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Preface

This report contains the conclusions and recommendations of the International Peer Review Committee that visited the Wageningen School of Social Sciences (WASS) of Wageningen University from June 7th to June 10th 2015.

The review consists of peer assessments of the progress and achievements of the School as a whole as well as its constituent research groups ('chair groups'). At the basis of the Committee's findings are the self-assessment reports of WASS and its chair groups, as well as the discussions during the site visit.

The report is retrospective and prospective in that it looks at both past performance ('research quality' and 'societal relevance') and future strategy ('viability'). It is the result of quantitative as well as qualitative analyses of the School and its chair groups. It is important to note that some of the Committee's comments and recommendations are not specifically directed to WASS but rather the university-level: this is especially true with regard to issues of budget, academic appointments and research quality monitoring. The Committee has taken the view that the specific allocation of tasks and responsibilities is a matter for the University and not an external committee such as this.

The Committee is grateful to Wageningen University and WASS for the professional organisation of the site visit and for the open atmosphere in which the discussions took place. The Committee operated in a transparent and consensual fashion. All the statements in this report have been agreed by the Committee as a whole.

Finally, I would like to thank Jetje De Groof for her excellent support work and the entire Committee for their good grace and collegiality under pressure.

September, 2015

Professor Alan Irwin
Chair, International Peer Review Committee WASS

1. Introduction

1.1 The evaluation

All publicly funded university research in the Netherlands is evaluated at regular intervals in compliance with a national standard evaluation protocol (SEP 2015-2021), as agreed by the Association of Universities in the Netherlands (VSNU), the Netherlands Organisation for Scientific Research (NWO) and the Netherlands Academy of Arts and Sciences (KNAW). The evaluation process, which is applied at the research unit level, consists of a systematic external peer review conducted every six years and a three-year interim review, often based on an internal self-reflection, focused on what has been achieved since the last external peer review.

The evaluation system aims to achieve three generic objectives:

- *improvement* in the quality of research through an assessment carried out according to international standards of quality and relevance;
- *improvement* in research management and leadership; and
- *accountability* to the higher management levels of the research organisations and to the funding agencies, government and society at large.

Moreover, these reviews at Wageningen University include another objective: requesting a formal recognition of the activities of its graduate schools. This is a consequence of the fact that the Research School Accreditation Committee (ECOS) of the Royal Netherlands Academy of Arts and Sciences (KNAW), that was responsible for accrediting graduate schools in the Netherlands, ceased to exist in 2015. The Standard Evaluation Protocol (SEP) includes terms of reference regarding the PhD programme of the graduate school. However, for the formal recognition of its graduate schools Wageningen University specifically requested the Peer Review Committee to indicate whether its graduate schools comply with the following conditions:

1. The graduate school provides a well-organised, coherent and productive research environment for the PhD programme;
2. The graduate school offers a sound and institutionalised programme in which students are trained to become independent researchers;
3. The graduate school functions as an independent organisational unit with its own budgetary and managerial responsibility, with the university or universities involved providing a level of financing for a period of at least six years that can be described as sufficient in view of the research school's planned capacity.

These conditions comply with the previous ECOS-criteria as well with the special conditions set by Sodola, the Dutch network of accredited research schools in all fields of academic research.

In early 2015 the European University Association (EUA) was invited by Wageningen University to conduct an evaluation of the generic elements of its doctoral education, with the aim of determining whether:

1. The intended learning outcomes of the Wageningen PhD programme meet international standards;
2. The Wageningen PhD programme has the structure and processes in place for PhD candidates to attain these learning outcomes.

The results of the EUA evaluation contribute to the current review, which focuses on the quality of the graduate school specific elements of the PhD training programme (appropriate research environment, the course programme, the day-to-day PhD supervision etc.).

This assessment moreover deals with the performance of the graduate school and in particular the position of its research (chair) groups within the (inter)national science and PhD education arena (retrospective) and identifies ways for further improvement (prospective).

1.2 The assessment procedure

The evaluation procedures followed by the Peer Review Committee were as set out in the NWO/VSNU/KNAW “Standard Evaluation Protocol 2015-2021 for public research organisations”. This protocol encompasses the following main characteristics:

- *Two levels of assessment*: The assessment takes place at two levels of the research organisation, i.e. the level of the graduate school and the level of chair groups;
- *Three main criteria*: The chair groups are assessed on three assessment criteria, i.e. research quality, relevance to society, and viability.

The Peer Review Committee was requested to report its findings on 23 of the 25 chair groups of WASS. Two chair groups had already been evaluated as part of the Research School for the Socio-Economic and Natural Sciences of the Environment (SENSE), which took place in 2014 (see table 1, 2.3.). The evaluation of the chair groups is in line with the three main criteria. With respect to the evaluation of WASS, the findings are reported in descriptive terms. For the assessment of the chair groups, the results of the assessment are given both in scores and in descriptive terms. In the text, the most important considerations of the Committee are clarified, while the conclusion is summarised in a single discrete score according to a four-point scale (annex 1).

The assessment was based on and supported by three main forms of evidence:

- self-evaluation reports detailing the operation, management, research activities, outputs, and SWOT analysis of the graduate school, and its chair groups; these self-evaluation reports were written as prescribed in the national standard evaluation protocol;
- links to selected papers and dissertations from each research / chair group to allow the Committee to examine in detail examples of published work;
- discussions with boards, PhD candidates and council, postdocs, academic staff and research managers about the information provided.

The site visit was undertaken from June 7th – June 10th, 2015 and consisted of a number of components, which can be summarised as follows (annex 2):

- a plenary introduction to Wageningen University and the WASS graduate school by the Rector, the director of WASS, and the bibliometric expert of the WU library;
- sub-Committee sessions with all individual chair groups (leaders and selected staff);
- meetings with WASS PhD candidates during poster sessions;
- a meeting with the WASS Board, WASS scientific Director, chairs of the Education Committee & Assessment Committee, executive secretary of WASS and the PhD programme coordinator;
- a meeting with the WASS PhD council;
- meetings with (in one case the representative of) the director general of the two Sciences Groups involved;
- a final plenary debriefing meeting with the WASS Board, Dean of Sciences and the Rector.

The Peer Review Committee comprised of ten peer members and a secretary (annex 3). Five external members with an advisory role provided their evaluation to the Committee in writing before the site visit. The final report with the conclusions and recommendations was formulated according to the formats that were provided to the Committee. The draft report was presented to the Rector to redress any (factual) errors.

1.3 Results of the assessment

This report summarises the findings, conclusions and recommendations of the international Peer Review Committee that visited the WASS graduate school in June 2015. The peer review covered the period between 2009 and 2014.

The assessment of WASS and its chair groups was based on and weighted according to the rationale explained in annex 1. This means that the performance of the groups was benchmarked against the performances of other groups in the global arena of comparable groups and disciplines. The conclusions, as presented in chapters 3 and 4 of this report, follow the structure and the criteria of the Terms of Reference (annex 1). Chapter 3 provides an assessment of the performance of the graduate school WASS and Chapter 4 elaborates on the performance of its individual chair groups.

1.4 Quality of the information

The Peer Review Committee based its evaluation of WASS on the self-evaluation reports of the WASS Graduate School and its constituent chair groups. During the site visit, further information was obtained through discussions.

The Committee appreciated the detailed information it received prior to the site visit. Also, it valued the openness of the discussions during the site visit. Still, the Committee wishes to make two suggestions for future reviews.

First, there are particular challenges in measuring the impact of interdisciplinary research as well as research in areas such as law, certain social sciences and philosophy. Without wishing to uncritically endorse all usage of bibliometrics, WASS and Wageningen University should consider the employment of forms of bibliometric analysis which can specifically address interdisciplinarity (see also 3.1.3.).

Secondly, the Committee recommends that WASS and Wageningen University look for ways to make the societal impact of its research more tangible and explicit. In particular, the Committee suggests that there should be more clear and agreed guidelines on how societal impact is reported: for example, through a more structured presentation of activities or the inclusion of well-documented case studies. One particular possibility here could be to identify, on the one hand, specific clients or stakeholders (e.g., government, the private sector, civil society) and, on the other, the types of impacts involved (from briefings through to specific forms of implementation).

2. Structure, organisation and mission of the graduate school WASS

2.1 Introduction

Wageningen School of Social Sciences (WASS) is one of the six graduate schools of Wageningen University. Its three main tasks are:

- To stimulate and coordinate the development of a coherent research programme within the mission of the graduate school;
- To safeguard, monitor and stimulate the quality and progress of research by staff, postdocs and PhD candidates;
- To coordinate a high quality tailor-made PhD training programme and organise and facilitate PhD courses, research seminars and academic exchange.

WASS was established in 2010 and is the result of a merger between the former Mansholt Graduate School of Social Sciences and the Wageningen branch of the national research school CERES (Research School for Resources Studies for Development). WASS currently hosts 25 chair groups in the Social and the Environmental Sciences, about 400 PhD candidates, 38 Postdocs and 180 scientific staff members.

The technical and life sciences environment of Wageningen University has a substantial impact on the research topics, the methodology of research, and the research output in WASS, leading to research projects and publications beyond the traditional scope of social sciences outlets. Practically all research has a strong empirical basis and many WASS researchers gather their own primary data, either in The Netherlands or abroad. Research projects often include close cooperation with societal partners and stakeholders.

WASS views itself as strongly internationally oriented in staff, PhD candidates and research topics, as working across disciplinary boundaries and multiple scales from a solid empirical basis, and as contributing to the analysis and solution of social challenges.

2.2 Mission

The mission of WASS is: *'To explore societal processes to improve the quality of life'*. WASS promotes research that increases our understanding of societal processes and practices around challenges in the domains of food, agriculture, environment, health and development.

The four WASS research themes focus on core societal challenges and concerns related to food quality and food safety; environmental protection and sustainable resource use; healthy lifestyles and sustainable livelihoods; and equal access to development opportunities:

- Disparities: Poverty, Wealth and Distribution;
- Responsible Production and Consumption: Sustainability, Health and Quality;
- Natural Resources and the Environment: Conflicts, Competition and Collaboration;
- Knowledge in Society: Contestation, Boundaries and Bridges.

Within these thematic domains, WASS researchers focus on exploring and understanding the interaction between institutions, practices and social change, often in relation to the bio-physical world (of natural resources, technologies and artefacts) and from a diversity of theoretical perspectives.

2.3 Management and organisation

The Board of WASS is responsible for the functioning and performance of the graduate school. The Board is composed of four chair holders and one PhD representative. The Scientific Director and the Chair of the Education Committee serve as advisors to the Board. The Board decides on the long-term strategies of the School. The International Advisory Board advises the Board of WASS on strategic issues with regard to content, quality and management. The Scientific Director is responsible for the management of WASS and leads the WASS Office in formulating and executing the plans, policy and activities of the School. The Scientific Director represents WASS in other institutions and platforms, inside and outside Wageningen University.

Fellows and PhD candidates co-steer the graduate school by participating in the different WASS committees. The Education Committee is in charge of the courses and of the development of new training elements. The Research and Assessment Committee is responsible for the assessment of new PhD project proposals and the organisation of theme-related activities. The Publication Policy Committee follows national and international discussions to advise the Board on publication policy. PhD candidates are organised in the PhD Council, which represents the interests of PhD candidates in the Board and the Education Committee.

The budget of the graduate school is variable, depending on the number of registered PhD candidates and the number of graduations. It includes a compensation for the Scientific Director (0.5 fte), a budget for the WASS Office, a visiting researcher budget, strategic resources for funding PhD candidates and postdocs, and a budget for training and education.

