listed separately.

### Tangible fixed assets

Tangible fixed assets are valued at acquisition price or production cost minus accumulated depreciation. Depreciation is applied using the linear method on the basis of the estimated useful life and the residual value. Depreciation is proportionally applied in the purchase year.

Tangible fixed assets under construction or in production are valued at the acquisition price or for the amount that has already been invoiced to the company by third parties. Investments of less than €5,000 are charged directly to the profit and loss statement.

Table 4.5Depreciation periods

Type of funding	Linear depreciation
	in years
Company property/Work in progress	None
Site layout and infrastructure	30 years linear
Company buildings	
Shell	60 years linear
Fittings	30 years linear
Greenhouses	20 years linear
Fittings and furnishings/interior of company buildings	15 years linear
Sheds, miscellaneous buildings/structures	15 years linear
Machinery and equipment	
Office furniture/machines and equipment/inventory of restaurant facilities/fibre-optic	10 years linear
network/other inventory	
Laboratory equipment/audio-visual equipment/vehicles/PR and information material	5/8 years linear
ICT equipment including software (network hardware)	5 years linear
ICT equipment including software (other hardware)	3 years linear
Personal computers	4 years linear

Acquired investment subsidies and amounts from externally-financed projects are deducted from the capitalised amount in the year of purchase. Subsidies received for the purchase of assets required for the primary operations are shown as liabilities and are released during the useful life of the asset. Highly specialised equipment that can only be used for a specific project and that does not have any value beyond this project is capitalised, but is depreciated in its entirety over the potentially shorter duration of the project (in accordance with the accounting principles). This is because the economic life of this specialised equipment is equal to the project's duration.

The expenditures for major overhauls are included in the cost price of the assets as soon as these costs are incurred and comply with the capitalisation criteria. The book value of the components that are replaced is then considered as disposed and is charged to the profit and loss statement as a lump sum. All other maintenance costs are directly charged to the profit and loss statement.

The institution carries out an evaluation on each balance sheet date to determine whether there are indications that a fixed asset may be subject to an impairment. Should there be any such indications, then the realisable value of the asset is determined. If the realisable value of the individual asset cannot be determined, then the realisable value of the cash flow generating unit to which the asset belongs is determined. A write-down is applicable when the book value of an asset is higher than the realisable value, where the realisable value is higher than the market value and the business value.

When it is determined that an impairment that was included in the past no longer exists or has decreased, the increased book value of the asset is set to no higher than the original book value would have been had the impairment of the asset not been recognised.

Fixed assets that are no longer usable for the primary operations are not depreciated. Write-offs as a result of permanent impairment, sale, loss or discontinuation are listed separately.

The proceeds from the sale of (education) buildings is used to fund new (education) buildings in the future.

### Financial fixed assets

### Receivables

Receivables from and loans to participating interests, as well as the other receivables provided, are initially recognized at fair value plus the directly attributable transaction costs and subsequently valued at amortised cost using the effective interest method. Income and expenses are recognised in the profit and loss statement as soon as the receivables are transferred to a third party or are subject to an impairment (or a reversal thereof) as well as via the amortisation process.

Participating interests and capital of members over whose business and financial policy the institution exerts a significant influence are valued at net asset value. This value is determined on the basis of the group's accounting principles for the valuation and determination of the result.

Participating interests and capital of members over whose business and financial policy the institution does not exert a significant influence are valued at acquisition cost. The valuation of these assets takes into account any permanent decline in value, where relevant.

Member certificates and member accounts at cooperatives are valued at the value determined by the cooperative on the balance sheet date.

### **Inventory**

This item comprises the trading stock. The trading stock is valued in accordance with the FIFO method at the acquisition cost or production cost increased by a margin for the indirect costs.

The value of unmarketable stock or stock with a lower market value is decreased accordingly.

### **Receivables and accrued assets**

Receivables and accrued assets are stated at fair value plus transaction costs on initial recognition after which they are stated at amortised cost minus any necessary provision for uncollectible debts.

### Project costs yet to be invoiced

The balance of projects in respect of third-party contract research results in a receivable or a debt on the balance sheet. The third-party contract research is valued at the actual costs incurred, consisting of costs that are directly related to the project (such as direct personnel costs and the costs of the acquired equipment and inventory), costs that are attributable to the project activities in general and that are allocatable to the project (including the cost of technical assistance and the overhead costs of the project activities), and other costs insofar as they are contractually reimbursed by the client, minus the provision for expected losses and invoiced instalments or received advances relating to the third-party contract research. Projects for which the prepaid expenses exceed the invoiced instalments/received advances are recorded under other receivables. Projects for which this occurs are included under short-term debts.

### Liquid assets

Liquid assets are understood to mean cash and cash equivalents, the balances on bank accounts, bills of exchange and checks that are recognised at nominal value. Deposits are included under liquid assets if they are in fact immediately available — although this may be accompanied by loss of interest income.

Liquid assets that are unavailable or are expected to be unavailable for more than twelve months are classified as financial fixed assets.

### **Equity capital**

Wageningen University does not distinguish between private and public capital.

General reserve

This reserve is credited with the operating result in any year in which the result is not allocated to a specific use.

Designated reserve

Two designated reserves are formed within the equity capital at corporate level:

- The innovation fund
- Reserve in relation to projects to be carried out in future.
- Statutory reserve

A legal reserve is maintained equal to the book value of the capitalised development costs.

### **Provisions**

The provisions are valued at nominal value, with the exception of the personnel provisions formed on the basis of RJ 271. The determination of the amount of the obligations accounts for future indexation and price increases. If the effect of the time value is material, the provisions are stated at cash value.

The amount of the provision recognised is the best estimate of the amount that will be required to settle the relevant obligations and losses on the balance sheet date.

Provisions are created for:

- legally enforceable obligations or actual obligations that exist on the balance sheet date;
- · it is likely that the settlement of obligations will require an outflow of funds; and
- a reliable estimate can be made of the extent of those obligations.

### **Provision for WW and BW obligations**

The provision for WW and BW obligations is determined as the cover required for the unemployment insurance (WW) and civil (BW) obligations on the balance sheet date and the expected future obligations in relation to personnel that have already left and personnel with a temporary employment contract.

### **Provision for WIA and ZW-flex**

The provision for the Work and Income (Capacity for Work) Act (WIA) and Sickness Benefits Act (ZWflex) obligations covers the obligations pursuant to these Acts as anticipated on the balance sheet date.

### Service bonus provisions

The anticipated obligation arising from future service (anniversary) bonuses is determined on the basis of historical information and withdrawals are made on the basis of realisation. The present value is determined on the basis of the prevailing market rate of interest for WU.

### **Provisions for reorganisation expenses**

This provision was formed to cover anticipated costs incurred as a result of decisions regarding current or intended reorganisations that have been made and announced within the organisation.

### **Provisions for product/contract risks**

This provision covers the expected cost of loss-making contracts, guarantees and claims arising from services and products delivered to third parties.

### Long-term debt

Long-term debt concerns liabilities that are due in more than one year from the end of the relevant

On initial recognition of long-term debt, this is stated at fair value, less the directly attributable transaction costs.

The long-term debt is valued after the first valuation at the amortised cost price according to the effective interest method. Profit or loss is recognised in the income statement as soon as the payables are no longer recognised in the balance sheet, as well as through the amortisation process.

### **Short-term debt**

Short-term debt concerns liabilities that are due within one year from the end of the relevant financial year. On initial recognition of short-term debt, this is stated at fair value, less the directly attributable transaction costs. The short-term liabilities are valued after the first valuation at the amortised cost price according to the effective interest method. Profit or loss is recognised in the income statement as soon as the payables are no longer recognised in the balance sheet, as well as through the amortisation process.

### Accounting principles to determine income and expenses

### General

Income and expenditures are the proceeds and costs which can be allocated to the relevant financial year or activity, regardless of whether they have resulted in receipts and payments during the annual reporting period.

Income is recognised in the year in which the products were delivered or the services were provided to clients. Losses and risks arising before the end of the financial year are taken into account if they are known before the preparation of the annual financial accounts.

### Direct government funding and other payments

Direct government funding is included as income in the year in which the funding is received. Components of direct government funding that can be considered to have been specifically allocated are added as income to the extent to which costs have been incurred for the activity in question. Other payments are included in the result in the year in which the project is carried out or the costs are incurred.

### **Tuition and course fees**

The statutory tuition fees and institutional tuition fees are recognised in the accounts of the reporting year under tuition fees. The payments for courses for professionals are included under course fees.

### Other government funding and grants

Government grants are initially recognised on the balance sheet as income received in advance as soon as there is a reasonable certainty that they will be received and that Wageningen University will meet the associated conditions. Subsidies to compensate for costs incurred by the group are systematically recorded as revenue in the statement of income and expenses in the same period in which the costs are incurred. Subsidies to compensate the group for the costs of an asset are systematically recorded in the statement of income and expenses during the asset's service life. If the proceeds are related to a specific activity, they are recognised as income in proportion to the activities performed.

### Income from third-party contract research

Proceeds in respect of third-party contract research are recorded as income in the statement of income and expenses for an equal amount of incurred costs, insofar as these are contractually reimbursed by the client.

### Costs

The costs are determined with due observance of the aforementioned accounting policies and allocated to the relevant reporting year. Foreseeable payables and possible losses that originate before the end of the financial year are taken into account if they became known before drawing up the annual financial report and the conditions for recognising provisions have been met.

Wages, salaries, and social security contributions are recognised in the profit and loss account on the basis of the terms of employment, insofar as they are owed to employees or the tax authority respectively.

