

## 2. STRUCTURE, ORGANIZATION AND MISSION OF WIMEK

### 2.1. Introduction

The Wageningen Institute for Environment and Climate Research (WIMEK) is one of six Graduate Schools at Wageningen University & Research (WUR) and was founded in 1993. WIMEK aims to develop an integrated understanding of environmental change, its impact on the quality of life, and sustainability, and it offers solutions for environmental improvement. WIMEK combines fundamental, strategic and participatory research in environmental, climate and sustainability sciences, from both social and natural sciences perspectives. WIMEK is focussed on pressing environmental problems and sustainable solutions from a local to a global scale. The scientific expertise of researchers associated with WIMEK covers the environmental domains of soil, water, atmosphere, landscape, and spatial planning, as well as environmental governance, economics, policy, technology, microbiology and toxicology.

### 2.2 Strategy and mission

The main aims of the WIMEK graduate school are:

- To conduct high quality scientific research for impact at the global scientific forefront of environmental and climate research,
- To provide an inspiring tailor-made in-depth and skill-oriented training programme for PhD candidates and postdocs,
- To form an internal WUR interdisciplinary network and social community of staff, postdocs and PhD candidates on environmental, climate and related sustainability sciences,
- To work transdisciplinary, by exchanging emerging insights, recent research results and novel technological & policy approaches in an interactive way to companies, public institutions, regulating authorities and other parties in society.

In order to focus its research programme, WIMEK has identified three Grand Environmental Challenges, for which it aims to contribute to solutions. These are:

1. *Climate action*: towards fair and effective solutions for climate change mitigation and adaptation,
2. *Managing our future biosphere*: developing strategies for the sustainable use of soil, water, atmosphere, biodiversity, ecosystems and landscapes,
3. *Advancing circular systems*: inclusive innovation towards closed water, nutrient, and material flows.

These Grand Challenges are the basis of WIMEK's strategy. It promotes interdisciplinary and transdisciplinary research between chair groups on these challenges. Strategic activities to achieve this include providing seed money for grant applications, quality assurance of research performed on these topics, an honours programme in which talented master students take part in a grant competition for a PhD programme and the education and training of PhD students working on these challenges.

### 2.3. Management and organization

WIMEK is a graduate school, cross cutting the scientific departments at WUR, and is positioned as the horizontal bar in its matrix structure. As a graduate school for environment and climate research, WIMEK is responsible for PhD education and training in these fields, coordinating the development of a coherent research programme for environment and climate research, and to safeguard, monitor and stimulate the quality and progress of research by staff, postdocs and PhDs.



A Graduate School is research supportive and has no tasks and responsibilities in the formal management of human resources, finances, education at the bachelor and master level and research facilities. This is the responsibility of the chair groups, which are the foundational units for research and education at Wageningen University.

Nineteen chair groups participate in WIMEK, of which eleven with their full research capacity and eight with a limited number of senior researchers, postdocs and PhD candidates. Most of the chair groups participate in one of the following clusters:

- Climate, Water and Society (CWS)
- Environmental Technology and Microbiology (ETE-MIB)
- Landscape Architecture and Spatial Planning (LSP)
- Soil Science (Soil)
- Wageningen Centre of Sustainability Governance
- Section Economics

The function of the clusters is to bundle research expertise in a certain domain, to acquire a stronger strategic position, to share support staff and equipment when this is advantageous and to increase visibility. The clusters in turn are grouped in large science groups covering all of WUR. The WIMEK clusters under review in this report are part of the following science groups: Agrotechnology & Food Science, Environmental Sciences and Social Sciences.

The WIMEK management organization consists of a General Board, a Scientific Director and executive staff, an Education Committee, a PhD Council and an International Advisory Board. The Board is in charge of the development of the general policy and strategy of the Graduate School and decides on the budget. The Scientific Director is responsible for the daily management of the School. He or she prepares its long-term vision, its scientific direction and an action plan, and discusses this with the executive board of WUR and the science groups. The International Advisory Board advises WIMEK on strategy and research quality.

WIMEK receives a budget for the execution of its main tasks, and can use it to appoint staff, organize PhD education and training, and to promote its research programme through financial incentives. This budget is a percentage of the research revenues generated by the academic staff within the Graduate School.

## **2.4 Recommendations at the level of WIMEK and WUR**

### *Inter- and transdisciplinarity*

Stimulating the collaboration across disciplines is an ambition and necessity for all clusters within WIMEK. By combining expertise, they will be better equipped to respond to complex scientific and societal issues. At the same time, the committee concludes from the interviews that all clusters to some extent struggle to achieve this trans- and interdisciplinarity. The committee thinks that Wageningen University could give the WIMEK clusters (and in all probability other units within the university as well) a helping hand. This could for instance have the form of giving more incentives for collaboration between chair groups at cluster level, such as additional dedicated funds for seed projects. In this or another way Wageningen University could promote exploratory interdisciplinary and transdisciplinary, high-risk research with high impact, and ensure that this kind of research becomes more structurally embedded, and not only happens ad hoc when individual researchers see a shared opportunity. In addition, the committee recommends awareness that interdisciplinary and practice-oriented research cannot be directly compared with the performance of single-disciplinary research. The ongoing development of changing criteria for the assessment of academic outputs – a move from quantitative to qualitative performance indicators – is in line with this.