Table 1 Chair groups attached to WASS

| Department of Social Sciences |
|---|
| <ul style="list-style-type: none"> • Agricultural Economics and Rural Policy (AEP) • Business Economics (BEC) • Development Economics (DEC) • Economics of Consumers and Households (ECH) • Education and Competence Studies (ECS) • Health and Society (HSO) • Information Technology (INF) • Knowledge, Technology, Innovation (KTI) • Law and Governance (LAW) • Management Studies (MST) • Marketing and Consumer Behaviour (MCB) • Operations Research and Logistics (ORL) • Philosophy (PHI) • Public Administration and Policy (PAP) • Sociology of Development and Change (SDC) • Rural and Environmental History (RHI) • Rural Sociology (RSO) • Sociology of Consumption and Households (SCH) • Strategic Communication (COM) • Environmental Economics and Natural Resources (ENR) (evaluated in SENSE 2014) • Environmental Policy (ENP) (evaluated in SENSE 2014) |
| Department of Environmental Sciences |
| <ul style="list-style-type: none"> • Forest and Nature Conservation Policy (FNP) • Water Resources Management (WRM) • Land Use Planning (LUP) • Cultural Geography (GEO) |

3. Performance of the Wageningen School of Social Sciences (WASS)

3.1. The research environment for the PhD programme

3.1.1. Mission statement and ambitions / strategic targets

The Peer Review Committee considers that WASS has a clear sense of purpose and mission. The Committee was also impressed by the overall quality of research activities and outputs. It is especially encouraging that WASS has adopted the broad goal of 'building cohesion' across the various chair groups. The Committee considers that WASS chair groups are effectively engaged both with the life sciences and their specific disciplinary bases (although there is some variation in this regard). However, the Committee encourages colleagues within WASS to go even further in terms of developing its distinctive niche within the global research environment: in other words, to 'own their uniqueness'. In that sense also, the Committee encourages both PhDs and academic staff to be proactive in developing the unique WASS environment and ensuring that possible complementarities are fully exploited. From the Committee's viewpoint, the capacity of WASS to 'make a difference' (both in academic and 'relevance' terms) is greatly increased by social science-wide collaboration and a shared strategic direction.

3.1.2. Management, leadership skills, and organisation of the graduate school

The Peer Review Committee has a positive assessment of the performance of the graduate school and the unique research environment for innovative social science within a life science context. The Committee has confidence in the good organisation of the Graduate School and in its financial resources. The Committee was specifically impressed by the commitment and professionalism of WASS staff. The Committee's assessment is that WASS is demonstrating leadership within the University and also with regard to international best practice.

3.1.3. Viability

In praising the good organisation, important function and excellent leadership of the Graduate School, the Committee also wishes to draw attention to a number of development points which may have consequences for the future success of the Graduate School.

In the first place, the Committee specifically encourages a greater sense of interdisciplinarity and strategic development. There was variable evidence of a commitment to collaboration across the chair groups: some had clearly embraced it, whilst others seemed more inclined to operate inside their own 'bubble' (although the Committee understands that this may also be an unfortunate consequence of the research review being conducted at the level of 23 separate chair group reviews). Some chair groups stressed the significance of the sub-departments (or 'research clusters') while others seemed to operate with a greater degree of isolation. More generally, the selection, mentoring, coordination and accountability of chairs are crucial for the success of WASS. Of course, leadership and strategic direction are not an issue for the chairs alone and it is crucial that the next generation of senior researchers should also be supported. However, sharing leadership experiences, successes and failures across the chair group leaders is especially important in this complex environment. The Committee understands that the Directors of the Science Groups (i.e. ESG and SSG) have a crucial role to play here and encourages their efforts in creating common purpose across the chair groups. This is especially important when some chair groups demonstrate a tendency to conservatism in terms of their future plans and activities.

Secondly, the Committee spent some time discussing issues of critical mass and the small size of many chair groups. This is not simply a question of scale *per se* (big in this context does not necessarily mean better) but rather of considering the challenges of smaller groupings – including the consequences for PhD training, strategic direction and external visibility - and ensuring that the organisational form is appropriate to its academic purpose. The Committee recommends that the issue of critical mass should be considered in terms of academic themes rather than staff numbers alone. The Committee also encourages a WASS-wide discussion of how some of the less-positive aspects of current group size can be mitigated: for example, by ensuring resources to maintain the viability of key programmes and research areas, facilitating access to large grants, and creating specific activities around ‘core’ concerns.

Thirdly, the Committee was presented with evidence that the University budgetary system might offer disincentives to cooperation. As one significant illustration of this, it was suggested that a reduction in the number of chair groups would lead to a loss of overall funding from the University. Similarly, it was indicated to the Committee that the budgetary system operated as an obstacle to the development of ambitious social science-wide courses.

Fourthly, the Committee’s attention was drawn to the uneven quality of supervision and PhD support across the chair groups: as it was put to us, it “depends to a great extent on the chair group a PhD is in”. Whilst to some degree this is inevitable within such a large and heterogeneous grouping, the Committee was concerned that the relatively small chair groups might constrain PhD development. It will be important that the Graduate School continues to work towards quality enhancement across the whole area.

Fifthly, concerns were expressed to the Peer Review Committee that University-wide efforts to enhance research performance may be undermining other activities: in other words, that incentives to publish in top ranked journals may be constraining the ‘bottom-up’ emergence of new ideas and the encouragement of radical new insights. The Committee recommends that the University continues to monitor the consequences of its incentive systems (e.g. the impact on more ‘public’ forms of social science). The Committee also notes that there are particular challenges in measuring the impact of interdisciplinary research as well as research in areas such as law and philosophy. Without wishing to uncritically endorse all usage of bibliometrics, the University should consider the employment of forms of bibliometric analysis that can specifically address such issues (such techniques do exist internationally). The Committee draws attention here to the 2012 article by Rafols et al (*Research Policy*, 41, 1262–1282) as an example of the critique of disciplinary approaches to the evaluation of interdisciplinary research. This paper also suggests some alternative approaches.

Sixthly, the Peer Review Committee deliberated about how best the different chair groups could clarify their role with regard to societal impact. One possibility is that a more structured approach across the groups would be beneficial – perhaps linked with the presentation of well-argued case-studies. The Committee was specifically concerned that ‘impact’ seemed often to be driven by particular individuals rather than following a shared direction within and across chair groups. The impact of the tenure track system on efforts towards enhanced impact was also viewed as a potential problem.

Seventhly, the Committee observed general support for the tenure track system but also concerns around the actual implementation of tenure requirements. The Committee recommends that there should be the maximum clarity in the specific and individual tenure track requirements so that the system is as predictable as possible to the individuals operating within it. In terms of professorial appointments in particular, the Committee received evidence that there may be unevenness in terms of overall requirements (i.e.

across the chair group head, tenure track and 'special professor' categories). This is clearly a matter of active debate and some anxiety within WASS.

Finally, the Committee would like to emphasise the importance of succession planning within chair groups, the necessity for a strategic perspective on academic staffing, and the need for constant attention to academic recruitment processes in order to enhance quality across the groups. This can be a sensitive matter since, on the one hand, there is a need for support and involvement within chair groups but, on the other, there is a risk of 'inbreeding' and conservatism within especially the smaller groups. The Committee did hear concerns about the future viability of specific chair groups given the pending loss of key staff (especially due to retirement).

3.2. PhD training and education programme

The Peer Review Committee takes note of the general findings on the Wageningen PhD programme provided by the EUA Solutions report, January 2015. The Committee especially emphasises the recommendations regarding the professional development of supervisors, guidelines for supervision, an overall PhD recruitment strategy and the requirement for transparent recruitment processes. The Committee commends also the statement: "The university should ensure that the allocation of supervisors is based on research relevance rather than the financial advantage for the chair group or the requirements of tenure-track staff to fulfil a certain quota of supervisees". In addition, the Committee notes the PhD experience survey and commends its continued development and implementation.

3.2.1. PhD course programme of the graduate school

In supporting the work of WASS in enhancing training and course provision, the Peer Review Committee wishes to make the following points.

Whilst generic and transferable skills are important, it must also be ensured that PhD candidates in WASS are equipped with appropriate training both in the knowledge and skills generic to the social sciences (which may cut across several chair areas, e.g. economics) and in those specific to the research area at both the basic and advanced levels. In the Committee's view, such a provision will also assist PhD candidates in gaining a broader understanding of their field beyond the perimeters of their chair group both theoretically and methodologically. It was put to the Committee that there is a particular shortage of broad-based methodology training across WASS. The 'T-shaped skills' model gives emphasis both to transferable skills & interdisciplinary overview, and to 'in-depth disciplinary knowledge'. However, the Committee's concern is that there may be a blind spot where the small scale of some chair groups restricts social scientific knowledge and understanding (e.g. concerning research in adjacent fields or the activities of competing research groups internationally). The Peer Review Committee emphasises the need for PhDs to be able to locate their work in a broad as well as narrow tradition, and also to develop a clear sense of the international significance and standing of their research activities.

Concerns were expressed within the review process concerning the financing of courses for PhDs. With the backpack system, PhD candidates may not be encouraged to take courses abroad or outside the University as this comes from money they can also use to attend conferences. As noted above, the Committee was concerned that there may be budgetary disincentives for courses across chair groups.

A specific issue concerns course availability for sandwich students. It was suggested to the Committee that some sandwich students had been delayed in the completion of their PhD

programme due to the unavailability of relevant courses. There was also an apparent lack of clarity among PhDs concerning the possibilities in practice for changing supervisor (or indeed chair group).

In general, the Committee encourages the active development of social scientific training courses covering the broad academic requirements for theory, methodology and research design. These would have the further advantage of building academic links across chair groups.

3.2.2. Quality of the PhD progress monitoring / efficiency of programme

The Peer Review Committee specifically praises the system of progress planning and quality assurance operated within WASS. This is a significant area of best practice. WASS has drawn up guidelines regarding PhD process and integrity, which the Committee considers again to be excellent practice. The Committee raises no particular issues concerning completion rates.

3.3.3. PhD career prospects

This area is covered in the Graduate School report and there seem to be no general problems in terms of employment after PhD completion. However, the Committee noted that chair groups typically did not address this issue within their presentations and sometimes struggled to recall examples of post-PhD careers. The Committee recommends that greater monitoring is conducted in this area. The Committee further recommends the more developed use of alumni networks – including across WASS as a whole.

3.3. Integrity

The Peer Review Committee considers the development of explicit guidelines as best practice and commends WASS upon their development. However, the Committee also notes that such written statements are necessary but not in themselves sufficient. Whilst chair groups often viewed research integrity as primarily a matter of data management, PhD scholars emphasised questions of co-authorship (a point expressed also in the PhD experience survey). The guidelines seem to be appreciated by everyone, but there is still scope for further discussion and attention to implementation. For example, the Committee received evidence that different chair groups take different approaches to matters of co-authorship. The Committee specifically supports the requirement for open and constant discussion around wider issues of research integrity and ethics so that (especially with regard to data management) this does not simply become a matter of 'box-ticking'.

3.4. Conclusion

The Peer Review Committee concludes that the graduate school meets the following conditions:

1. The graduate school provides a well-organised, coherent and productive research environment for the PhD programme;
2. The graduate school offers a sound and institutionalised programme in which PhD candidates are trained to become independent researchers;

In supporting this statement, the Peer Review Committee calls for particular attention to issues of quality control across WASS as a whole, the encouragement of collaboration across chair groups, the strengthening of PhD training in methodology, key social scientific concepts and research design, and increased supervision monitoring.

3. The graduate school functions as an independent organisational unit with its own budgetary and managerial responsibility, with the university or universities involved providing a level of financing for a period of at least six years that can be described as sufficient in view of the graduate school's planned capacity.