### **Interest**

Interest is allocated to successive reporting periods in proportion to the remaining principal. Premiums/discounts and redemption premiums are attributed to the successive reporting periods as interest expenses so that, together with the interest payable on the loan, the effective interest is recognised in the profit and loss account and so that the balance sheet shows the amortised cost of the debt on balance. Periodic interest expenses and similar charges are charged to the year in which they become due.

### ACCOUNTING PRINCIPLES FOR THE PREPARATION OF THE CASH FLOW STATEMENT

The cash flow statement was prepared using the indirect method.

### **SYSTEM CHANGES**

Not applicable.

### **CHANGES IN ACCOUNTING ESTIMATES**

No changes in estimates were made in 2021.

#### 4.1.7 Auditor's report by the independent auditor

To: the Supervisory Board of Wageningen University

### Our opinion

The abridged annual financial report of Wageningen University 2021 included in Chapter 4.1 of the Wageningen University & Research Annual Report 2021 (hereinafter: the abridged annual financial report) is directly derived from the full audited Wageningen University Annual Financial Report 2021. In our opinion, the abridged annual financial report included in Chapter 4.1 of the Wageningen University & Research Annual Report is consistent with the audited Wageningen University 2021 annual financial report in all materially relevant aspects in accordance with the basic principles as described in point 4.1.6 of the explanation.

### Not applicable.

- the abridged consolidated balance sheet as of 31 December 2021;
- the abridged consolidated profit and loss statement for 2021;
- the abridged consolidated cash-flow statement for 2021;
- the notes comprising a summary of the accounting principles and other explanatory information.

### Abridged annual financial report

The abridged annual financial report does not contain all the explanations required on the basis of the Annual Accounts Regulations for Educational Institutions (Regeling jaarverslaggeving onderwijs). The adjustment has no effect on the valuation of the existing greenhouses: it will only be used for newly built greenhouses.

### The audited annual financial report and our auditor's report are included

We approved the audited Annual Financial Report 2021 of Wageningen University in our auditor's report from 20 May 2022.

### This adjustment is only recognised for new investments as well.

The Executive Board is responsible for the preparation of the abridged annual financial report in accordance with the basic principles as described in 4.1.6 of the explanation.

The Supervisory Board is responsible for overseeing Wageningen University's financial reporting process.

### Our responsibilities

Our responsibility is to draw a conclusion about whether this abridged annual financial report is in all materially relevant aspects, consistent with the audited annual financial report based on our audit, which was conducted in accordance with Dutch law, including the Dutch Standards on Auditing 810, "Opdrachten om te rapporteren betreffende samengevatte financiële overzichten".

Arnhem, 20 May 2022

Ernst & Young Accountants LLP Signed on its behalf by

M. Verschoor RA

#### 4.2 Wageningen Research Foundation

#### 4.2.1 Result Development

Wageningen Research Foundation (WR) obtained a positive net result of €9.4 million in 2021. This result is €7.6 million lower than the net result for 2020 (€17.0 million). The pre-tax result from ordinary operational activities amounted to €13.1 million.

An important reason for the positive result is the combination of a full order portfolio and a tight labour market, resulting in high productivity. There has been some displacement within the order portfolio (including internal R&D projects). Some of the orders have been unavoidably postponed until 2022. Priority was given to the completion of assignments for the Ministry of Agriculture, Nature and Food Quality. At the end of 2021, the Ministry of Agriculture, Nature and Food Quality's assignments had decreased compared to 2020. In recent years, this workload, as well as the Ministry of Agriculture, Nature and Food Quality's turnover, has been steadily increasing. Due to the full order portfolio, not all scheduled internal R&D projects, which are at the company's own risk and expense, were carried out. However, R&D did catch up in the second half of the year. The coronavirus pandemic has mainly resulted in lower overall costs and only to a limited extent in specific additional expenses. Whereas the coronavirus led to significant operational changes in 2020 and the subsequent measures, WR was able to execute the contracts in 2021 using coronavirus-adapted working methods, which did not affect productivity in 2021.

**Table 4.6** Breakdown of the result of Wageningen Research Foundation (in € millions)

	2021	2020
Result from institutes and primary process	13.2	16.5
Result from housing and internal WW/BW premiums including cost of capital and interests	5.6	6.8
Central departments:		
Incidental	-0.5	0.3
Operational	-5.2	-1.2
Wageningen Research operating result	13.1	22.4
Corporate tax	-3.9	-5.4
Result from participating interests	0.2	0.0
Wageningen Research Net result	9.4	17.0

The departments achieved a positive joint annual result of €13.2 million, which is a decrease of €3.3 million in comparison to 2020.

#### 4.2.2 Development of turnover and costs

Turnover for 2021 was €372.1 million. An increase of 4.8% due to increasing demand. For 2020, the total turnover was €355.1 million.

An additional turnover of €17.0 million was achieved compared to 2020. Only the revenues from ancillary activities, mainly analysis and consulting, is lagging behind the 2020 realisation. This is primarily due to the fact that WR did not repeat the coronavirus test processing in 2021 at its request. The ancillary activities in 2021 itself were affected by restrictions imposed by the government in the context of the coronavirus, including the obligation to work from home.

In comparison to 2020, staff expenses increased by €12.4 million to €233.7 million. This increase is attributable to the increase in the number of FTEs, excluding interns, by 117 and to an increase in average salary costs by 3.3% (due to a 2.4% increase in wages, a 5.8% increase in social security costs and a 6.5% increase in pension contributions.

### **Development of balance sheet items**

Liquid assets (€135.8 million) decreased by €7.9 million in comparison with the end of 2020 (€143.7 million)

Table 4.7 Wageningen Research liquidity development (in € millions)

	2021
Net result	+9.4
Net decrease in fixed assets (investments minus depreciation and sales)	+2.0
Decrease in short-term debt and receivables	-10.2
Decrease in provisions	-2.2
Decrease in long-term debt and receivables	-6.7
Result from participating interests	-0.2
Total reduction in cash and cash equivalents	-7.9

The change in fixed assets consists of €20.3 million in building and inventory depreciation; investment expenditures (including participating interests and members' capital) to the amount of €20.9 million; and divestments in the amount of +€2.6 million. The amount of the advances received, including funds to be paid to partners, amounted to €85.1 million on the balance sheet date. Partially due to the positive result, solvency rose to 62.6%. At year-end 2020, solvency was 60.6%.

### Changes in the legal structure and capital stake

Wageningen Research Foundation no longer has any capital interests in Bfactory BV, Telemetronics Biometry BV, and Knowhouse BV.

#### 4.2.3 Outlook for 2022

For 2022, Wageningen Research Foundation, unlike the previous years, budgeted a negative result of -€1.5 million after tax. In comparison to 2021, a number of important tariffs for 2022 will be lower, a collective labour agreement increase has been taken into account that was estimated to be realistic at the time the budget was drafted, and in-house R&D investments will increase in volume. The 2022 budget takes an increase of approximately 150 FTEs into account compared to the 2021 forecast in order to fulfil all research ambitions. The tight labour market may mean that the envisaged growth in FTEs will not be fully achieved and/or will be delayed. This could mean that external turnover will be prioritised in capacity planning, which will lead to the expected result being higher than currently budgeted.

The total Wageningen Research turnover for 2022 is budgeted at €390.3 million, €18.2 million higher than the result for 2021. The largest part of this increase concerns top sectors ( $\leq$ 5.5 million), followed by the bilateral market (€3.9 million), and the co-funding and grant market (€2.3 million). The institutes are focused on obtaining more turnover from the business community, Dutch municipalities, and provinces and in doing so also achieving higher project margins.

Investments are budgeted at €38.8 million. The budgeted investments in buildings and infrastructure amount to €27.9 million. These investments mainly concern major maintenance and renovation on Runderweg (€7.3 million) and building modifications for thermal energy storage (ATES, €5.5 million) and in the context of the strategic housing plan Remote Working (€3.7 million). Furthermore, investments are made in the pilot farms "Droevendaal" (€3.2 million) and "Open Cultivation" (€3.6 million). The plan costs for Born Oost are budgeted at €2.7 million.

Wageningen Research expects a liquid assets balance at the end of 2022 of €125.0 million. The budgeted decrease of the liquid assets is mostly due to the investment expenditures. The budgeted solvency at the end of 2022 is 63%.

#### Abridged Wageningen Research Annual Financial Report 4.2.4

# CONSOLIDATED BALANCE SHEET AFTER THE ALLOCATION OF THE NET RESULT (\* in $\ensuremath{\mathfrak{e}}$ 1,000)

Balance sheet	31-12-2021	31-12-2020
ASSETS		
FIXED ASSETS		
Intangible fixed assets	3,905	2,870
Tangible fixed assets	301,966	305,196
Financial fixed assets	36,806	36,129
Total fixed assets	342,677	344,19
CURRENT ASSETS		
Inventory	4,293	3,35
Receivables and accrued assets	93,196	88,012
Liquid assets	135,803	143,740
Total current assets	233,292	235,103
TOTAL ASSETS	575,969	579,298
CAPITAL AND LIABILITIES		
EQUITY CAPITAL		
Statutory reserve	3,866	2,760
Other reserves	350,427	341,70
Appropriated reserve	6,030	6,500
TOTAL EQUITY CAPITAL	360,323	350,963
THIRD-PARTY SHARE	0	(
GROUP CAPITAL	360,323	350,963
PROVISIONS	13,580	15,82
LONG-TERM DEBT	27,680	34,020
SHORT-TERM DEBT	174,386	178,48