The university could also support the clusters in identifying target audiences and performing stakeholder analyses. Clusters are not specialized in this kind of work and being professionally facilitated will contribute to a more strategic vision at cluster level on potential chances that could both increase impact and stimulate scientific innovation.



With regard to inter- and transdisciplinarity, the committee is enthusiastic about the 'landscape approach' developed by the LSP cluster. The cluster collects and integrates knowledge from various academic disciplines and stakeholder perspectives and translates this knowledge into solutions for current and future problems. This approach could be a source of inspiration for other clusters.

## **2.5 Recommendations for all clusters**

### *Talent management*

The committee found that WIMEK has managed to create a brilliant mind-hub with their junior researchers. The challenge is then to hold on to some of this talent for the long term. The committee thinks that the junior researchers would benefit from receiving more accountability and acknowledgement for scientific advancement and highlighting achievements at the junior level. When junior academics see that their work does not go unnoticed and is not overshadowed by supervisors' larger reputations, this may provide a level of ownership and drive for their research. In addition, PhD candidates and postdoctoral researchers could also be given the spotlight more frequently. The combination of more ownership, more acknowledgement and more visibility may ultimately encourage more junior researchers, and in particular female and non-Dutch academics, to look for long-term research opportunities at WIMEK. In addition, if junior or even mid-career researchers can show that their work is showcased or rewarded by the cluster, this will support them during external funding calls as well as outreach activities.

Societal impact becomes more and more important for funding agencies, for the assessment of research organizations and for individual careers. However, the committee found that societal impact seems not yet to be sufficiently and, in any case, not explicitly recognized in tenure track criteria. According to the experience of several interview participants, the degree of recognition remains implicit, and largely depends on the particular views of the various tenure track committees. In the committee's view, this is an unsatisfactory situation. The committee recommends that WIMEK prioritizes the societal impact it finds most important. It should then strive for explicit and objective recognition of societal impact and activities, supporting activities to reach this impact in clear tenure track criteria. Such a shift in perspective seems needed to align human resource processes with organizational objectives.

In the same vein, while it is undoubtedly worthwhile to honour individual achievements, team collaboration is equally important, particularly now that solutions for complex societal problems require the integration of knowledge and expertise from different scientific disciplines. The committee therefore recommends putting incentives in place to stimulate multidisciplinary collaborations, within but certainly also across teams. Moreover, fierce competition between individual researchers should be avoided, since this does not contribute to a happy working environment, fruitful collaboration, and productivity in general.

### *PhD supervision and training*

Most of the PhD candidates who are enrolled in the WIMEK research school follow the educational programme of the Wageningen graduate school. In their first six months, they write a project proposal and develop an individual training and supervision programme. Since recently, the candidates also design a data management plan. These plans and proposals are approved by the WIMEK graduate school. After 8 to 14 months, the candidate's progress is evaluated in a go/no go interview. PhD candidates are guided by at least two, and preferably not more than three supervisors. In addition to the go/no go interview the PhD candidate and the supervisors have annual evaluations. In these talks, both the candidate's progress and the supervisors' coaching role are evaluated.

Overall, the committee encountered a good, safe, and interacting atmosphere within clusters. It is quintessential to preserve this in the coming years. Supporting activities for PhD's (such as peer groups, buddy system, postdoc being coaches to PhDs) are well appreciated. It would be good to integrate such activities in a WIMEK-wide policy.



It struck the committee that over all clusters, the group of postdocs feel somewhat forgotten. It would be good to assess their needs and for instance develop a coaching programme and/or career guidance tools that may help them find a new position after finishing their contract.

A long duration of PhD trajectories is an issue that most clusters seem to grapple with, although it was not always identified as a major problem by PhD candidates themselves. The committee has three recommendations that could help to repair this. In the first place, for all PhD projects, ambition should meet duration. This pertains both to the scope of the project and the number of papers needed to be able to graduate. Secondly, the committee recommends adding intermediate milestones explicitly in PhD guidance and policy, particularly in the second and third year, where they are now lacking. These milestones should include clear requirements, not only concerning output (i.e. number of research papers).

Finally, mentoring and supervision in general should be something that is given sufficient time for. If supervisors are overloaded with other work, there may be a tendency for reduced guidance. Across clusters it was mentioned that some researchers supervise many PhD students at the same time. The committee suggests having an internal discussion whether there should be a limit on how many PhD students (and by extension maybe also graduate students and postdocs) one person should supervise at the same time. Perhaps this is something to think about moving forward, especially as postdocs and new hires are recruited in the coming years.