3.5. Recommendations

The Committee will not repeat all the various recommendations and suggestions made above, but will instead emphasise the following points. The Committee does not direct these points to any particular group within the University:

1. That, although the Committee found the quality of research activities overall to be high (albeit with significant variations), more could be done to achieve the maximum synergy and impact from this broad social scientific group. The Committee particularly encourages efforts towards setting a common direction, raising the general ambition, and making the case for social science in this unique environment. At one level, this is about clarity of mission and purpose across WASS as a whole. At another, this is about promoting the importance of this academic area, developing a shared narrative and being pro-active in creating new opportunities in both disciplinary and interdisciplinary terms;
2. That appointments at all levels (including PhD but also more senior positions) represent a crucial area for the University, and deserve increased attention in terms of both strengthening the field of applications and ensuring that the highest quality standards apply. For the Committee, this calls attention to the overall strategic planning and coordination of advertising and search efforts, succession, transparent assessment policies, the encouragement of international recruitments, and the evaluation of candidates according to the highest quality standards. It would be helpful to have a clear designation of who has general responsibility for this area (currently, it seems to be divided across several groups and individuals);
3. That the University should consider both the disadvantages and advantages of the operation of small chair groups and take appropriate steps to mitigate and address the current challenges (including for the academic development of 'core' areas and the support to PhD students);
4. That WASS continues to pay attention to the unevenness of provision across the chair groups (including matters of supervision and the functioning of different research environments);
5. That increased attention is required to training pathways for PhD candidates not only in terms of transferable skills but also foundational and methodological courses;
6. That the overall budget system should facilitate and support academic priorities (there may be disincentives in the system);
7. That, despite broad support for the tenure track system, there should be the maximum clarity in its operation.

4. Assessment of the research programmes

4.1. Agricultural Economics and Rural Policy (AEP)

Leader research group: Prof. dr. Justus Wesseler (2014 to present)
Dr. Jack Peerlings (2010-2013, interim)
Prof. dr. Arie Oskam (2009)

Research input tenured staff in 2014: 2.70 FTE / 12 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 2 |
| | Viability | 1 |

Motivations for scores:

Research quality

The group has a strong tradition in analysing agriculture, food markets and rurality and related policies. More recently its focus has been redefined towards the economics and policy of the bioeconomy. This change has been boosted after the appointment of the new chair, after a long period (more than four years) of vacancy. The themes have therefore been redefined as well, and currently are a blend of more traditional topics (CAP reform, trade policy, price analysis, spatial structure of rural areas, contracting) and new topics (biofuel, GMOs, green services). The vision is clear and well positioned towards recent developments in the field.

The staff has a critical mass (23 people employed as research staff including post-docs and PhD candidates, 8.57 FTE in 2014) and has increased over the reporting period (18 people employed as research staff including post-docs and PhD candidates, 7.41 FTE in 2009). The share of research contracts to total funding has also increased over the period (from 50% to 56%).

The number of PhD theses has been quite volatile over the reporting period, partly following a natural cycle of gestation of PhD careers. As compared to the preceding review period, the number of PhD theses declined by 6%, with no theses in 2014.

The research quality has improved as compared to the previous reporting period clearly responding to the change in the structure of incentives at WASS: per research staff input the number of refereed research articles increased by 74%, while the number of books decreased by 7%. The average relative impact (RI) is 1.43: though quite volatile over the period it shows an increasing trend over the last years. The same applies to publications that belong to the top 10 % most cited publications in their field (T10 publications) and non-cited (NC) articles. However, there is a non-trivial number of NC articles, not only just in recent years when the Committee would expect citations to be lower given the expected time lag in citations, but also in prior years of the review period.

The overall evaluation is that the AEP research group conducts very good internationally recognised research.

Relevance to society

The societal relevance is very good and seems to be focused mostly on the EU. Target group relations and uses of research by target groups seem to follow this tendency and are strong.

The Rural Policy content of the AEP Group is mostly related to sub-theme (2) 'spatial structure' (and, to a lesser extent, to sub-theme (3) 'institutional and organisational aspects'), following a specific way to approach rural policy issues, mostly related to land use patterns and maybe diversification of economic activities. Innovations in patterns of development at local level are much less represented.

The overall evaluation is that the AEP research group provides a very good contribution to society.

Viability

The group is excellently equipped for the future. The chair replacement issue is solved, the group has critical mass, a shared vision is in place focusing on a topic - bio-economy - which is hot both in applied research and in the policy arena: this represents a common/unifying theme for the three different research lines.

The benchmarking exercise is very comprehensive and shows that the AEP group is very well positioned as compared to the most direct competitors in EU and in USA.

The overall evaluation is that the AEP research group is excellently equipped for the future.

Recommendations

- Further reduce the number of NC articles and make a systematic analysis of them to check whether there is an emerging pattern in terms of specific topics;
- Increase and make less volatile the number of PhD theses;
- Set a more clear strategy to increase the impact on society;
- Focus also on rural development patterns (rather than on just spatial structure analysis). This is the major source of innovation in governance and institutional change in rural areas (cf. the bottom-up approaches and private-public partnerships AEP refers to as opportunities in the SWOT analysis, cf. p. 9 of self-evaluation). Possibly seek collaboration/synergies with other research groups (e.g. RSO) on the grounds of methodologies (qualitative vs. quantitative) to analyse these aspects;
- Considering the formidable ethical issues involved in dealing with many bioeconomy issues, strictly implement the existing Guidelines/Protocols concerning research integrity specifically with reference to private funding/co-funding of bioeconomy research.

4.2. Business Economics (BEC)

Leader research group: Prof. dr. Alfons Oude Lansink

Research input tenured staff in 2014: 3.40 FTE / 9 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 1 |
| | Relevance to society | 1 |
| | Viability | 2 |

Motivations for scores:

Research quality

The group has a long-lasting tradition in farm management and in 2003 redefined its focus on business decisions made by firms along the whole food supply chain. Therefore research themes have been also redefined and they currently revolve around three topics - economic performance and risk; economics of healthy animals, plants and food; and sustainable food – mostly at the farm level but increasingly more downstream along the food supply chain. In other words, current research themes are a blend of more traditional topics at the farm level (efficiency and productivity analysis; management of plant and pest diseases; animal welfare) and new topics (performance of firms along the food chain, food safety and quality). The vision is clear and well positioned towards recent developments in the field.

The staff has a critical mass (36 staff including Post-docs and PhD candidates, 20.74 FTE in 2014) and has increased over the reporting period (26 people, 11.79 FTE in 2009), including four people entering the tenure track system. The share of research contracts to total funding has increased over the period (from 62% to 70%) as have the research grants (from 0 to 5%).

The number of PhD theses has been increasing and over the reporting period a total of 22 PhD candidates graduated at WU while 6 other PhD candidates graduated at Utrecht University.

The research quality has improved as compared to the previous reporting period, clearly responding to the change in the structure of incentives at WASS: the number of refereed articles increased by 56%, mostly due to the increase in staff, considering that the productivity of refereed articles per research staff input remained virtually constant (-4.1%). The average RI has been constantly above the world average over the whole period and is equal to 1.7 as an average of the six years. The T10 publications increased from 10% (2003-2008) to 19% (2009-2014) and the publications that belong to the top 1% most cited publications in their field (T1 publications) increased from 0 to 4%. However, there is a non-trivial number of NC (not cited) articles, not only in recent years when the Committee would expect citations to be lower given the expected time lag in citations, but also in prior years of the review period.

The overall evaluation is that the BEC research group conducts excellent research and is among international leading groups in its specific domain.

Relevance to society

The research group has been very effective in having a societal impact, mostly leveraging on well-established and long-lasting relationships with farmers and their organisations. This is

witnessed by the significant share of research funding from research contracts, by the development of software tools adopted by end-users, and by the numerous keynote speeches addressed to professional fora. The field where the societal impact has been most relevant has been risk management, especially in the meat food chain.

The overall evaluation is that the BEC research group made an outstanding and measureable contribution to society over the period.

Viability

The BEC research group is very well equipped for the future. It has critical mass and a shared vision in place: to analyse and support decision-making of actors in food supply chains and to evaluate their risks and their economic, environmental and social performance.

The benchmarking exercise shows that, while BEC is well-positioned regarding direct competitors (Ghent University and Charles Dyson School at Cornell University) in terms of T25, it is lagging behind in terms of T10.

Considering the attempt to move downstream along the various food value chains, which is also a topic of other research groups (e.g. MCB's 'animal welfare', ORL's 'modelling and solution approaches for efficient decision support', MST's focus on innovation and coordination within chains and networks), there is in principle a risk of overlapping if this new positioning is not carefully managed. Opportunities exist to capitalise and build upon the synergies between these units to deepen the analytical perspective brought to supply chain issues through different theoretical and methodological lenses.

The overall evaluation is that the BEC research group is very well equipped for the future.

Recommendations

- In order to keep pace with its excellent research record the group should increase the number of T10 articles per research staff input and further reduce the number of NC articles (maybe making a systematic analysis of these articles to check whether there is an emerging pattern in terms of specific NC topics);
- Move further downstream the focus along the food value chains, keeping a clear demarcation vis-à-vis other research groups at WU, namely:
 - focusing on risk management issues and on the analysis of the structure of incentives that entrepreneurs face at different stages of the food chain;
 - leveraging the strong BEC microeconomic background to formulate theoretical frameworks and scientific hypotheses to be tested that can spur synergies with other WU research groups (e.g. ORL).

4.3. Cultural Geography (GEO)

Leader research group: Prof. dr. Claudio Minca (2010-2014)
Prof. dr. Jaap Lengkeek (2009)

Research input tenured staff in 2014: 3.2 FTE / 9 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 1 |
| | Viability | 3 |

Motivations for scores:

Research quality

This is the first evaluation since the appointment of a new chair group leader in 2010 led to the hiring of several new early-career assistant professors and a significant reorientation of the group's longstanding research on tourism and landscape values under the broader banner of cultural geography. This subdisciplinary label is very prominent in international Anglophone human geography, but it is not well established in the Netherlands. Thus there is a clear opportunity to do something that is both distinctive and of national significance, even if the relatively small size of the group in comparison with more established competitors in the UK and North America means that the aim of becoming a major centre of international excellence will always be challenging.

Over the evaluation period, the volume of research outputs from the group has increased while the head count has remained steady, suggesting an increase in productivity. There is also evidence for an increase in quality. The group has shifted its publication strategy to emphasise publication in international peer reviewed journals. Performance appears to be relatively consistent across group members at different career stages. While ISI Web of Science citation metrics tend not to favour cultural geography because its publication outlets and practices are not well captured, the bibliometric analysis presented in the self-assessment document reinforces the expert judgement of the panel about the very good quality of the research being done by the group. Several prizes, fellowships, and other marks of esteem (including several for early career staff), provide further evidence of research quality. The only obvious weak spot amidst an otherwise very promising performance was competitive research grants.

The overall evaluation is that the GEO research group conducts very good internationally recognised research.

Relevance to society

Building on a longstanding programme of research in tourist studies and a set of relationships developed with key stakeholders in that industry over many years, the group is making an outstanding contribution to society by helping to develop corporate social responsibility codes of practice governing tourist operators in The Netherlands and working internationally with key stakeholders to encourage tour operators in Africa to adopt more sustainable and socially just practices. The importance of this work to key stakeholders is evidenced by their commitment to fund a special chair for Professor van der Duim. The impact of research conducted by other group members is less well established, as might be expected given both career stage and recent appointment to Wageningen, but the significance and reach of that impact upon tourism both in the Netherlands and

internationally is such that overall the research of the group can be said to have made an outstanding contribution to society, despite the relative immaturity of the contributions from elsewhere in the group.

Viability

The research unit is well equipped for the future, insofar as it makes responsible decisions based on a clear research strategy. Nevertheless over the medium term it faces a number of issues it will need to consider. While cultural geography provides a stronger outward face for the group that gives it a clear subdisciplinary and thematic identity by which to be identified externally, there are tensions between this subdisciplinary logic of chair group organisation and those more typical across Wageningen UR. Across the University the logic of chair group organisation is more typically problem or topic-based (rather than subdisciplinary), and this provides a clear basis for intra-group complementarities and collaboration on larger research projects. By contrast, the three research themes within the group are so broad that there is not terribly much in common between, for example, the social theoretical work of the chair group leader on the political geographies of camps (understood here as both literal concentration and detentions camps and more general spaces of custody and care, like hospitals and care homes) and the work of other group members on power in spatial planning, on 'rewilding' and animal geography, or on the health care system. Each of these research programmes is individually excellent, but this humanities-style of (often) lone scholarship is not scalable, and their combination does not necessarily make for more than the sum of their parts. This may be one reason why despite considerable effort the group has thus far failed to win any research grants.