# CONSOLIDATED PROFIT AND LOSS STATEMENT (\* in $\[ \epsilon 1,000 \]$ )

	Results for 2021	Results for 2020
INCOME		
Basic funding	34,851	30,61
Programme funding	103,898	99,71
Co-funding and subsidy market	26,989	23,854
Top sectors	71,316	63,45
Bilateral market	96,511	88,26
Secondary activities	36,039	44,07
Other income	2,545	5,088
Total income	372,149	355,056
EXPENDITURES		
Personnel costs	233,707	221,342
General costs	72,641	59,583
Specific costs	49,043	48,178
Total expenses	355,391	329,107
OPERATING RESULT	16,758	25,949
Financial income and expenditures	-3,606	-3,709
RESULT FROM OPERATIONAL ACTIVITIES	13,152	22,240
BEFORE TAX		
Taxation on operational activities	-3,965	-5,402
Result from participating interests	173	127
RESULT FROM OPERATIONAL ACTIVITIES	9,360	16,96
AFTER TAX		
Third-party share	0	(
Exceptional income and expenditures	0	1
NET RESULT	9,360	16,965

# **CONSOLIDATED CASH FLOW STATEMENT** (in €1,000)

	Results for 2021	Results for 2020
OPERATIONAL ACTIVITIES		
Operating result	16,758	25,949
Adjustment for sale of assets	-494	-1,174
Depreciation and impairments	20,303	19,368
Changes in provisions	-2,248	-5,275
	34,319	38,868
Changes in inventory	-942	656
Changes in receivables	-5,184	-4,412
Changes in short-term debt	-1,872	20,073
Cash flow from business operations	26,321	55,185
Interest received	136	120
Interest paid	-3,742	-3,829
Income tax paid	-6,867	-6,870
Cash flow from operational activities	15,848	44,606
INVESTMENT ACTIVITIES		
Investments in intangible assets	-1,642	-2,409
Investments in buildings, sites, and WIU	-11,421	-18,990
Investments in other tangible assets	-7,696	-7,152
Investments in participating interests and	-167	-181
members' capital		
Correction regarding investment invoices still to be paid	673	375
Divestments of fixed assets	3,145	1,562
Cash flow from investment activities	-17,108	-26,795
FINANCING ACTIVITIES		
Changes in long-term Ministry of Agriculture,	3,944	3,903
Nature and Food Quality receivables		
Changes in long-term Ministry of Agriculture,	-6,409	-6,303
Nature and Food Quality debt		
Change in other long-term debt	-4,212	-829
Change in equity capital	0	-4
Cash flow from financing activities	-6,677	-3,233
CASH FLOW	-7,937	14,578
CHANGE IN LIQUID ASSETS		
Balance of liquid assets on 1 January	143,740	129,162
Balance of liquid assets on 31 December	135,803	143,740
Change in liquid assets	-7,937	14,578

#### 4.2.5 Accounting Principles

### General

The Wageningen Research Foundation has its registered office in Wageningen and is registered in the commercial register under number 09098104.

The annual financial report was prepared and validated by the Executive Board on 25 April 2022 and approved by the Supervisory Board on 18 May 2022. The annual financial report was prepared in accordance with the below accounting principles. Any departure from these principles is stated alongside the relevant financial information.

The settlements and debt ratios between the various members of the group (which are referred to as inter-group payments) have been eliminated. The figures for the previous financial year are in accordance with the figures in the annual financial report of the relevant year. Variations may arise as a result of corrections, shifts between items or changes in the rounding-off method. Variances of relevant significance are indicated in the annual accounts.

### General accounting principles for the preparation of the annual financial accounts

General accounting principles for the preparation of the annual financial accounts Wageningen Research Foundation, Wageningen Research Holding B.V. and a number of subsidiaries are grouped together.

Receivables and payables are stated at fair value plus transaction costs on initial recognition after which they are stated at amortised cost minus any necessary provision for uncollectible debts. The amortised cost generally matches the nominal value.

The amortised cost is the amount at which a financial asset or financial liability is stated in the balance sheet on initial recognition, minus principal repayments, increased or decreased by the cumulative amortisation calculated on the basis of the effective interest method of the difference between the initial amount and the instalment, and minus any write-offs (either direct or by making a provision) due to impairments or uncollectible debts.

Monetary assets and liabilities in foreign currencies are converted at the exchange rate on the balance

Exchange rate differences are included in the profit and loss statement. Income and expenses in foreign currency are included in the profit and loss statement at the exchange rate on the date of receipt or payment.

The annual financial accounts are prepared in accordance with the Netherlands Civil Code, Book 2, Title 9, and the accounting standards issued by the Dutch Accounting Standards Board.

### Use of estimates

The preparation of the annual financial accounts demands that the board draw conclusions and makes estimates and motivations that affect the accounting principles and reported value of fixed assets and obligations, as well as of income and expenditures. The actual outcome will deviate from these estimates. The estimates and underlying motivations are continually evaluated. Adjustments to estimates are implemented in the period during which the adjustment is made as well as the following periods that are affected by this adjustment. The principal items subject to estimates are:

- valuation and life span of fixed assets
- Provisions for receivables and projects;
- Provisions;
- claims
- valuation of projects in accordance with percentage of completion

### Consolidation

The consolidated reports incorporate the annual financial accounts of Wageningen Research, its subsidiaries and other organisations over which the institution exercises control (pursuant to the actual situation) or central management. The subsidiaries are legal entities directly or indirectly controlled by Wageningen Research, given that the institution possesses the majority of the voting rights or can control the financial and operational activities in some other manner. Also taken into account are potential voting rights that may be exercised directly on the balance sheet date. The annual financial accounts of Wageningen Research, its subsidiaries and other organisations over which the institution exercises control (pursuant to the actual situation) or central management are fully incorporated into the consolidated financial report. Third party shares with respect to the group capital and the group result are reported separately.

**Table 4.8** Consolidated participating interests

	Shareholder	403	Registered	% end of	% end of
			office	2020	2019
Agri New ventures B.V.	WBG	N	Wageningen	100%	100%
Wageningen Research Holding B.V.	Wageningen	N	Wageningen	100%	100%
	Research				
Exploitatiemaatschappij	WBG	N	Wageningen	100%	100%
Windmolenparken Lelystad B.V.					
Wageningen Business Generator B.V.	Holding	N	Wageningen	100%	100%
Windmolenpark Neushoorntocht B.V.	WBG	N	Wageningen	100%	100%
Windmolenpark Mammoethtocht B.V.	WBG	N	Wageningen	100%	100%
Stichting Akkerweb	n/a	N	Wageningen	n/a	n/a

**Table 4.9** Non-consolidated participating interests valued at acquisition cost

	Shareholder	Registered	% end of 2020	% end of 2021
		office		
Bfactory B.V.	WBG	Wageningen	17%	-
Isolife B.V.	WBG	Wageningen	5%	5%
Telemetronics Biometry B.V.	WBG	Heteren	4%	-
Wageningen Science & Technology Consulting	Holding	Beijing	100%	100%
Services Ltd.*				

<sup>\*</sup> in connection with small size, processed at acquisition price.

Table 4.10 Non-consolidated participating interests valued at net asset value

	Shareholder	Registered office	% end of 2020	% end of 2021
CoVaccine B.V.	WBG	Lelystad	25%	25%
Fresh Forward Holding B.V.	WBG	Wageningen	49%	49%
Knowhouse B.V.	WBG	Horst	30%	-
VOF Oostwaardhoeve	ANV	Slootdorp	50%	50%

### **ACCOUNTING POLICIES FOR THE VALUATION OF ASSETS AND LIABILITIES**

### Intangible fixed assets

Intangible fixed assets are valued at acquisition price or production price less cumulative amortisation and, if applicable, cumulative impairments. Development costs, patents and licenses, software, goodwill, and production rights are activated if the conditions established for them are met. Intangible fixed assets are valued at acquisition or production cost. Depreciation takes place on a linear basis over five years. Pursuant to statutory obligations, a statutory reserve is maintained for the capitalised amount of development costs. Write-offs as a result of permanent impairment, sale, loss or discontinuation are listed separately.

### Tangible fixed assets

Tangible fixed assets are valued at acquisition price or production cost minus accumulated depreciation. Depreciation is applied using the linear method on the basis of the estimated useful life and the residual value. Depreciation is proportionally applied in the purchase year.

Tangible fixed assets under construction or in production are valued at the acquisition price or for the amount that has already been invoiced to the company by third parties. Investments of less than €5,000 are charged directly to the profit and loss statement.

Table 4.11 Depreciation periods

Type of funding	Linear depreciation
	in years
Company property / Work in progress	None
Site layout and infrastructure	30 years linear
Company buildings	
Shell	60 years linear
Finishings (limited to company building end date)	30 years linear
Greenhouses	20 years linear
Fittings and furnishings/interior of company buildings (limited to company building end date)	15 years linear
Sheds, miscellaneous buildings/structures	15 years linear
Machinery and equipment	
Office furniture/machines and equipment/inventory of restaurant facilities/fibre-optic	10 years linear
network/other inventory	
Laboratory equipment/audio-visual equipment/vehicles/PR and information material	5/8 years linear
ICT equipment including software (network hardware)	5 years linear
ICT equipment including software (other hardware)	3 years linear
Personal Computers	4 years linear

Acquired investment subsidies and amounts from externally-financed projects are deducted from the capitalised amount in the year of purchase. Subsidies received for the purchase of assets required for the primary operations are shown as liabilities and are released during the useful life of the asset. Highly specialised equipment that can only be used for a specific project and that does not have any value beyond this project is capitalised, but is depreciated in its entirety over the potentially shorter duration of the project (in accordance with the accounting principles). This is because the economic life of this specialised equipment is equal to the project's duration. The demo greenhouses are an example of this and are depreciated over a period of five years.

The expenditures for major overhauls are included in the cost price of the assets as soon as these costs are incurred and comply with the capitalisation criteria. The book value of the components that are replaced is then considered as disposed and is charged to the profit and loss statement as a lump sum. All other maintenance costs are directly charged to the profit and loss statement.