As a result the group relies on teaching income for its financial survival: 75% of the group's funding over the 2009-14 period was direct funding from the university (against a WASS chair group average of 49%; 3 groups >70% direct funding; 3 groups 60-69%; 3 groups 50-59%; 8 groups 40-49%; 6 groups <39%), making this group the second most reliant on direct funding of any chair group examined in this review. Supervising overseas PhD students has helped to balance the group's books (but not necessarily those of the university as a whole since some of the funding for these PhD studentships has come from internal WUR-wide competitions). However, PhD supervision is labour intensive, and research productivity may suffer unless those PhD projects can be aligned to larger, more scalable research programmes.

While external collaboration with other chair groups might provide a solution to the external grant-getting challenge and help diversify the group's income streams, many of the empirical topics being pursued by group members do not particularly play to the established strengths across the University and this poses challenges for collaboration on research grants. The notion of biopolitics might provide a basis for cultural geographers to comment on the life sciences, but it is not clear what that conceptual framing might offer life scientists in return as a basis for collaboration. Likewise the emergence of the 'environmental humanities' might provide another basis for connection, but it may be challenging to articulate its external appeal to potential collaborators elsewhere in WUR.

It is also not clear, either from the group's self-assessment report or our interview with them, whether and how the group's successful and impact-generating research programme on sustainable tourism will be maintained after the retirement of the holder of the personal professorship in tourism, who has led the group's productive engagement with the Dutch tourist industry. Cultural geography emerged out of a longstanding Wageningen interest in landscape and spatial planning. While this subdisciplinary thematic provides a potentially productive way to extend existing strengths on tourism in some innovative directions, there does not seem to be much in the way of formal succession planning. Nor are there clear

strategies and institutional structures in place for supporting the development of pathways to impact from research across the group.

Recommendations

- The group needs to begin succession planning to ensure that its successful and impact-generating research programme on sustainable tourism continues after the upcoming retirement of the personal chair holder;
- The group needs to consider what ideas and concepts (Biopolitics? Environmental humanities?) might provide the best bridges between its subdisciplinary tradition in cultural geography and the more problem oriented and interdisciplinary mode of chair group organisation across WASS and Wageningen University more generally;
- The group needs to establish better training and support, including internal screening and constructive peer review feedback mechanisms, to support grant writing by early career staff and increase the success rate of grant applications. This can be done either at the level of the chair group or through WASS.

4.4. Development Economics (DEC)

Leader research group: Prof. dr. ir. E.H. Bulte

Research input tenured staff in 2014: 2.71 FTE / 9 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 1 |
| | Viability | 1 |

Motivations for scores:

Research quality

DEC is a strong research group with a focused and well-developed research strategy and with an emphasis on understanding and evaluating the processes and outcomes of economic development and institutional change. DEC's research is primarily empirical in nature, with the chair group having made a strategic decision to invest in the development and application of experimental methods through the use of randomised controlled trials (RCTs). Survey-based tools and observational data remain an important basis for other aspects of the group's research. As such, RCTs and observational data provide a rich mixed methods approach to addressing a wide variety of development issues. Impact evaluation 2.0 features strongly in the group's research focus, where the intent is to unpack the 'black box' of the experiment and draw upon theory to understand which economic development strategies work, and why. Further efforts in this regard are encouraged. DEC has a strong network of research collaborations, both with other economics groups within Wageningen University, with partner institutions internationally, such as Nanjing Agricultural University, Cambridge University, IFPRI, the World Bank and FAO, and with NGO partners in developing countries.

The strategy to incorporate field experiment-based studies into the research portfolio of the group, in addition to observational-based studies, has resulted in an upward trajectory in terms of the quality of research publications, with 40 percent of publications in Q1 journals over the review period, including 21 percent T10 journal articles, and 2 percent (3) T1 articles. The group has published in leading journals in the field, including the *American Journal of Agricultural Economics*, and most notably, the *American Economic Review*. The Relative Impact (RI) factor of 1.55 signals the impact of the chair group's research to be well above world average. The excellent research performance is somewhat clustered among a few research staff, and efforts to facilitate the development of an enhanced research focus across the chair group are encouraged. With the addition of new staff, the chair group is on a promising upward trajectory and, while the research quality score was assessed as 2 averaged over the evaluation period, the group is clearly tending towards an average of 1 over the past two years and the Committee anticipates into the future.

The chair group has a laudable ambition to be recognised as the leading centre in its field in Europe, and is strongly positioned to achieve this ambition. The self-assessment indicates that DEC compares favourably with the Centre for the Study of African Economies (CSAE) at the University of Oxford, although this was difficult to assess since statistics to verify the comparison were not provided.

Overall, DEC has a clearly defined research strategy and is on a strongly upward trajectory in terms of research quantity and quality. The group is heavily involved in PhD supervision, and research staff members have well-established international reputations within their fields.

The overall evaluation is that the DEC research group conducts very good internationally recognised research.

Relevance to society

DEC demonstrates its relevance to society on a number of fronts. A significant portion of PhD candidates are from developing countries and return to their countries following PhD training to assume academic posts, and governmental and NGO policy positions. Capacity building therefore represents a key output from the DEC chair group. The strong collaborative network with NGOs, donor and governmental organisations facilitates the dissemination of DEC research to relevant stakeholders. Rather than being spread too thinly by grasping every project that arises, the chair group has made a wise strategic decision to focus on research projects which offer the opportunity for high quality academic publications while also within their capacity to deliver meaningful results to the community of interest. An example is the focus on projects in Sierra Leone, where the relatively small size of the country, and the long-running involvement of DEC in targeted research projects, has generated tangible economic development results. Research conducted by DEC, particularly the impact assessment work, has provided input to future policies regarding development assistance nationally within the Netherlands, as well as internationally; for example, the development of policies to enhance Ebola response efforts in Sierra Leone. Staff members serve in numerous capacities as board members of international development organisations and research networks.

The overall evaluation is that the DEC group made an outstanding and measureable contribution to society over the period.

Viability

DEC features a good balance of experienced and young researchers, with four assistant professors currently on tenure track and a growing number of post-docs. The appointment of a special chair in the area of impact assessment and food security further strengthens the group's research capacity and network of research and policy connections. The chair group has a solid financial position, with a comfortable surplus which provides flexibility to invest in the application of innovative research methods and ideas, and to facilitate research intensiveness across the chair group. Funding sources are nicely balanced across direct funding from the university (38% on average across the review period), research grants (including NWO and KNAW funding) (26%) and contract research (35%). The international reputation of the group, and its strong network of research collaborations within both academic and practitioner communities, provide a solid foundation for continued success.

The overall evaluation is that the DEC research group is excellently equipped for the future.

Recommendations

- The chair group is encouraged to increase research intensity more evenly across the chair group, facilitating the professional development of less research-active staff, and the career development of tenure track assistant professors;
- The group should keep and foster the mix (and links between) of RCT and observational-survey work to cover the broad mix of development questions;
- The group should continue to intensify its efforts to publish in Q1 journals.

4.5. Economics of Consumption & Households (ECH)

Leader research group: Prof. dr. G. Antonides

Research input tenured staff in 2014: 1.6 FTE / 4 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 3 |
| | Relevance to society | 3 |
| | Viability | 3 |

Motivations for scores:

Research quality

The group was refocused following the previous review and an emphasis was placed on behavioural economics. One person was moved to another group and one new tenure track appointment has been made. Following the review, there was also an increased emphasis on experimental studies.

There were initially relatively few publications from PhD theses but this has now increased. However, the publication and citation rates remain relatively low and there are no T1 papers. Although there has been a decrease overall in non-refereed publications, there has not been a notable increase in refereed publications. There has also been a low number of PhD theses completed during the review period.

The external research funding is low and there are no research grants shown for the review period. In a promising new development, there is a new NWO grant (2015) not shown in the figures. The strategy for increasing research funding was not clearly articulated. The aim is to increase the number of PhD students from the current 5 to around 6 or 7 but again this would need a clear strategy regarding the source of funding.

The relative impact (RI) of publications is very variable (due to small numbers of publications in each year) and is around 1.0. While this shows that the relative impact is around the same level as the world average, the target for this should be higher. No data were provided on non-cited articles but it was stated that the number was low (around 5%).

Little quantitative information was provided within the benchmarking component of the self-assessment documentation, making it difficult to assess this group's relative performance. While the benchmark group chosen is generally appropriate, there are a number of groups within behavioural economics that are very much stronger (and larger).

The overall evaluation is that the ECH group conducts good research.

Relevance to society

The advice of this group has been sought by policy-makers, e.g. Ministry of Finance, BIT, RLi. Behavioural and experimental economics is a growing area and there are many potential applications of relevance to society. In some European countries behavioural economics has been popular for a few years in the policy area; however, it is not clear that the group has had an impact on policy to an extent that would be expected given the growth in interest in this area.

Research staff have been actively engaged in professional academic organisations, including editorship of a disciplinary journal. PhD graduates hold posts in a variety of places, including industry (e.g. Pepsi) and research organisations (e.g. LEI), suggesting that graduates have strong employability.

The overall evaluation is that the ECH group makes a good contribution to society.

Viability

This is a small group with only four members of staff. Two of these are coming up to retirement, including the chair. If the group is to continue it is very important that these posts be replaced and in a timely manner. Even with replacements the group will remain small and vulnerable. A decision needs to be made regarding whether to continue the focus on the economics of consumption and households in a stand-alone unit or to integrate this important sub-discipline into one or more related economics groups within WASS. There is an opportunity to build a strong group in what is potentially a very important area but this would require further recruitment of research staff rather than mere replacement in order to ensure long-term viability.

Around 30% of the funding for the group comes from external sources and recently ECH has obtained grant income from highly competitive sources, which is a positive development. There is some evidence of collaboration with other groups in WASS (e.g. MCB, DEC) and with other groups and institutes in Wageningen (e.g. LEI, Nutrition) but this collaboration could be much stronger; this group should be able to offer unique skills and expertise within such collaborations. Considering the focus on behavioural economics, plans for strengthening/developing collaboration with other research groups would seem a natural opportunity (e.g. DEC for experiments and heuristics in LDCs, BEC on environmental decisions, MCB on psychological sciences as applied to consumer behaviour).

The overall evaluation is that the ECH group is well equipped for the future.

Recommendations

There are serious concerns about the viability of the ECH group given its small size and the impending retirements, particularly given the often lengthy time-frame for recruitment of a new chair. A strategic decision needs to be made at the WASS/WUR level regarding re-investment in this group. A clear plan is needed for timely succession management, and to build the group into a stronger and more viable unit.

4.6. Education and Competence Studies (ECS)

Leader research group: Prof. dr. Martin Mulder

Research input tenured staff in 2014: 2.22 FTE / 7 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 1 |
| | Relevance to society | 1 |
| | Viability | 1 |

Motivations for scores:

Research quality

ECS has exhibited excellence in research quality and is on a strong upward trajectory, both in terms of research productivity and the quality of research outputs. The number of refereed articles averaged 17 per year over the review period (up from 7 per year over the previous review period). The group publishes in both disciplinary and inter-disciplinary journals, with an ISI relative impact score of 2.1 across the review period. Over 50% of publications are in Q1 journals, with 38% in T10% (10% most cited papers) and one paper in the 1% most cited category (published in the prestigious journal *Science*). The ability to publish both in top-ranked disciplinary journals in the field of education, as well as top journals across a number of disciplines, including multidisciplinary sciences, agriculture, engineering and agronomy, among others, is commendable. ECS has a cohesive research programme focused around three inter-connected research themes related to competence development: societal forces, which influence competence needs; human resource development (education, social and business environments as a context for learning); and sustainable development (normative perspective). The group has established a strong national and international reputation in its field, with staff members active in journal editorial roles, as chairs of European and international research networks, and numerous invited keynote speeches at international conferences. Research produced by the group has been influential in the adoption of competence-based practices at organisations within the Netherlands and internationally. ECS has an impressive network of international research collaborations. Efforts to increase the proportion of highly competitive research grant (NWO) funding have paid off with an upward trajectory in grant funding beginning in 2012.

The overall evaluation is that the ECS group conducts excellent research.

Relevance to society

ECS is actively engaged in the delivery of professional publications and outreach activities, including the *ECS Bulletin*, with information for practitioners. The group has had an important involvement in green education and the implementation of competence-based education, authentic competence assessment, sustainability in education and entrepreneurship education. Participation on advisory boards and in advisory positions to various bodies has enabled the group to enhance and broaden its impact in the implementation of competence based practices. 74,000 full text downloads of publications by ECS staff from the Wageningen Yield database and Research Gate is a strong indicator of the level of interest in, and influence of, the work produced by this group. The group is actively developing a social media plan for strategic use of key social networking platforms (Linked-In, Twitter, blogs, etc.) as dissemination and outreach mechanisms. Contract research funding accounts

for just under 50% of ECS funding on average over the review period, suggesting strong interest in the research produced by this group from key funding bodies.

The overall evaluation is that the ECS group makes an outstanding contribution to society.

Viability

The prospects and outlook for ECS are strong. The expertise and capacity of the group has been strengthened by the addition of two new tenure track assistant professors over the review period, as well as the appointment of one staff member as a personal professor. At a time when specialised educational faculties in other universities are facing budgetary challenges, the embedded nature of ECS within the life sciences focus of Wageningen University is a particular strength. The chair has a clear sense of vision and mission for the group and has encouraged the development of a cohesive, highly complementary set of research themes. The numbers and quality of PhD students has been increasing, and the group has identified strategies to improve the selection and retention of higher quality PhD students. The chair holder emphasises professional autonomy for research staff members, balanced with a clear set of goals for continued professional growth. The chair holder is due to retire and active steps have been taken to encourage smooth succession planning with the unit. Prompt replacement of the Chair upon his retirement will be particularly important.

The overall evaluation is that the ECS group is excellently equipped for the future.

Recommendations

- Wageningen University is encouraged to ensure that replacement of the current Chair holder upon his retirement occurs in a timely manner to ensure continuity within ECS;
- ECS should continue its efforts to increase its proportion of grant funding;
- Balancing the production of high quality refereed research outputs with the delivery of salient outreach documents to the public, and communicating the practical implications of ECS research to society, will continue to be important.

4.7. Forest and Nature Conservation Policy (FNP)

| | |
|--|---------------------|
| Leader research group: | Prof. dr. Bas Arts |
| Research input tenured staff in 2014: | 2.32 FTE / 8 people |
| Score | |
| Research quality: | 1 |
| Relevance to society: | 1 |
| Viability: | 2 |

Motivations for scores:

Research quality

Since its last evaluation in 2009 the group has made significant strides to improve its overall research performance. Supported by a steady stream of project and contract funding, FNP has increased its research volume and productivity substantially. Progress has been particularly impressive in rapidly increasing the number of refereed journal papers (tripled) and the number of academic publications (doubled). FNP leadership and staff have also made a concerted effort to seek publication in higher quality journals. These results reinforce the expert judgement of the panel about the quality of the group's research and its status as one of the most influential in the world in their field.

This research excellence is underpinned by the group's commitment to a distinctive practice-based approach to research, especially in the areas of participatory forest governance and co-production of science and policy. Intellectually and practically, both programs have successfully advanced fundamental knowledge and positioned the group to actively influence the societal processes they seek to change. This approach has also allowed FNP to meaningfully leverage their considerable data and human resources to build robust collaborative networks both within WASS and across NGOs (e.g. CIFOR) and research groups outside the Netherlands (e.g. IFRI—University of Michigan, US). Their excellence was well reflected in the clear and articulate way the group presented their work during the site visit and offered compelling evidence of how their influence and quality of their research has increased over the past five years. Whereas their inability to date to secure more prestigious grants such as VENI-VIDI-VICI or ERC despite their significant level of external funding (through research contracts) has been disappointing by their own assessment, the group is committed to continue pursuing larger and more prestigious funding from sources like NWO and EU.

Relevance to society

Through its long term policy and issue networks in the Netherlands and abroad, FNP has been effective in influencing policy and social change domestically and internationally. As mentioned above, their practice-based approach to research intellectually positions the group to effectively influence policy as they consistently and actively work together with decision-makers to influence the policy process. In at least one example well-articulated during their presentation, FNP showed compelling evidence of their ability to directly influence Dutch environmental policy. In addition, through their researcher-practitioner networks (especially internationally), and knowledge brokering activities (in co-production processes) FNP has positively affected both forest conservation and governance and policy-science dialogues.

The overall evaluation is that the FNP group makes an outstanding contribution to society.

Viability

Whereas the substantial progress in terms of steady growth of staff and contract projects, research productivity and societal influence bodes well for FNP's viability, the group's inability to secure prestigious research grants suggests that there is room for improvement. The fact that the group has been close to success in a couple of opportunities demonstrates they are doing something right. Their commitment to persist is commendable.

The overall evaluation is that the FNP group is very well equipped for the future.

Recommendations

Given FNP's successful trajectory in the past five years, a recommendation towards further strengthening and consolidating the strategies that improve programmatic coherence and research productivity makes sense. In addition, the Committee recommends that FNP significantly enhances efforts to ensure external funding, particularly research grants that can enhance group visibility and resources as well as revitalise funding for PhD candidates.

4.8. Health and Society (HSO)

Leader research group: Prof. dr. Maria Koelen

Research input tenured staff in 2014: 1.92 FTE / 5 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 3 |
| | Relevance to society | 1 |
| | Viability | 3 |

Motivations for scores:

Research quality

The scientific quality is good overall, due to a coherent interdisciplinary approach (salutogenesis) to positive health from an everyday life perspective. It is an advantage that the group draws upon a mix of methods to address these issues. The publication productivity is not very high and so here there is room for improvement. The relative impact of publications is somewhat variable, due to the low numbers, but is a little above average for the field. There is only one T10 paper and no T1 papers. The publication quality is, however, good when taking the academically young issue of health promotion into account. The output of the group is impacted by problems of multi-, inter-disciplinary research generally not appearing in high impact (single discipline) journals. Also outputs from the group seek to address specific target audiences which again might reduce the impact factors of potential outlets.

The academic reputation appears to be good, and there is a reasonable output strategy, but there is a need to increase the overall impact of publications. The faculty come largely from within the institution rather than being external appointments, which might limit engagement in major research networks nationally and internationally.

Relevance to society

The societal relevance of the work of the group is outstanding. Healthiness is clearly of major social concern and the group is contributing very well in this area. The narrative on societal relevance is explicit and clear, and since the research approach of the group involves action research, there is no doubt about the ambition for the research group in relation to societal relevance. The extent and variety of networking with societal actors is very impressive, and the use of research among societal actors seems to be high and broad. For example, various interventions and questionnaires developed by the group have been used in a number of organisations.

The adoption of the salutogenetic approach to positive health (as opposed to pathogenesis and ill health) is commendable but the term 'salutogenesis' may obstruct the wider impact of the work both in societal and academic terms.

Viability

The research group is relatively small and relatively new, having been split off from a previous larger research group. With this in mind, the leadership appears to be working well, and there is a good share of financing that is attracted as external funding (around 40% over the review period). The group appears to work closely together in a committed and coherent

fashion and overall the sum is definitely greater than the parts. The research vision is clear, although it is also relatively broad and more recently is broadening further in beginning to cover non-Western contexts of health, in line with the direction proscribed at the instalment of the chair. Care must be taken not to broaden the focus too far.

The group appears to have a heavy teaching load and since there is a two-year lag in being rewarded in financial terms for teaching and PhD supervision, this appears to have caused some problems. This issue would appear to be a particular concern for a new and small group such as this one, rather than larger groups with a longer history where the lag is less important.

The chair of the group will retire in the next few years and it is very important that the succession planning for this is done in a timely manner and takes account of the existing strengths of the group. There are some plans for expansion on the teaching side and also into the research area of healthy ageing. Healthy ageing would complement the current research portfolio and would offer opportunities to attract funding and to make a significant impact both academically and societally. However, this would be highly dependent on the appointment made and it needs to be borne in mind that this is a very competitive research field.

The overall evaluation is that the HSO group is well equipped for the future.

Recommendations

- It is extremely important that planning for the replacement of the chair is conducted in a timely manner. Also it is important that the appointed person fits with the strengths of the existing group;
- The group would do well to take advantage of the important parallels between their research and other areas of research on behavioural/practice change, particularly in relation to the publication strategy;
- In order to improve impact, publications and funding, the group needs to speak beyond the narrow 'salutogenesis' approach and more in terms of e.g. holistic, well being, positive health;
- To maintain and if possible increase external funding and publication impact, it is recommended that the group creates a detailed strategic plan.

4.9. Information Technology (INF)

Leader research group: Prof. dr. ir. B. Tekinerdogan (since 2015)
Prof. dr. ir. Jack van der Vorst (interim 2013-2014)
Prof. ir. Arie Beulens (until 2013)

Research input tenured staff in 2014: 1.08 FTE / 4 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 3 |
| | Relevance to society | 3 |
| | Viability | 4 |

Motivations for scores:

Research quality

Despite a minor computer malfunction in the early part of the presentation, the Peer Review Committee was able to gain a good sense of the situation within the group. INF is a relatively small group consisting of staff members with expertise in a variety of areas related to information technology. The arrival of a new chair in January 2015 has provided the group with an opportunity to refocus its research strategy in the direction of smart systems engineering. The new strategic direction is focused around three sub-themes: software engineering, information management/knowledge engineering, and socio-technical systems engineering within a smart systems engineering approach. The challenge lies in integrating these themes in a sufficiently coherent manner to provide a clear research direction within the unit that speaks to a solid overarching purpose. The strategy for transition to the new research focus is not entirely clear.

Publication quality and quantity have fluctuated over the review period. In addition to refereed journal articles, refereed conference papers remain an important publication outlet relevant to this discipline, however, the number of publications in high quality venues has been rather low on average. In part this may have been due to low staff numbers and a delay in replacing the chair following the retirement of his predecessor. While the addition of the new chair and a new tenure track staff member, along with seven new PhDs and one post-doc from September 2015 will add much-needed research capacity, a more clearly articulated strategy to improve publication quality and productivity is required.

Appropriate mentoring of new staff and PhD student researchers in the development of their programmes of research will be critical to the long-term success and cohesion of this group. The research focus of INF has applications across a number of domains relevant to the life sciences at Wageningen, and as such makes this group a natural research partner for a number of the other chair groups engaged in research related to the operation and improvement of supply chains, quality measurement, and information and knowledge systems, particularly Operations Management and Logistics (ORL). INF takes a strongly collaborative approach to research, which is to be commended. The challenge lies in balancing a primarily service industry-as-laboratory-based, somewhat reactive research focus with the need to develop innovative research proactively initiated and led by the INF group.

The overall evaluation is that the INF group conducts good research.

Relevance to society

The INF group has a new research focus on smart systems and systems of systems engineering that has many potential applications in agriculture and the life sciences. Innovation in agricultural equipment involves ever more advanced levels of technology, precision, and the gathering and processing of information, with sophisticated computing power embedded in these innovations. Unfortunately, the group struggled to clearly articulate the societal impact of its own research in this important field. The 'SMART' modelling tool is being used by a number of international academic institutions, however, it is unclear whether industrial partners are also using this modelling tool. Information was not available in the self-assessment documentation on the present jobs of PhD alumni, so it was difficult for the Committee to gauge the impact of the group in this regard. INF is involved in a major EU funded project 'FI space', which has the potential to deliver industry-relevant benefits in terms of improved supply chain efficiencies in flower auctions, although the extent of the group's involvement in the project (which has multiple partners) was difficult to gauge. A third edition of the bestselling book by Hofstede et al. was published during the review period and continues to be influential.

The overall evaluation is that the INF-group makes a good contribution to society.