The institution carries out an evaluation on each balance sheet date to determine whether there are indications that a fixed asset may be subject to an impairment. Should there be any such indications, then the realisable value of the asset is determined. If the realisable value of the individual asset cannot be determined, then the realisable value of the cash flow generating unit to which the asset belongs is determined. A write-down is applicable when the book value of an asset is higher than the realisable value, where the realisable value is higher than the market value and the business value.

When it is determined that a write-down that was included in the past no longer exists or has decreased, then the increased book value of the asset is set no higher than the original book value would have been without the application of the write-down of the asset.

Fixed assets that are no longer usable for the primary operations are not depreciated. Write-offs as a result of permanent impairment, sale, loss or discontinuation are listed separately.

### Financial fixed assets

### **Deferred tax receivables**

For the valuation and processing of deferred tax assets, reference is made to the separate section on taxation of the profit or loss.

#### Receivables

Receivables from and loans to participating interests, as well as the other receivables provided, are initially recognised at fair value plus the directly attributable transaction costs and subsequently valued at amortised cost using the effective interest method. Income and expenses are recognised in the profit and loss statement as soon as the receivables are transferred to a third party or are subject to an impairment (or a reversal thereof) as well as via the amortisation process.

Participating interests and capital of members over whose business and financial policy the institution exerts a significant influence are valued at net asset value. This value is determined on the basis of the group's accounting principles for the valuation and determination of the result. Participating interests and capital of members over whose business and financial policy the institution does not exert a significant influence are valued at acquisition cost. The valuation of these assets takes into account any permanent decline in value, where relevant. Member certificates and member accounts at cooperatives are valued at the value determined by the cooperative on the balance sheet date.

### **Inventory**

This item is comprised of the trading stock, finished product, livestock and stock of harvested agricultural produce. The trading inventory and finished products are valued in accordance with the FIFO method at the acquisition cost or production cost, including a supplement for indirect costs. The valuation of livestock and stock of harvested agricultural produce is based on market prices. The value of unmarketable stock or stock with a lower market value is decreased accordingly. On the basis of the average annual use in the last ten years, a provision is made for antisera that according to this calculation have been in stock longer than three years.

The stock of finished product is valued in accordance with the FIFO method at the acquisition cost or production cost increased by a margin for the indirect costs.

### Receivables and accrued assets

Receivables and accrued assets are stated at fair value plus transaction costs on initial recognition after which they are stated at amortised cost minus any necessary provision for uncollectible debts.

### Project costs yet to be invoiced

The balance of projects in respect of third-party contract research results in a receivable or a debt on the balance sheet. The third-party contract research is valued at the actual costs incurred, consisting of the costs that are directly related to a project (such as direct personnel costs and the costs of the acquired equipment and inventory), the costs that are attributable to project activities in general and that are allocatable to a project (including the cost of technical assistance and the overhead costs of the project activities), and other costs insofar as they are contractually reimbursed by the client, minus the provision for expected losses and invoiced instalments or received advances relating to the third-party contract research. Projects for which the prepaid expenses exceed the invoiced instalments/received advances are recorded under other receivables. Projects for which the instalments invoiced in advance/received advances exceed the prepaid expenses are recorded under short-term debts.

### Liquid assets

Liquid assets are understood to mean cash and cash equivalents, the balances on bank accounts, bills of exchange and checks that are recognised at nominal value. Deposits are included under liquid assets if they are in fact immediately available — although this may be accompanied by loss of interest income. Liquid assets that are unavailable or are expected to be unavailable for more than twelve months are classified as financial fixed assets.

### **Equity capital**

Issued capital The nominal value of issued and paid-in capital is included under this item.

- Statutory reserve
  - The mandatory maintenance of a statutory reserve for research and development costs capitalised in the balance sheet.
- Appropriated reserve
  - Concerns a future use established by means of a decision of the Executive Board, without establishing any obligation to a third party in this context, be it legal or factual.
- · General reserve
  - This reserve is credited with the operating result in any year in which the result is not allocated to a specific use.

### Third-party share

The share of third parties in a participating interest consolidated in full by the group is included in the "Third-party share" item in the annual financial report.

### **Provisions**

The provisions are valued at nominal value, with the exception of the personnel provisions formed on the basis of RJ 271. The determination of the amount of the obligations accounts for future indexation and price increases. The amount of the provision recognised is the best estimate of the amount that will be required to settle the relevant obligations and losses on the balance sheet date. If the effect of the time value is material, the provisions are stated at cash value.

Provisions are created for:

- legally enforceable obligations or actual obligations that exist on the balance sheet date;
- it is likely that the settlement of obligations will require an outflow of funds; and
- a reliable estimate can be made of the extent of those obligations.

### Provision for unemployment insurance obligations

Provisions for unemployment insurance obligations are determined as the amount required to cover the unemployment insurance obligations on the balance sheet date and the expected future obligations in relation to personnel that have already left and personnel with a temporary employment contract.

### **Provision for WIA/ZW-flex**

The provision for the Resumption of Work for Partially Disabled Persons Act (WIA) and Sickness Benefits Act (ZW-flex) covers the WIA and ZW-flex obligations for which the organisation bears the risk as of 1 January 2017, as anticipated on the balance sheet date.

### Service bonus provisions

The anticipated obligation arising from future service (anniversary) bonuses is determined on the basis of historical information and withdrawals are made on a realisation basis. The present value is determined on the basis of the prevailing market rate of interest for Wageningen University.

### **Provisions for reorganisation expenses**

This provision was formed to cover anticipated costs incurred as a result of decisions regarding current or intended reorganisations that have been made and announced within the organisation.

### **Provisions for product/contract risks**

This provision covers the expected cost of loss-making contracts, guarantees and claims arising from services and products delivered to third parties.

### Long-term debt

Long-term debt concerns liabilities that are due in more than one year from the end of the relevant financial year.

On initial recognition of long-term debt, this is stated at fair value, less the directly attributable transaction costs.

The long-term debt is valued after the first valuation at the amortised cost price according to the effective interest method. Profit or loss is recognised in the income statement as soon as the payables are no longer recognised in the balance sheet, as well as through the amortisation process.

### Short-term debt

Short-term debt concerns liabilities that are due within one year from the end of the relevant financial year.

On initial recognition of short-term debt, this is stated at fair value, less the directly attributable transaction costs.

The short-term liabilities are valued after the first valuation at the amortised cost price according to the effective interest method. Profit or loss is recognised in the income statement as soon as the payables are no longer recognised in the balance sheet, as well as through the amortisation process.

### **ACCOUNTING PRINCIPLES TO DETERMINE INCOME AND EXPENSES**

### General

Income and expenditures are the proceeds and costs which can be allocated to the relevant financial year or activity, regardless of whether they have resulted in receipts and payments during the annual reporting period.

Income is recognised in the year in which the products were delivered or the services were provided to clients. Losses and risks arising before the end of the financial year are taken into account if they are known before the preparation of the annual financial accounts.

The income from contract research is determined on the basis of the direct costs, including a supplement for indirect costs to a maximum of the rate to be paid by the finance provider. Results are calculated in proportion to the progress of the project.

Revenue from the Ministry of Agriculture, Nature and Food Quality (LNV) falling under the ministry's funding regulation is determined on the basis of the direct costs, including a supplement for indirect costs. The margin for indirect costs is determined once a year in accordance with the prevailing system for calculating the margin. Results are calculated in proportion to the progress of the project.

Taxation on the profits includes the corporate tax (payable and deductible) for the entire financial year. This is the corporate income tax expected to be payable for the taxable profit in the financial year, taking into account the fiscal rules and facilities, calculated on the basis of the applicable tax rates on the reporting date, and any corrections to the taxes owed for prior years, such as fiscally compensable losses from prior financial years.

Furthermore, Wageningen Research has made a provision for a deferred tax asset. This is based on the difference between the valuations for tax and commercial purposes of tangible fixed assets (company buildings in particular) at the time of the introduction of the liability to pay tax and the limitation of fiscal depreciation to the value of buildings to the value for the purposes of the Valuation of Immovable Property Act (WOZ). Since the period within which taxable profits at Wageningen Research can be considered probable is relatively short, in part due to the lack of a profit motive over the long-term, the deferred tax is calculated for a period of five years.

The costs are determined with due observance of the aforementioned accounting policies and allocated to the relevant reporting year. Foreseeable payables and possible losses that originate before the end of the financial year are taken into account if they became known before drawing up the annual financial report and the conditions for recognising provisions have been met.

Wages, salaries, and social security contributions are recognised in the profit and loss account on the basis of the terms of employment, insofar as they are owed to employees or the tax authority respectively.

Interest is allocated to successive reporting periods in proportion to the remaining principal. Premiums/discounts and redemption premiums are attributed to the successive reporting periods as interest expenses so that, together with the interest payable on the loan, the effective interest is recognised in the profit and loss account and so that the balance sheet shows the amortised cost of the debt on balance. Periodic interest expenses and similar charges are charged to the year in which they become due.

### ACCOUNTING PRINCIPLES FOR THE PREPARATION OF THE CASH FLOW STATEMENT

The cash flow statement was prepared using the indirect method.

### **SYSTEM CHANGES**

Not applicable.

### **CHANGES IN ACCOUNTING ESTIMATES**

No changes in estimates were made in 2021.

#### 4.2.6 Auditor's report by the independent auditor

To: the Supervisory Board of Wageningen Research Foundation

### Our opinion

The abridged annual financial report of Wageningen Research for 2021 included in Chapter 4.2 of the Wageningen University & Research Annual Report 2021 (hereinafter: the abridged annual financial report) is derived from the audited Wageningen Research Foundation Annual Financial Report 2021 In our opinion, the abridged annual financial report included in Chapter 4.2 of the Wageningen University & Research Annual Report is consistent with the audited Wageningen Research Foundation 2021 annual financial report in all materially relevant aspects in accordance with the basic principles as described in point 4.2.5 of the explanation.

### Not applicable.

- the abridged consolidated balance sheet as of 31 December 2021;
- the abridged consolidated profit and loss statement for 2021;
- the abridged consolidated cash-flow statement for 2021;
- the notes comprising a summary of the accounting principles and other explanatory information.

### Abridged annual financial report

The abridged annual financial report does not contain all the explanations required on the basis of Title 9, Book 2 of the Dutch Civil Code and the Standard Remuneration Act for Public and Semi-public Sector Senior Officials (WNT). Consulting the abridged financial report, therefore, cannot take the place of consulting the audited and approved Wageningen Research Annual Financial Report.

### The audited annual financial report and our auditor's report are included

We approved the audited Annual Financial Report 2021 of Wageningen Research Foundation in our auditor's report from 20 May 2022.

### This adjustment is only recognised for new investments as well.

The Executive Board is responsible for the preparation of the abridged annual financial report in accordance with the basic principles as described in 4.2.5 of the explanation.

The Supervisory Board is responsible for overseeing Wageningen Research's financial reporting process.

### Our responsibilities

Our responsibility is to draw a conclusion about whether this abridged annual financial report is in all materially relevant aspects, consistent with the audited annual financial report based on our audit, which was conducted in accordance with Dutch law, including the Dutch Standards on Auditing 810, "Opdrachten om te rapporteren betreffende samengevatte financiële overzichten".

Arnhem, 20 May 2022

Ernst & Young Accountants LLP Signed on its behalf by

M. Verschoor RA

# Appendix 1 Education at Wageningen University

 Table B1.1
 List of Bachelor's and Master's programmes 2021 2022

Bachelor's	Master's
WO Development Studies	
Internationale Ontwikkelingsstudies (International	International Development Studies
Development Studies)	
WO Health Sciences	
Gezondheid en Maatschappij (Health and Society)	
WO Leisure and Tourism	
Tourism (joint degree)	Tourism, Society and Environment
WO Environmental Sciences	
Environmental Sciences	Environmental Sciences
	Urban Environmental Management
	Metropolitan Analysis, Design and Engineering (joint
	degree)
WO Earth Sciences	
Soil, Water, Atmosphere	Earth and Environment
WO Management Studies Group	
Bedrijfs- en Consumentenwetenschappen (Management and	Management, Economics and Consumer Studies
Consumer Studies)	
WO Communication Science	
Communicatie en Life Sciences (Communication and Life	Communication, Health and Life Sciences
Sciences)	
WO Chemistry	
Moleculaire levenswetenschappen (Molecular Life Sciences)	Molecular Life Sciences
WO Life Sciences and Natural Resources	
Agrotechnologie (Biosystems Engineering)	Animal Sciences
Biotechnologie (Biotechnology)	Aquaculture and Marine Resource Management
Bos- en Natuurbeheer (Forest and Nature Conservation)	Bioinformatics
Animal Sciences	Biosystems Engineering
International Land and Water Management	Biotechnology
Landschapsarchitectuur en Ruimtelijke Planning (Landscape	Climate Studies
Architecture and Planning)	Development and Rural Innovation
Food Technology	Food Quality Management
Plantenwetenschappen (Plant Sciences)	Food Safety
Voeding en Gezondheid (Nutrition and Health)	Food Technology
	Forest and Nature Conservation
	Geo-information Science
	International Land- and Water Management
	Landscape Architecture and Planning (MLP)
	Nutrition and Health
	Organic Agriculture
	Plant Biotechnology
	Plant Sciences
	Water Technology (joint degree)
	Biobased Sciences
WO Biology	
Biologie (Biology)	Biology
WED Economics Group 1	
Economie en Beleid (Economics and Governance)	

 
 Table B1.2
 Number of enrolled students, first-year and total, at Wageningen University by type of
 enrolment and gender on 1 October 2021 (source: Osiris)

Type of Enrolment	First-year All enrolme				l enrolments	nts	
	Male	Female	Total	Male	Female	Total	
Students	1,265	1,717	2,982 5,779		7,374	13,153	
Other enrolments:							
Contract education participants	7	15		9	16	25	
Second enrolment students	93	161	111		180	291	
Exchange student / Erasmus student	81	122		81	126	207	
Total	1,446	2,015		5,980	7,696	13,676	

Table B1.3 Number of students, first-year and total, at Wageningen University by study phase and gender on 1 October 2021 (source: Osiris)

Types of Enrolment	F	First-year			All students		
	Male	Female	Total	Male	Female	Total	
BSc	675	774	1,449	2687	3105	5792	
Pre-MSc	41	67	108	42	70	112	
MSc	549	876	1,425	3,050	4,199	7,249	
Total	1,265	1,717	2,982	5,779	7,374	13,153	

Table B1.4 Number of Bachelor's students, first-year and total, at Wageningen University by programme and gender on 1 October 2021 (source: Osiris)

Programme	First-year			All students		
	Male	Female	Total	Male	Female	Total
Animal Sciences (BAS)	41	80	121	118	326	444
Agrotechnologie (BAT)	22	4	26	125	24	149
Business and Consumer Studies (BBC)	40	27	67	239	205	444
Biology (BBI)	95	51	146	325	259	584
Forest and Nature conservation (BBN)	43	43	86	171	144	315
Biotechnology (BBT)	44	23	67	200	86	286
Communications and Life Sciences (BCL)	9	12	21	29	71	100
Economics and Policy (BEB)	23	8	31	113	47	160
Environmental Sciences (BES)	39	68	107	145	238	383
Food Technology (BFT)	54	74	128	205	282	487
Health and Society (BGM)	11	35	46	24	135	159
International Land and Water Management (BIL)	36	20	56	162	97	259
International Development Studies (BIN)	9	56	65	54	200	254
Landscape Architecture and Spatial Planning (BLP)	53	49	102	205	169	374
Molecular Life Sciences (BML)	47	33	80	152	111	263
Plant Sciences (BPW)	46	42	88	168	134	302
Soil, Water, Atmosphere (BSW)	33	23	56	141	104	245
Tourism (joint degree) (BTO)	4	9	13	36	67	103
Food and Health (BVG)	26	117	143	75	406	481
Total number of enrolled students	675	774	1,449	2,687	3,105	5,792

 
 Table B1.5
 Number of Master's students, first-year and total, at Wageningen University by
 programme and gender on 1 October 2021 (source: Osiris)

Programme		First-year		A	ll students	
	Male	Female	Total	Male	Female	Total
Aquaculture and Marine Resource Management (MAM)	15	11	26	98	76	174
Animal Sciences (MAS)	19	53	72	91	270	361
Biosystems Engineering (MBE)	17	9	26	125	40	165
Bioinformatics (MBF)	19	13	32	69	44	113
Biology (MBI)	17	20	37	176	164	340
Biobased Sciences (MBS)	13	9	22	63	32	95
Biotechnology (BBT)	34	35	69	245	184	429
Communication, Health and Life Sciences (MCH)	1	11	12	21	134	155
Climate Studies (MCL)	19	31	50	81	115	196
Development and Rural Innovation (MDR)	8	14	22	22	55	77
Earth and Environment (MEE)	7	6	13	116	85	201
Environmental Sciences (MES)	34	60	94	168	257	425
Forest and Nature Conservation (MFN)	38	41	79	191	228	419
Food Quality Management (MFQ)	10	20	30	36	79	115
Food Safety (MFS)	5	17	22	35	81	116
Food Technology (MFT)	52	123	175	218	451	669
Geo-information Science (MGI)	15	12	27	86	49	135
International Development Studies (MID)	13	47	60	60	235	295
International Land and Water Management (MIL)	11	15	26	93	89	182
Landscape Architecture and Planning (MLP)	2	8	10	52	76	128
Metropolitan Analysis, Design and Engineering (joint degree) (MMD)	22	31	53	74	78	152
Management, Economics and Consumer Studies (MME)	19	17	36	173	161	334
Molecular Life Sciences (MML)	7	4	11	87	53	140
Nutrition and Health (MNH)	15	83	98	66	493	559
Organic Agriculture (MOA)	37	55	92	114	163	277
Plant Biotechnology (MPB)	11	17	28	75	76	151
Plant Sciences (MPS)	58	69	127	292	258	550
Tourism, Society and Environment (MTO)	4	13	17	18	66	84
Urban Environmental Management (MUE)	18	26	44	88	95	183
Water Technology (joint degree) (MWT)	9	6	15	17	12	29
Total number of enrolled students	549	876	1,425	3,050	4,199	7,249

 
 Table B1.6
 Success rate of the MSc programmes for the starting class of 2017-2018 to 2019-2020
 (source: Osiris)