Viability

The appointment of a new chair for the INF group and the recruitment of seven new PhDs and a post-doc from September 2015 are positive developments that provide the group with an opportunity to rebuild and refocus its research capacity. Nevertheless, the small size of this group, and the apparent disparate nature of the research undertaken by its members remain a serious concern. The addition of a new tenure track assistant professor to the group in August 2015 will also help bring additional research depth and capacity to increase research fund acquisition, although it will take time for a new junior colleague to become established. The international visibility of the group does not appear to be particularly high at present. INF has a new vision and mission focused on smart systems and systems of systems engineering, with positive ambitions for growth that are laudable. Nevertheless, a clearly articulated strategy to transition the group to the new theme and to achieve the strategic goals of improving research quality and productivity was difficult to pinpoint. Obvious synergies exist between INF and much larger, more viable chair groups within WASS, in particular Operations Research and Logistics (ORL). While recognising that an administrative decision to explicitly divide the INF and ORL groups was made in recent years, and the INF group strives to have a broader and distinct focus on smart systems engineering, the long-term viability of information technology research and graduate education within WASS might be better positioned within the ORL umbrella.

The overall evaluation is that the INF group is not adequately equipped for the future.

Recommendations

- The INF group has chosen a relevant research focus. The chair group needs to develop a clearly articulated strategic plan to implement this research focus across the group, including identifying the fundamental research questions, funding sources, and potential collaborations both within WUR and with external partners in academia and industry;
- Opportunities exist for co-operation with strong computer science groups in The Netherlands working in the field of smart systems and systems of systems engineering. Efforts should be made to build these connections and create a stronger profile for the INF group;
- The group should aim for higher quality Computer Science outputs for their research;

- Even with the appointment of a new chair and the addition of a tenure track faculty member, this remains a very small group that may continue to struggle. Integration of INF into ORL should be given serious consideration.

4.10. Knowledge, Technology and Innovation (KTI)

Leader research group: Prof. dr. ir. Cees Leeuwis

Research input tenured staff in 2014: 3.04 FTE / 10 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 2 |
| | Viability | 1 |

Motivations for scores:

Research quality

This group, principally focused on knowledge and socio-technological innovation in agro- and environmental systems, was instituted in 2011 from two longer standing Wageningen groups (TAD and CIS). It has thus seen substantial reorganisation over the assessment period. There is a clear and coherent strategy to understand processes of socio-economic innovation and transformation that support re-configuration of the bio-material, social and symbolic. KTI has a good track record of internationally recognised research, supported by a steady stream both of competitive and contract research. Performance appears strong and is spread relatively evenly across the group. Publication quality has improved and the group has, to an extent, been able to influence the publishing milieu of the research focus area. There is perhaps rather less research which seeks strongly to 'change the game' in the research area. The group adopted several research approaches. One such approach (technography) has been developed as a research and problem solving methodology and has the potential to become a more general theoretical perspective for interdisciplinary problem solving. Overall, the panel considers that the research is very good indeed and internationally recognised. It is progressing well with an upward trajectory and has the potential to become a leading world research group, particularly if it were able to generalise the considerable insights it has developed through its very good research on innovation in agricultural and natural resources contexts more broadly to other domains of socio-technical innovation.

Relevance to society

The group emphasises action research as having impact through different pathways, with an action research orientation: for example, reflexive methodologies that support stakeholders in reconfiguring environments; innovation brokering; empowering marginal groups. KTI works hard to disseminate its research and to work with societal stakeholders. There is reasonable evidence that its dissemination strategy has produced impact in a range of important situations (Panama disease in bananas, for example). The significance and reach of the impact is somewhat difficult to evaluate on the basis of the evidence provided in the self-assessment document, though informal discussions with the panel suggests that it could be considerable. Overall, KTI makes a very good contribution to society and could relatively easily be organised to become 'outstanding'.

Viability

The group is strong with a clear and coherent strategy. Group members appear to work well with a strong team dynamic. Quality is rising and there is a very strong upwards trajectory, supported by a track record success in competitive and contract research. There is good evidence that the 'section' strategy to integrate the work of three chair groups is being implemented 'on the ground' and this bodes well for the future. Evolution in the next years has strong potential for the KTI to develop into a strongly world leading group. The overall evaluation is that the KTI group is excellently equipped for the future.

Recommendations

- The Committee recommends that the group raises its ambition and seeks to engage more with the mainstream social sciences and with other domains of application beyond agro-food. At present it is well grounded in the area of innovation in agro-systems, where it is a significant global player but the group should be encouraged to explore the opportunity to build on these strengths and contribute to understanding of other areas of innovation beyond its core strengths in the agro-food and natural resources domains;
- The group could relatively easily move towards a more general world class expertise in innovation platforms with some further effort to draw on its experience in agro- and environmental systems, and increasingly in natural resource management and human health, so as to drive wider debates in the social sciences and society at large about responsible innovation;
- The group should more systematically organise its dissemination and impact activities so that its relevance to society can be more easily assessed.

4.11. Land Use and Planning (LUP)

| | |
|--|---|
| Leader research group: | Prof. dr. Leonie Janssen-Jansen (as of June 2015) Prof. dr. ir. Adrie van den Brink (2011-2015) Provisional leadership (2010-2011) Prof. dr. Arnold van der Valk (until spring 2010) |
| Research input tenured staff in 2014: | 2.38 FTE / 10 people |
| Score | |
| Research quality | 3 |
| Relevance to society | 3 |
| Viability | 3 |

Motivations for scores:

Research quality

The research productivity and quality of the Land Use Planning (LUP) group is good. In an effort to improve its research quality, the group has reoriented its research away from its longstanding technical-applied research on landscape issues, often for Dutch government agencies, to emphasise more internationally relevant topics, such as climate proofing and land cover land use change dynamics. This strategic reorientation offers a stronger basis for improving research quality and for advancing the societal relevance mission of this group.

While the group's strategic reorientation within the field of land use planning would appear to strengthen its chances of securing more research funding, it has yet to yield much in the way of competitive research grant awards. As the internal assessment notes, this group's level of external funding is insufficient to achieve its research vision. The reinvestment in several promising early career staff does look to be bearing fruit in terms of some more high quality publications in international peer reviewed journals. In particular, the group is to be commended for its achievements in sustaining and increasing its number of refereed articles published each year, articles placed in high impact journals and the relative impact of these publications, as measured by citation indices.

However the small size of the group may make it difficult to fulfil the contact time demands for practicals and other planning professional certification requirements for students without compromising research. Publication productivity and research quality appear to be uneven across the group, and the citation metrics are what would be expected for a group in transition, with a small and still fairly junior staff cohort whose research as a whole is broadly good. While there are some signs of promise, other areas of performance will require improvement in order to achieve the very high standards to which the group and WASS aspire.

Relevance to society

While the LUP group's research addresses issues of strong societal relevance and there is some quite good outreach and engagement work being done, especially with the planning and landscape architecture professions, evidence of the tangible societal impacts from these outreach efforts is not always very clear. The potential is certainly there for the group to make more than just a good contribution to society. In the period ahead it will be important, therefore, to document and emulate the examples of existing good practice from within the

group, such as the support provided for provincial conservation planners in Gelderland through the RULEX project, as well as looking beyond for inspiration, so that the group can increase its contribution to society. In the process it will be important not to lose the strong relationships already in place with the Dutch planning profession, as the group's research strategy leads its members to work on more international topics and to publish in international (typically English language) peer reviewed outlets where intellectual property rights issues keep research findings locked away behind proprietary pay walls. LUP group members are to be applauded for their efforts over the review period for publishing a number of articles in local newspapers and other Dutch language media that are more accessible to the local publics who are not just key user groups but, as citizens and taxpayers, are ultimately key user groups.

The overall evaluation is that the LUP group makes a good contribution to society.

Viability

With a newly appointed chair group leader and some good early career appointments (and 1-2 more planned in the immediate future), there are reasons to expect better things to come from this group. There is clear awareness of the need for more research grant income to provide the resources to increase research volume and capacity by funding more PhD students. The current external funding situation is an acknowledged area of weakness and is defined in the LUP self-assessment as "not a sustainable situation". However the small size of the group makes this difficult by limiting critical mass and compromising resiliency in the face of the inevitable fluctuations in the external funding success of individuals. While the expertise of the new chair group leader in urban planning and governance points to some exciting new research areas that potentially complement the work going on in other WASS groups, it is not so clear whether and how those new directions will mesh with the existing emphasis of group members (including several recent appointments) on land use change dynamics and human-physical processes.

The overall evaluation is that the LUP group is well-equipped for the future.

Recommendations

- The group is much smaller than comparable groups internationally and indeed is even below the minimum threshold of 10 FTEs for a unit of REP assessment recommended by NWO guidance. To provide greater resiliency, critical mass and economies of scale in research capacity and teaching, there would be arguments for seeking to consolidate into larger groupings and sections at WASS;
- Given the increasing international orientation both of the group's research and of its PhD candidate base, it may be worth trying to use future academic staff appointments to internationalise the academic staff by looking to recruit more staff with research expertise and linguistic competence in key global regions of the world, including Latin America, East Asia, and Africa, where future research on landscape processes and land use change at the urban fringe is likely to concentrate;
- Continue exciting strategic efforts to build programmatic coherence and enhance the impacts and visibility of research publications;
- Work to enhance efforts to increase outside funding, focusing particularly on research grant funding, to ensure the sustainability and potential growth of the group's research program.

4.12. Law and Governance (LAW)

Leader research group: Prof. dr. Bernd van der Meulen

Research input tenured staff in 2014 : 1.6 FTE / 4 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 2 |
| | Viability | 2 |

Motivations for scores:

Research quality

The scientific quality of the research in the group is very good. The group focuses on food regulation through an interdisciplinary approach to law in the widest sense, where it works specifically with legal regulation of sustainable international food supply chains. Thus, the group operates in a distinct niche of food law, consumer law, and intellectual property which are highly specialised branches of law.

In 2011, the group went through a refocusing of its strategy, where it ended its research line on natural resources and developed the current clear focus on sustainable food. The output strategy is very clear, focusing on increasing both quantity and quality of publications. The publication productivity is high and very respectable in terms of quality, especially when taking into account that the law discipline does not traditionally match bibliometric criteria too well. There has been a significant increase in refereed publications, and attention is being paid to achieving publication in high-ranking international journals. The academic reputation measured in terms of recognition from peers is very good with for example several editor positions with key journals. The academic reputation measured in citations and impact is credible, even when taking into account that both measures vary somewhat across the period of evaluation, due to for example one particularly highly cited publication. Given the rapid growth in output, the challenge might be to consolidate this and continue to improve.

Relevance to society

The narrative on societal relevance of the research is very clear and realistic in addressing the expectations about relations between law oriented research and societal actors. A very strong example of group output is the *EU Food Law Handbook*, produced by the group. The group is active in outreach to government, regulators and industry in particular, but also to a lesser degree to consumers. The societal use of the group's research products is very good, consisting in for example group members having contributed their expertise in the form of reports to the European Commission as well as to national government, and their reports are also cited in judicial decisions and legal practice. Likewise, there are clear marks of societal recognition in the form of memberships of boards in relevant institutions and organisations, including at an international level. Interaction with general 'publics' seems to be weaker, so here there is room for improvement.

The overall evaluation is that the LAW research group makes a very good contribution to society.

Viability

The group seems to compare very well in the international benchmarking with other groups, taking into account that the groups in the comparison are not exactly the same type of specialisation of law research. The group is relatively small, due to the refocusing of the research strategy in 2011. As mentioned earlier, the leadership used this to focus the line and vision of the research. This seems to have paved the way for very good strategic choices to follow up recommendations from the previous evaluation, e.g. by hiring new staff in the areas of behavioural law and economics. However, the size of the group seems to make it necessary for them to collaborate quite a lot with other groups at Wageningen as well as elsewhere, which seems on the one hand to be a strength in relation to interdisciplinarity, for applications for external funding and for publication, but on the other hand might lead to a default of acting as a research service rather than initiating research. Furthermore, some imminent retirements will present challenges to the size and composition of the group. The attraction of external funding is reasonable - approximately 40% of the group income– but it is expected to increase, and there should be good possibilities for research funding in law and regulation, given the interests in food safety and security.