Programme		Class	of 2017		Cl	Class of 2018			Class of 2019	
	N		%	%		9/	%		%	
		After 2	After 3	After 4		After 2	After 3		After 2 yrs	
		yrs	yrs	yrs		yrs	yrs			
MAM	45	27%	56%	89%	38	18%	66%	65	15%	
MAS	169	36%	75%	84%	147	23%	71%	138	30%	
MBE	49	24%	67%	80%	53	11%	66%	50	12%	
MBF	29	28%	76%	90%	47	17%	66%	45	11%	
MBI	108	11%	53%	79%	88	8%	50%	116	9%	
MBS	0	0%	0%	0%	20	20%	55%	58	28%	
MBT	162	15%	66%	88%	135	11%	65%	163	14%	
MCH	60	22%	63%	83%	63	17%	65%	61	23%	
MCL	47	21%	64%	85%	36	3%	58%	62	21%	
MDR	26	38%	65%	85%	33	21%	55%	28	18%	
MEE	64	31%	64%	88%	76	9%	62%	87	17%	
MES	157	43%	79%	90%	173	23%	71%	206	20%	
MFN	122	20%	57%	84%	108	14%	56%	134	16%	
MFQ	47	45%	85%	89%	49	35%	76%	48	40%	
MFS	73	38%	73%	86%	69	38%	77%	55	31%	
MFT	259	39%	78%	89%	266	42%	85%	240	42%	
MGI	54	20%	69%	85%	56	18%	80%	54	30%	
MID	86	13%	55%	81%	113	8%	50%	95	16%	
MIL	50	24%	64%	84%	56	13%	71%	75	20%	
MLP	56	11%	41	64%	29	10%	55%	38	11%	
MMD	19	37%	74%	79%	40	18%	70%	36	31%	
MME	152	22%	70%	89%	133	14%	72%	152	24%	
MML	56	13%	68%	88%	43	9%	58%	52	19%	
MNH	195	23%	68%	87%	152	18%	72%	205	20%	
MOA	73	42%	74%	81%	89	27%	75%	101	26%	
MPB	55	16%	64%	76%	60	18%	70%	67	21%	
MPS	189	25%	70%	81%	131	19%	67%	199	25%	
МТО	22	41	68%	91%	27	37%	70%	30	23%	
MUE	48	54%	83%	90%	49	29%	67%	63	29%	
MWT	17	88%	94%	94%	19	79%	89%	15	53%	
Total MSc	2,371	28%	70%	87%	2,239	21%	71%	2,568	24%	

Table B1.7 Success rate of the BSc programmes on the basis of re-enrolments in the second year (N t+1) for the starting class of 2016-2017 to 2018-2019 (N and N t+1 in absolute numbers, after x year in %) (source: Osiris)

Programme	Class of 2016				Class of 2017			Class of 2018				
	1	1		%		1	1	9,	⁄o	1	1	%
		t+1	After	After	After		t+1	After	After	N	N t+1	After
			3 yrs	4 yrs	5 yrs			3 yrs	4 yrs			3 yrs
									yr			
BAS	91	74	42%	70%	82%	109	87	33%	70%	134	100	34%
BAT	38	31	34%	53%	75%	47	41	29%	61%	52	45	42%
BBC	169	154	38%	74%	89%	145	127	37%	77%	125	112	23%
ВВІ	178	150	26%	68%	79%	172	138	19%	64%	185	154	28%
BBN	79	65	29%	74%	83%	99	77	18%	61%	86	71	38%
BBT	138	107	51%	72%	86%	90	78	32%	62%	98	78	38%
BCL	25	23	22%	70%	83%	29	27	48%	81%	29	24	42%
BEB	51	46	22%	65%	76%	65	52	19%	62%	54	45	18%
BES	61	52	52%	79%	92%	61	48	51%	80%	87	69	37%
BFT	154	140	49%	89%	95%	193	157	48%	76%	187	152	43%
BGM	65	57	50%	88%	95%	62	52	65%	94%	67	51	61%
BIL	79	69	30%	79%	89%	80	64	33%	77%	100	79	38%
BIN	88	79	41	76%	86%	91	75	36%	73%	63	54	35%
BLP	67	57	27%	66%	78%	79	63	30%	63%	86	74	26%
BML	89	66	35%	61%	77%	77	69	31%	69%	57	50	46%
BPW	64	57	43%	83%	90%	100	83	40%	78%	109	92	43%
BSW	78	69	29%	77%	84%	72	57	36%	81%	88	65	24%
вто	29	28	71%	82%	82%	39	32	69%	84%	39	32	53%
BVG	150	140	51%	87%	92%	157	144	50%	90%	150	131	42%
Total BSc including												
programme	1,610	1,467	39%	75%	86%	1,657	1,473	36%	72%	1,683	1,481	35%
transfers												

### Explanation of the tables:

WU migrated to a new student information system, Osiris, in December 2020. Some of the definitions are different than before.

New definition of first-year students in Osiris: all students who commenced their first year of study at WU between 1 September 2021 and 1 October 2021 (Tables B 1.2, 1.3, and 1.4).

The yield data in tables B1.5 and B1.6 of all cohorts are derived from Osiris, so the data are comparable between cohorts. However, it is not possible to compare the return data from the previously published annual reports with this return data because the data comes from a different source, with slightly different definitions, which means there is a break in the trend.

# Appendix 2 Knowledge valorisation indicators

### Indicators for the UNL domain "People" 1

#### 1.1 Research into entrepreneurship

Table B2.1 Percentage of MSc graduates who find employment per sector

	2019	2020	2021
Business community 1)	23%	21%	33%
Business services 2)	12%	14%	6%
Government 3)	8%	8%	12%
Other non-academic sectors 4)	40%	41	39%
Universities 5)	17%	16%	10%

Source: National Alumni Survey.

- 1) Industry, trade, transport.
- 2) Information and communication, financial services, legal services, human resources, press and information, other business services.
- 3) Relevance to government.
- 4) Research institutes, universities of applied sciences, other education sectors, hospitals (including academic medical centres), health and wellbeing institutions, other healthcare, other sectors.
- 5) Academic universities (not including academic medical centres).

#### 1.2 Entrepreneurship

**Table B2.2** Entrepreneurship education; number of students per course

Course code	Course name	2018-2019	2019-2020	2020-2021
BMO-51306	Economics of Science and			
	Technology	30	24	45
BMO22706	Principles of Entrepreneurship	67	82	120
	Sub-total of minor courses	97	106	165
BMO-56806	Business Cases Agri-Food	45		
	Entrepreneurship		50	28
ELS-51306	Intrapreneurship: Impacting	15		
	existing organizations		17	21
ELS-66100	Entrepreneurial Skills	58	44	36
BMO-55806	Entrepreneurship and Innovation	25	27	28
	in Emerging Economies			
YMS-31803	Entrepreneurial Skills	38	35	59
YMS-31903	Entrepreneurial Thinking	38	34	57
ELS-66700	Pursuing and Realising	72		
	Entrepreneurial Projects		51	85
BMO-23406	New Venture Creation: from Idea	32		
	to Business Plan		48	34
BMO-33806	Circular Entrepreneurship: Co-	40		
	creating the circular economy		49	52
	Sub-total of other courses	363	355	400
	TOTAL	460	461	565

### 1.3 Lifelong Learning

Table B2.3 Courses for professionals

Wageningen Academy (WU)	2019	2020	2021
Number of open registrations	1,047	566	2,374
Number of open registrations for courses	43	27	38
Number of course participants in in-company courses	805	76	175
Number of in-company courses	21	4	5

WCDI (WR)	2019	2020	2021
Course participants open registrations	968	784	749
Number of courses given	35	34	32
Number of completed course days*	12,225	5,465	12,460

<sup>\*</sup>Number of course days  $\boldsymbol{x}$  number of students.

### Indicators for the UNL domain "Results" 2

#### 2.1 **Patents**

 
 Table B2.4
 Number of new patent applications for Wageningen University & Research and total
 active patent families in portfolio

	2019	2020	2021 To	tal active patent families in Wageningen
				University & Research portfolio
WU	8	16	5	68
WR	5	4	8	65
Wageningen University &	13	19*	13	133
Research new applications				

 $<sup>\</sup>boldsymbol{*}$  Due to joint WU/WR applications.

### 2.2 Licences

Table B2.5 Number of licenses for patents, breeds, models and materials in 2021

	Number of
	licenses
WU	13
WR	63
Total Wageningen University & Research	76

### 2.3 Entrepreneurship

Table B2.6 Number of new spin-offs and (student) startups

	2019	2020	2021
Number of spin-offs	4	3	0
Number of startups	3	7	1

## Client satisfaction and knowledge utilisation Wageningen Research

 Table B2.7
 Customer satisfaction in 2021

Customer satisfaction	Number	Score	Total	Final score
Very satisfied	251	10	2,510	
Satisfied	171	8	1,368	
Neutral	22	6	132	
Dissatisfied	5	4	20	
Very dissatisfied	5	2	10	
Total number of respondents	454		4,040	8.9

 Table B2.8
 Knowledge utilisation in 2021

Assessment of project results	Percentage
Useful	98.7%
Not useful	0.7%
No comment	0.7%

Of these, the project results were used for:

Knowledge utilisation	Percentage
New/renewed product	10.4%
New/renewed process	18.5%
Policy formation	12.8%
Strategic decision-making	6.4%
Legal obligation	27.3%
Basic knowledge	16.8%
Follow-up research	5.3%
Not yet known	2.6%

### Indicators for the UNL domain "Collaboration" 3

#### Collaboration 3.1

 
 Table B2.9
 Number of completed research projects for the benefit of societal, non-affluent
 organisations

Science Shop	Societal organisations	18	160	41	76
Coionas Chan	Contabal	10	Master's)	project leaders)	70
			and	(including	projects
			(Bachelor's	involved	involved in
		2021	involved	employees	stakeholders
		research projects in	students	WU/WR	external
Initiative	Target Group	Number of completed	Number of	Number of	Number of

Table B2.10 Number of student projects carried out in response to requests from various societal stakeholders

Initiative	Target Group	Number of student projects conducted in 2021	Number of students involved (Bachelor's and Master's)	Number of WU/WR employees involved in supervision
Society Based	SMEs & startups	00		
*		88		
Education	Multinationals	25		
	PPS consortia	3		
	Relevance to	17	2,171	449
	government			
	Societal organisations	76		
	Knowledge institutes	30		
	Other	25		

Contribution to other education: number of pupils and teachers reached, number of Wageningen University employees involved and teaching product selection

Initiative	Target Group	Number of pupils in activities	Number of lecturers in activities	Number of WU employees involved	Total selection of teaching materials	Online Websites
Smaaklessen support point & EU Schoolfruit - Curriculum - Smaaklessen	Primary education	24,600	10,742	8	7	108,486
EU school fruit and vegetables programme	Primary education	474,780	20,750	8	4	364,396
Science Hub	Primary education	23,606	1,901	25	18	24,159
Wageningen Pre- University	Secondary education (senior)	13,858	1,616	53	50	108,139
Wageningen Youth Institute	secondary education	300	3,602	86	74	141,004

Table B2.12 Capacity utilisation of the Shared Research Facilities equipment portfolio as well as the share of external companies and institutions

Shared Research Facilities equipment portfolio	2021
Average utilisation (%)	62.5%
Of which from external users (%)	13%
Number of external users	57

**Table B2.13** Number of temporary exchanges/secondments with the business community

	2019	2020	2021
Number of WUR employee secondments with the business	9	8	5
community			

### 3.2 **Funds**

Table B2.14 Wageningen University & Research turnover from the business community (in € millions)

	2019	2020	2021
WU			
Business community contribution to top sector research	0.0	0.0	0.0
Contract research for the business community	17.0	14.2	18.3
Total business community contribution to research at WU	17.0	14.2	18.3
WR			
Business community contribution to top sector research	14.1	17.1	18.6
Contract research for the business community	47.6	42.7	46.3
Total business community contribution to research at WR	61.6	59.8	64.9
TOTAL BUSINESS COMMUNITY CONTRIBUTION TO RESEARCH at Wageningen University & Research	79.0	74.0	83.0

*Table B2.15* Wageningen University & Research turnover from EU grant programmes (in € millions)

Total EU Turnover Wageningen University & Research	37.1	36.0	39.3
WR	20.5	19.0	21.3
_wu	16.6	17.0	18.0
	2019	2020	2021

### 3.3 **Publications**

Table B2.16 Number of public-private Wageningen University & Research co-publications

	2019	2020	2021
Total publications including:	3,043	3,363	3,779
Corporate (business community)	279	273	357
Academic	2,805	3,110	3,468
Government	1,159	1,289	1,488
Medical	68	96	145
Other	100	169	238

Source: Scopus, Elsevier B.V. All rights reserved. All rights reserved. SciVal ®.

*Table B2.17* Number of professional publications, publications for the general public, other publications

Type of publication	WU			WR		
	2019	2020	2021	2019	2020	2021
PROFESSIONAL PUBLICATIONS						
a. Journal articles	99	103	102	206	242	244
b. Books	7	2	6	19	6	11
c. Book chapters	10	49	36	8	28	20
d. Annotations	0	0	0	0	0	0
e. Conference papers	5	4	0	2	6	1
f. Protocols	0	0	0	0	0	0
g. Reports	151	184	201	676	745	799
PUBLICATIONS FOR THE GENERAL PUBLIC						
a. Books	0	0	0	0	0	0
b. Book chapters	0	4	0	1	0	0
c. Articles in newspapers/magazines/journals	30	9	8	9	6	3
OTHER PUBLICATIONS						
a. Book reviews	10	13	23	1	1	2
b. Book editorships	17	21	20	5	8	7
c. Journal editorships	29	55	38	3	2	5
d. Inaugural speeches	2	1	2	1	0	1
e. Abstracts	336	160	232	137	55	84
f. Designs	0	1	0	0	1	0
g. TV or radio appearances	57	51	49	50	25	54

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# Appendix 3 Corporate Social Responsibility Report

The Wageningen University & Research (WUR) Corporate Social Responsibility Report contains information about the total staff at Wageningen University and Wageningen Research Foundation, such as the total number of employees, the relationship between permanent and temporary staff, the number of full-time and part-time workers, data on target groups, and information on sick leave.

We have been facing a global coronavirus pandemic since March 2020. Despite the limitations this entailed, the number of employees working at WUR in 2021 once again rose sharply. This increase was 155 Individual Employment Relationships (IER) at the Wageningen Research Foundation, an increase of almost 5%, while the increase at Wageningen University was 223 IER, more than 6%.

### WR staff on 31-12-2021 in IER and FTE

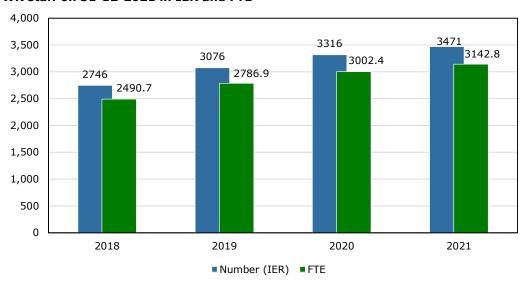


Figure B3.1 WR staff in IER and FTE

### WU staff on 31-12-2021 in IER and FTE

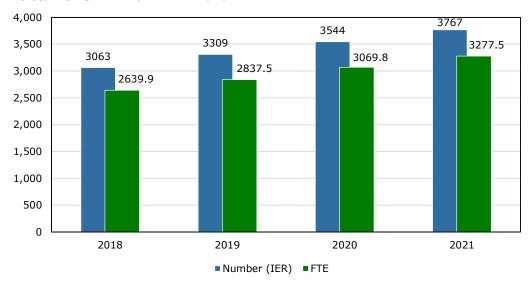


Figure B3.2 WU staff in IER and FTE

The increase in the number of new employment contracts affects both the temporary/permanent ratio of Wageningen University employees and the length of time spent in the job.

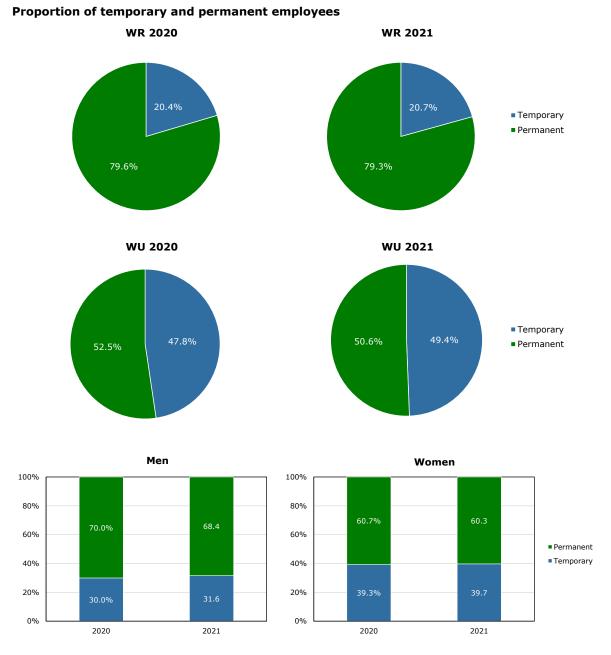


Figure B3.3 Temporary/permanent ratio at WR and WU plus men/women ratio temporary/permanent

The percentage of temporary employment contracts rose by 1.6% among men in particular, while the increase among women was 0.4%. However, the percentage of women in permanent employment, 60.3%, still lags behind that of men, 68.4%.

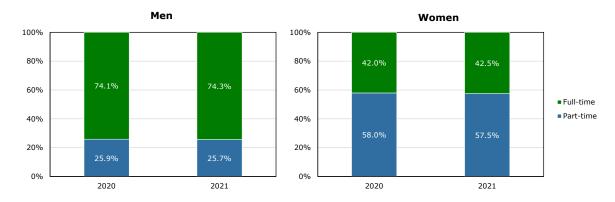


Figure B3.4 Full-time/part-time WUR men/women ratio

The percentage of full-time employees has increased for both men and women by 0.2% and 0.5% respectively. However, the majority of men still work full-time, while the reverse is true for women.

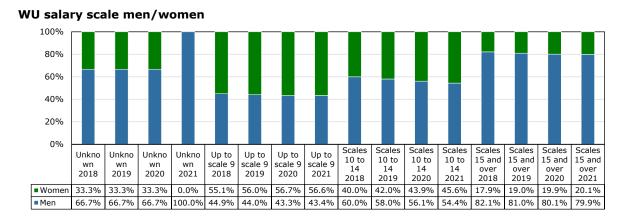
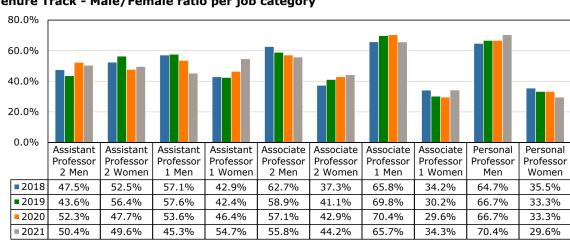


Figure B3.5 Salary scale for men/women

The man/woman ratio within the various job scales at Wageningen University has steadily increased over the past four years from a total of 5.6% to 45.6% in the scale 10 to 14 category. In the category scale 15 and higher we also see an increase in the percentage of women: from 17.9% in 2018 to 20.1% in 2021.



Tenure Track - Male/Female ratio per job category

Figure B3.6 Man/woman ratio in WU tenure track per job category

The percentage of men recruited into tenure track for the position of Assistant Professor 2 was almost equal to that of women, 50.4% and 49.6% respectively in 2021. The percentage of women in the Associate Professor 1 position increased again, by 8.3% to 54.7%. The men/women ratio in the position of Associate Professor 2 also changed due to an increase in the percentage of women by 1.3% to 44.2%. The percentage of women in the position of Associate Professor 1 rose by 4.7% points and is now 34.3% in this job category. The percentage of women professors holding a personal chair, on the other hand, decreased by 3.7%.