The overall evaluation is that the LAW research group is very well equipped for the future.

Other remarks (e.g. if applicable on integrity etc.)

The group is aware of the importance of research integrity and is appropriately geared up to best practice in this regard. It was however difficult to get an impression of the research culture vitality since the interview did not include representatives of the younger staff members.

Recommendations

- It is important to make plans for the hiring of new staff as the size of the group is already small and retirements are coming up;
- The group needs to develop a more pro-active strategy for collaboration with other research groups;
- The group has a very good research productivity, and this should be consolidated, and the share of highest ranking journals could be increased;
- In its outreach to society, the group could embark upon more interaction with wider general publics, such as consumer organisations and general media.

4.13. Management Studies (MST)

Leader research group: Prof. Dr. S.W.F. Omta

Research input tenured staff in 2014: 3.34 FTE / 11 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 1 |
| | Relevance to society | 2 |
| | Viability | 1 |

Motivations for scores:

Research quality

The Management Studies (MST) group is at the forefront of its research field in the study of innovation in agri-food chains and networks. The research is excellent and highly influential in advancing scientific knowledge regarding communication, innovation, and coordination within chains and networks. The MST's analytical approach is widely respected for enhancing both understanding and practices fostering local, national, and global sustainability. The strong and coherent focus of the MST group has promoted its research excellence over the review period and positions it to maintain its leadership into the future.

The number and quality of publications by the MST group are excellent and have increased substantially over the review period based on the success of its new publication strategy. Particularly impressive is that the number of refereed articles per year doubled from 2003-8 to 2009-14 (from 14 to 32) and the percentage of articles in Web of Science journals more than doubled (from 21% to 57%). The impact of these articles is well above world average; 18% of articles are in the top 10% of most cited journals in their field and several have won awards. MST takes an important leadership role in shaping its field through the Conference on Chain and Network Management, *Journal of Chain and Network Science*, and other major academic networks.

The MST group has been very successful in pursuing external funding, particularly in contract research which increased substantially during the review period. Although research grant funding diminished with the completion of two projects, MST has acquired new grants supporting two PhD candidates starting in 2015.

Relevance to society

The MST group contributes strongly to society particularly in business and policy arenas. The group collaborates with businesses in its research activities and influences the agribusiness community through its development of management tools to address real world problems. A good example is the creation of a 'Toolbox' to guide SME's in identifying EU partners for innovation projects which has been adopted by several companies. Ties to the business community are strengthened by the placement of half of their recent PhD graduates in jobs in industry, science based industry institutions, and consultancies.

The MST group also engages in an influential way in policy debates in The Netherlands and other parts of Europe. It has contributed to a set of EU policy discussions over the review period addressing important issues related to agricultural cooperatives, the fruit and vegetable sector, and sustainable trade. The connection between MST's research and policy issues was well articulated in the presentation and self-assessment, clearly demonstrating

how work advances policy discussions and leads to changes in trade policies and laws. MST is well recognised for its important work in the International Food and Agribusiness Management Association forum linking businesses, academics and policymakers.

Although some of the accomplishments of the MST group have received media attention, less work has been done to date to engage wider civil society groups or more popular avenues of communication.

Viability

The MST group is excellently equipped for the future due to the strength of its academic, financial, and human resource position and its ability to make strong strategic planning commitments which it appears fully able to see to fruition. This group's research productivity and quality is on a strong upward trajectory and compares quite favourably to benchmarked US and European peer groups. The MST group has been very successful in pursuing external funding which provides financial stability and a platform for advancing its promising research agenda. While MST members are well aware of the time commitment required in maintaining and advancing their research excellence they have a clear strategy for doing just that.

This programme has a substantial and well-balanced scientific staff, including four young tenure track faculty in key programme areas. This creates a robust research environment and supports the ambitious research agenda of the group. The chair professor will be retiring in a few years which will be a significant loss for the group given his substantial academic and strategic leadership, but there is already a plan for succession that should greatly ease the difficulties of leadership transition.

Recommendations

- Continue the strategic efforts to enhance programmatic coherence and productive collaborations within the University and in outside networks;
- Follow through on plans to maintain and if possible increase outside funding, including looking for new types of funding sources;
- Continue to enhance publication impact through the existing strategy of targeting high quality journals as well as new strategies to draw public attention to the group's work via web based and other media outlets;
- Timely and effective replacement of the Chair holder is essential – while succession plans are in place, there needs to be careful follow through;
- Work to broaden societal engagement to include more diverse civil society groups (NGOs etc.) and to deepen impact through more strategic communication and engagement measures.

4.14. Marketing and Consumer Behaviour (MCB)

Leader research group: Prof. dr. ir. J.C.M. van Trijp

Research input tenured staff in 2014: 3.73 FTE / 12 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 1 |
| | Relevance to society | 2 |
| | Viability | 1 |

Motivations for scores:

Research quality

The group has a strong, long-lasting tradition in marketing and consumer behaviour. The mission is to “contribute to effective food and agribusiness marketing systems to satisfy both the short-term needs of customers, primary producers and stakeholders, and the long-term (societal) viability of the system as a whole”, where the entry point for the analysis is end-customer needs, preferences and decision-making. The vision is clear and well positioned towards recent developments in the field.

The staff has a critical mass (31 people employed as research staff, including post-docs and PhD candidates, 14.11 FTE in 2014) and has increased over the review period (27 people employed as research staff including post-docs and PhD candidates, 10.67 FTE in 2009), including three people entering the tenure track system. The share of research contracts to total funding has substantially increased over the period (from 36% to 57%) as did the research grants (from 1% to 11%). The expenditures over the whole period have been roughly constant, always above 2.2 million euro.

The number of PhD theses has been increasing and over the reporting period a total of 13 PhD candidates graduated at WU.

Despite the considerable changes in staff over the review period, allowing its rejuvenation, the research quality has constantly remained well above the world average (average RI = 1.67 for the whole period). The number of refereed articles slightly increased over the review period due to the increase in staff, considering that the productivity of refereed articles per research staff input remained constant. The average over the period is almost 35 refereed articles per year, corresponding to 2.53 articles per research staff input. Most notably, the quality of the articles has remained at top level, with 23% of articles in T10 and 2% in T1. The MCB group has also an excellent representation in scientific leadership as witnessed by its presence in many scientific advisory boards and programme committees as well as by the numerous awards and prizes won by its members.

The overall evaluation is that the MCB research group conducts excellent research and that it is internationally recognised as one of the leading groups at world level in its specific domain.

Relevance to society

The already very good societal impact of the research group at the beginning of the period has been maintained over the review period, through public-private initiatives, the delivery of publications for societal target groups, the development of collaborative research with

societal partners and the advisory role to government bodies played by many MCB members.

This is also witnessed by the very high share of research funding from research contracts and grants and by the numerous keynote speeches addressed to professional fora. Examples of activities where the societal impact has been relevant include nudging for promoting healthier eating habits and the use of eye-tracker technology. Very interesting is the use of modern social networks to extend the traditional dissemination network.

The overall evaluation is that the MCB research group made a very good contribution to society over the period.

Viability

The MCB research group is excellently positioned for the future. It has critical mass and a much younger and more international staff as compared to the beginning of the review period. It has also put in place a shared vision that strengthened complementarity and developed synergies among the various research lines. The contributions of this group are very significant not only in the group-specific domain (i.e. food sciences and agribusiness) but also in the group foundational sciences (i.e. psychology and marketing). Furthermore, the group has developed strong networks in society.

The benchmarking exercise shows that the MCB group is excellently positioned vis-à-vis its most important competitors (Ghent University and the Aarhus MAPP in EU, and the Charles Dyson School at Cornell University and the University of Illinois in USA).

The group's financial position is very healthy and represents a window for opportunity to use part of this money to pioneer new fields.

The overall evaluation is that the MCB research group is excellently equipped for the future.

Recommendations

- In order to further continue on the path of excellence the group should increase the number of T10 articles per research staff input and further reduce the number of NC articles (maybe making a systematic analysis of them to check whether there is an emerging pattern in terms of specific NC topics);
- Further increase the share of personal grants and develop more public-private partnerships (also as alternatives to the decrease of importance of Marketing and consumer behaviour 'pillars' in H2020);
- Taking into account that social network media are now employed in outreach to society, include within societal relations a more 'interactive assets' view of the general public in addition to the traditional dissemination view;
- Experiment with newer fields of research such as the ones identified by the group itself, e.g. unobtrusive measures in consumer behaviour, marketing-finance interface, food waste, sustainable packaging, authenticity.

4.15. Operations Research and Logistics (ORL)

Leader research group: Prof. dr. Ir. Jack G.A.J. van der Vorst

Research input tenured staff in 2014: 1.93 FTE / 9 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 1 |
| | Relevance to society | 1 |
| | Viability | 1 |

Motivations for scores:

Research quality

This is an impressive group. The research within ORL is clearly structured around three inter-related themes: quality controlled logistics; sustainable logistics management; and modelling and solution approaches for efficient decision support, each with a theme leader. Both research productivity and research quality have exhibited a strong upward trajectory over the review period, with more than half of ORL publications in Q1 journals, with 27% as %T10 publications. Publications are both disciplinary and interdisciplinary in nature, with a strong showing in engineering journals, but also notably in agricultural science and computer science journals. The group is actively engaged in a number of impressive research projects, which have resulted both in scientific publications in strong journals and the implementation and adoption of new practices by the business community. The group is increasingly well known internationally and has carved out a strong niche for itself in the application of operations research and logistics to agri-food supply chains. Success in research funding acquisition, publications and a growing reputation has strengthened the group's ability to recruit PhD students, and created a vibrant and dynamic environment for research and PhD training. Benchmarking metrics show that ORL compares favourably with well-known similar programs at Cranfield (UK), Cornell (US) and TUM (Germany).

The overall evaluation is that the ORL research group conducts excellent research.

Relevance to society

The group has a strong track record in securing contract research funding, with research that is applied to real world problems related to improving operations efficiency and logistics within supply chains. Research innovations have been adopted directly by companies in The Netherlands and internationally. The expertise of the chair is sought nationally and internationally by governmental agencies and international organisations (e.g. the World Bank). Staff members are actively engaged in service to professional bodies, including advisory groups for the government, knowledge councils for businesses, editorial boards of scientific journals, and organisation committees of international scientific conferences on supply chain management and operations research. PhD alumni have excellent employment opportunities in industry, as well as academic positions in The Netherlands and internationally (often the home country of the PhD student).

The overall evaluation is that the ORL research group makes an outstanding contribution to society.

Viability

ORL is well positioned to continue its upward trajectory. The chair holder has a clear and well-articulated vision for the group, and the enthusiasm of both the chair and group members was self-evident. The three research sub-themes are nicely integrated and provide excellent synergies for collaborative research across the themes, as well as collaboration with other units within Wageningen University, both in the social and natural sciences. The expertise and research focus of the group provide an ideal bridge to the natural sciences in applications related to, e.g. reducing food waste, green logistics and sustainability assessment. Thus the expertise of the group likely will remain in high demand by other disciplines and research groups. The challenge for this group will lie in prioritising its pursuit of research and funding opportunities. The group has a healthy cohort of PhD students, and with its solid international reputation should be well positioned to continue to recruit good PhD candidates. This also creates opportunities for increasing the quality of PhD candidates that are selected to join the group.

The overall evaluation is that the ORL research group is excellently equipped for the future.

Recommendations

Research collaboration between ORL and other chair groups is occurring and has the potential to deepen. There is considerable capacity at Wageningen for exciting, innovative research that creates new knowledge, tests new hypotheses and changes the way we think about the management and operation of supply chains. Research that improves the operation and efficiency of systems at a micro level will undoubtedly continue to be very relevant and in high demand. To achieve pathbreaking insights or paradigm shifts, however, likely requires the integration of perspectives from across a variety of groups (e.g. ORL, MST, BEC, AEP, INF). The ORL group is well positioned to leverage perspectives from these other chair groups and this is an opportunity that the Committee encourages the group to grasp.