### Man/woman ratio of WU professors

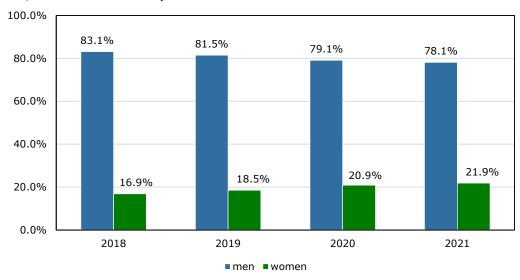


Figure B3.7 Man/woman ratio of WU professors

In order to achieve a gender balance, the recruitment of female professors is actively promoted, among other things. This has resulted in a steady growth of the percentage of women in this job category in recent years. In recent years, this has resulted in a steady growth of the percentage of women in this job category in recent years. The percentage of women in this job category also increased by 1% to 21.9% in 2021.

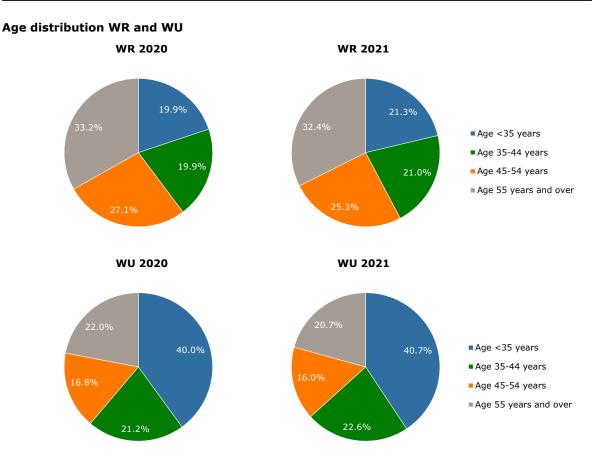


Figure B3.8 Age distribution WR and WU

Figure B3.8 shows that the increase in the number of employees at Wageningen Research is caused by the growth of the group of employees in the age category up to 35 years by 1.4% and those in the age category 35 to 45 years by 1.1%.

The increase in the number of employees at Wageningen University mainly concerned the age category from 35 to 45 years, by 1.4%. More than 63% of Wageningen University's employees are under the age of 45. The majority of employees at Wageningen Research Foundation are older than 44 years: 57.7%. A decrease in the number of employees in this age category is visible in both organisational components.

# Years of employment at WR and WU

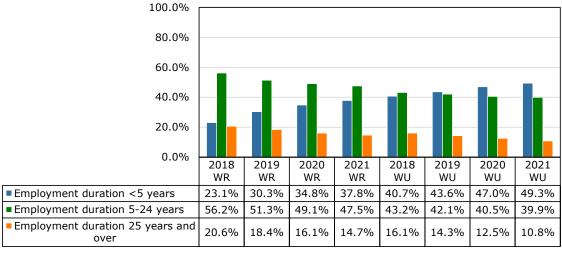


Figure B3.9 Years of employment at WR and WU

Figure B3.9 also clearly shows the influence of the large number of new employees. For example, almost 50% of Wageningen University employees have been with the university for less than five years. The percentage of employment contracts over 25 years has halved since 2018 and was 10.8% in 2021. Part of this trend is explained by the large number of employment contracts for postdocs and PhD candidates. For example, the number of PhD candidates increased by over 9% in 2021, from 774 to 844 IER. The departure of employees due to retirement is also responsible for the increase in the length of time that employees stay in their jobs for less than five years.

# **WR 2020** WR 2021 8.2% Dutch ■ Non-Dutch 92.2% 91.8%

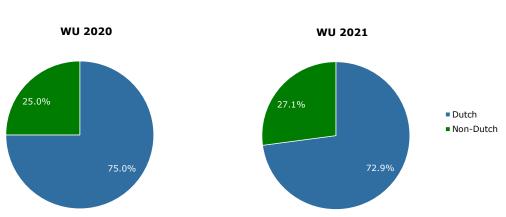


Figure B3.10 Dutch/International

Internationalisation

In addition to the work done to improve gender diversity, efforts have also been made in the area of recruiting more international employees due to the limited international diversity in the current staff. This also led to an increase in the percentage of non-Dutch nationals employed at Wageningen University by 2.1% to 271% in 2021. Wageningen Research Foundation in particular has a very low percentage of international employees, but also increased slightly; by 0.4% to 8.2%.

### Sick leave at WR and WU

Sickness absence 2015-2018 excluding pregnancy	2018	2019	2020	2021
Sickness absence percentage incl. absences > 1 year	4.1	4.5	3.6	3.5
Sickness absence percentage excl. absences > 1 year	3.2	3.4	3.1	3.1
Average duration of absence (calendar days)	18.4	17.9	27.1	24.2
Absence frequency (%)	1.0	0.9	0.7	0.7
Staff without absenteeism due to illness (%)	48.8	52.5	60.1	61.8
Number of individual cases of absence through illness*	5,562	5,803	4,357	4,617

<sup>\*</sup>Only those instances that began during the reporting period.

Sick leave percentage per age group	2021
< 25 years	1.1
25 - 29 years	3.1
30 - 34 years	4.9
35 - 39 years	4.6
40 - 44 years	4.6
45 - 49 years	4.0
50 - 54 years	4.5
55 - 59 years	6.0
60 - 64 years	6.3
65+ years	5.4

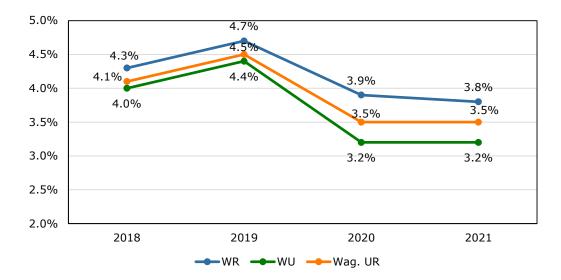


Figure B3.11 Sick leave

The consequences of the pandemic are clearly visible in the sickness absence rates. Perhaps contrary to expectations, the sickness absence rates showed a marked decline, which started in 2020 and stabilised in 2021. The average duration of illness decreased slightly in 2021 compared to 2020, but is still high compared to the years preceding the coronavirus pandemic. However, the number of individual cases of illness increased somewhat, but still remained much lower than before the coronavirus pandemic, while the number of employees rose sharply.

The exceptional circumstances due to the coronavirus pandemic are certainly to blame for these developments. It could be that people working from home usually continued to work (fully or partially) even though they were ill, and therefore did not call in sick or called in sick less. In particular, the fact that people had more control over their own work because they worked from home was seen as positive and will certainly have contributed to this positive development. Sickness absence rates stabilised at both Wageningen Research Foundation and Wageningen University. However, this does not alter the fact that there are also very clear signs of excessively high work pressure, which creates a risk of sickness absence.

# Appendix 4 Glossary

Limitations	The scope of reporting, namely where the organisation has set the boundaries of the activities reported on. The scope determines which information is consolidated in the report. As well as what information is included regarding activities in the supply chain that could be of particular
	interest to users, but over which the organisation may have limited or no control.
Dialogue with	The entirety of interactions between an organisation and its stakeholders. This is not limited to
stakeholders	physical or virtual meetings specifically organised for that purpose.
Governance	The entirety of regulations for managing an organisation and the monitoring of their proper
	implementation. On the one hand, governance involves the relationships between shareholders
	supervisors, management, and other stakeholders. On the other hand, governance also has an
	internal definition which includes management and control, internal control measures, and
	division of authority and responsibilities.
Social aspects of	Social aspects of entrepreneurship which are identified when looking at businesses from a
entrepreneurship	broader perspective than the traditional financial perspective. These include economic,
	environmental, and social aspects. It is used here as a synonym for Corporate Social
	Responsibility or sustainable business.
Societal information	All information related to the social aspects of business.
Societal results	The performance of an organisation with regard to the social aspects of business.
Societal reporting	External information on the organisation's policies and results with regard to the social aspects
	of business. Societal reporting is a generic term for typically non-financial information published
	in sustainability reports, CSR reports, or integrated in the annual report by the organisation in
	order to satisfy stakeholders' comprehensive information requirements.
Material topics	The topics most relevant to a specific organisation that, as such, are eligible for inclusion in
	societal reporting. A topic is more relevant, and therefore more material, when the organisation
	has a significant impact in that area. Topics that satisfy stakeholders' comprehensive
	information requirements and which could be decisive to stakeholders' decision making and
	considerations with regard to the organisation must also be considered material.
Performance indicator	A key figure used by the organisation with regard to a specific topic in order to monitor its
	development as well as to measure the organisation's progress and account for its results.
Scope	The range of reporting, namely the entirety of topics reported on. The scope of reporting
	concerns the organisation's choices regarding whether or not to report on specific topics.
Stakeholders	Internal or external individuals or parties who may reasonably expect the organisation to take
	their legitimate interests and expectations into account.
Value creation	Value creation means using the knowledge and infrastructure of WUR for the benefit of society.
	Our knowledge achieves economic and social impact through application.
Value chains	An organisation is active in a chain of activities leading to the production and delivery of
	products and/or services which are sold, used, and discarded by end users. For some
	organisations, activities in the value chain progress both "upstream", such as the activities of
	suppliers, and "downstream", such as the use of products and/or services. The hallmark of a
	value chain is the addition and detraction of value at various places and moments due to the

# Colophon

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Printing
MediaCenter B.V. Rotterdam

To explore the potential of nature to improve the quality of life



The mission of Wageningen University & Research is "To explore the potential of nature to improve the quality of life". Under the banner Wageningen University & Research, Wageningen University and the specialised research institutes of the Wageningen Research Foundation have joined forces in contributing to finding solutions to important questions in the domain of healthy food and living environment. With its roughly 30 branches, 7,200 employees (6,400 fte) and 13,200 students, Wageningen University & Research is one of the leading organisations in its domain. The unique Wageningen approach lies in its integrated approach to issues and the collaboration between different disciplines.