4.16. Philosophy (PHI)

Leader research group: Prof. dr. Marcel Verweij (2013-present)
Prof. dr. Michiel Korthals (2009-2013)

Research input tenured staff in 2014: 1.92 FTE / 8 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 2 |
| | Viability | 1 |

Motivations for scores:

Research quality

The unit is producing very good research, much that is internationally recognised. The philosophy group takes a pragmatist philosophical approach to the phenomenon of moral contestation and deliberation about societal problems with food, health and environment, and furthermore questions the popular explanation for this moral contestation (socio-cultural pluralism). It is notable that the unit is committed to both interdisciplinarity and multi-authorship, both of which are still relatively unusual for Philosophy units. Social science is embraced as a means towards strengthening the empirical basis of reflection.

Joint authorship was a recommendation in the last assessment, particularly as a means of opening up new paths of reflection and leading to higher output. This is to be applauded, and the group seems to be managing the tension between interdisciplinarity and aiming for high quality journals. The group is also publishing with other chair groups in an interdisciplinary way.

The group has recognised that the traditional philosophical output of the single authored book may not be the best thing to prioritise in terms of research impact. In philosophy, quantitative publication measures are problematic and peer recognition may take a number of forms. Nevertheless, the fact that 23 of 43 peer-reviewed articles were published in WoS Q1 journals is an important measure of success, and the unit compares well against the benchmark.

There is also clear evidence of recognition. Members of the unit have been or currently are active in international organisations, editorial boards and conferences. Worthy of note here is Verweij's position in relation to *Public Health Ethics*.

Research quality would be sustained and enhanced by replacement of retiring staff with younger tenure track appointments, though it is important also to maintain international visibility.

Relevance to society

The unit makes a very good contribution to society. The narrative on societal relevance is very clear and explicit and takes a starting-point in societal dilemmas, rather than commencing with the research and trying to adapt that to societal actors' interests. Thus, there are also close collaborations with a number of relevant societal actors, and concrete uses of the research among such target groups. There is a focus on specific areas which include public health ethics, OneHealth and responsible innovation. These are at the cutting

edge of current debate. The marks of societal recognition are also very good in the sense that the group has several chairs paid by societal actors.

It could hardly be more pressing in the current global context to deal with value conflicts in a positive and constructive way. The resources of epistemology and ethics are crucial here, but the unit also recognises the need to interact with social organisations.

Viability

The group is new and yet has a clear and interesting research vision, which might show among other things that the merging of two former groups and a new leadership have been constructive in producing a coherent research environment. The unit is making responsible strategic decisions and is therefore excellently equipped for the future.

The self-assessment document describes well the challenges facing a unit of this type, especially as it is a relatively new group formed by the merger of APP and META. However, it has a distinctive identity, which marks it out from other Philosophy groups, focusing as it does on ethics and philosophy of science in non-clinical life sciences. The research seems characterised by enthusiasm, teamwork and embeddedness, which are all crucial to success. The success in relation to PhD candidates seems very good, both in terms of number of successful defences, and in terms of job placement.

The strategic investment of 200,000 euros represents a substantial commitment, which will also serve as a basis for future grant applications. This is an important statement of intent. It is recognised that it is difficult to attract funding in the area of applied and practical philosophy (especially private co-funding), but there has been some notable success, such as the NWO grant awarded. Moreover there is a strategy in place, both to develop ethics components in life sciences applications and to pursue key targets such as infectious diseases, ethics and health. It is hard to see how this could be bettered as a strategy.

The overall evaluation is that the PHI research group is excellently equipped for the future.

Recommendations

- The most important step would be to make some key appointments. While it may be important to replace retired staff with younger tenure track appointments, thought should also be given to maintaining international visibility;
- Continue with a multifaceted strategy for attracting income. The unit needs to decide whether and to what extent to be opportunistic in applying for money, and to what extent to be selective. The group can consider also whether more could be got out of their collaboration with some of the other WASS research groups. Maybe consider publication on the methodologies of the team;
- Continue to target high-ranking journals.

4.17. Public Administration and Policy (PAP)

Group Leader: Prof Dr. CJAM Teemer

Research input tenured staff in 2014: 2.32 FTE / 6 people

| | | |
|--------------|------------------------------|---|
| Score | Research quality: | 1 |
| | Relevance to society: | 1 |
| | Viability: | 1 |

Motivations for scores:

Research quality

The quality of the research is excellent and reflects the effort the group has made to improve both the number of publications and the quality of journals to which they submit papers. Of particular note has been the rapid progress in the productivity trend. However, the balance between quality and quantity needs to be carefully considered to consolidate this positive trend and increase the scientific impact of the group - and especially of individuals within the group.

The group's positive trajectory is well supported by a coherent and cogent analytical framework ("changing governance—governing change") that sits nicely between strong theoretical contributions and positions the group well to have strong societal impact. The group is consistently and homogeneously good at publishing and writing grants and a young and upcoming faculty bodes well for the group's future.

The panel noted that, in addition to making valuable contributions to environmental social science, the group is also engaged productively with the core disciplines of political science and public administration. Another positive aspect of research productivity is the group's initiative and capacity to collaborate with other units within WASS. The group is financially sound and two recent NWO grant awards just outside the reporting period will increase the group's ability to procure grants to support this positive trend and future growth.

Relevance to society

The group has been active in disseminating its work among practitioners and professional organisations both through the media and by cultivating long-term networks that have critically enhanced their capacity to influence societal processes, particularly agenda setting. In one outstanding example, it has directly developed policy arrangements, processes and decisions that have become part of the Dutch Delta management plan. Concretely, the paragraph the group developed in collaboration with its policy networks - and which was included in the Delta Plan - changed the way the funding schemes of the programme worked by allowing financing under the rubric of water safety to go outside of the water system to other sectors that have a bearing in the management of the Delta.

The overall evaluation is that the PAP research group makes an excellent contribution to society.

Viability

The group is excellently equipped for the future both in terms of human and financial capital. Staff are clearly influential in environmental governance studies and have great potential to

build on this success to further strengthen their engagement with other WASS groups and the core disciplines of political science and public administration. While the group is small it seems to be well prepared to grow organically as their financial resources increase.

Recommendations:

The group's positive trajectory in terms of research quality can be further strengthened through increasing its emphasis on quality over quantity. The group has been cautious in its growth strategy, and while this has worked so far, PAP is relatively small and should think carefully about how growing might create a critical mass that will allow the group not only to continue but further increase its scientific and practical effectiveness.

4.18. Rural and Environmental History (RHI)

Leader research group: Prof. dr. Ewout Frankema (2012-present)
Dr. Anton Schuurman (interim, 2010-2012)
Prof. dr. Pim Kooij (2009)

Research input tenured staff in 2014: 1.12 FTE / 4 people

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|--------------|-----------------------------|----------|
| Score | Research quality | 1 |
| | Relevance to society | 1 |
| | Viability | 2 |

Motivations for scores:

Research quality:

After lying vacant for several years, this chair was filled externally in 2012. Supported by a further external Associate Professor appointment, the new team has successfully internationalised Wageningen's long tradition of Western European rural history and made important-- and internationally recognised-- contributions to the wider fields of social and economic history by bringing a global perspective to questions about the history of economic development traditionally considered in a strictly Eurocentric frame. The panel was impressed by the clarity and intelligence with which the group's contributions and strategy were communicated in its interview with them. The group has an outstanding record of competitive research grant awards from NWO and ERC, which have helped bolster numbers and support research productivity in an otherwise small and meagrely resourced (by the University) group.

As the self-assessment document correctly notes, conventional citation metrics are not a very accurate measure of research quality in history. Academic honours, like the Cole award and fellowship of the Dutch Royal Academy of Sciences, and other measures of academic esteem, including invited keynote addresses and membership of key editorial boards, are a more appropriate indicator of the high regard with which this young and dynamic group is held by its disciplinary peers. The work on comparative economic development of sub-Saharan Africa has the potential to change the way we understand the causes of global uneven development. Other new lines of research in the group also show great promise in enriching a somewhat Anglo-centric debate about the implications of Empire for spatial and gender divisions of labour. There is also potential to make the group's longstanding excellence in Dutch rural history speak to wider debates about environmental history, which heretofore have been dominated by US historians. While there may be some questions whether the group's three themes can (or indeed should, since the lone scholar tradition of historical scholarship does not necessarily generate economies of scale) encourage wider synergies, the panel was nevertheless convinced that the quality of the research being conducted by the group is world leading, a judgment reinforced by a further peer review report from an international expert in economic history.

The overall evaluation is that the RHI research group conducts excellent research.

Relevance to society

What historians can provide society is self-understanding, wisdom even, rather than discrete products to be taken off the shelf and 'applied'. The self-assessment document provides

clear evidence of the effectiveness of group members at injecting historical perspective into contemporary debates in The Netherlands, whether about heritage and landscape at home or economic development abroad. The panel was particularly impressed by efforts to organise leading international scholars into writing a textbook on the history of African development and making it freely accessible to African schools and others worldwide. In making the shift to a more global approach to rural and environmental history, it will be important to retain the valuable links with *Vereniging voor Landbouwgesciedenis* and other local history groups in the Netherlands.

The overall evaluation is that the RHI research group makes an excellent contribution to society.

Viability

In just a short time this group has done well, winning prizes and prestigious research grants, producing impressive scholarship, and building wider networks across Wageningen and the international research community. However, for all its dynamism and impressive trajectory of growth and achievement, this small group rests on somewhat precarious foundations. The chair group receives only half of the funding typically allocated by the University to a chair group and has also struggled to secure much central funding through teaching. As a result it is heavily dependent on continuing success in competitive research grant competitions and cannot provide much security for early career staff. The group contains some rising stars, and if the university wishes to retain their services it will need to do more to support them. Given RHI's position as one of the few humanities chair groups at the university, it will be important for them to cleave to their own disciplinary standards of excellence, which emphasise monographs and contributions to books (in Dutch as well as English), rather than trying to chase citation metrics and international journal outlets that are preferred across the University but are not necessarily the most appropriate for the work being done by this group.

The overall evaluation is that the RHI research group is very well equipped for the future.

Recommendations

- As well as continuing to contribute to its own field, the group should seek opportunities to engage with wider social scientific debates about innovation and societal transitions (whether of food and energy systems or sustainability more generally) that often lack the group's vital historical perspective and appreciation for the *longue durée* and so resemble nothing so much as weak cappuccino that is all froth and no coffee;
- Having made excellent recent appointments in its first two research themes, it will be important to consider whether and how to replace the staff members nearing retirement associated with the group's third research stream;
- Group members can offer important historical perspective on many of the issues central to teaching across WASS. However, various financial and institutional barriers inhibit this potential. It will be important for WASS to take steps to ensure that historical perspectives are appropriately represented across the undergraduate, masters, and PhD curricula at WASS.

4.19. Rural Sociology (RSO)

Leader research group: Prof. dr. Wiskerke

Research input tenured staff in 2014: 3.0 FTE, 8 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 2 |
| | Viability | 2 |

Motivations for scores:

Research quality

Scientific quality is very good because of a clear approach (relational and spatial) to sustainability transformation of food provisioning, territorial dynamics and rurality. There has been success from the group's strengths in city-region food networks and alternative food networks. While the Committee judged the publication productivity as average and impact a little low, it was glad to learn that the group is actively working on improving both. The academic reputation seems very good, and the group is internationally very well networked. Additionally, RSO has been very successful in gaining EU project funding. On the one hand, this success is to be commended because it supports the group's activities; on the other, it can bring project overload, perhaps at the expense of publications. There is, however, a clear approach to output strategy from EU projects, including through special issues in good journals, though there could be more thought given to high impact journal publishing.

The overall evaluation is that the RSO research group conducts very good internationally recognised research.

Relevance to society

The narrative on societal relevance is clear and the uses of research, together with and by societal actors, is very good. RSO is quite policy oriented with effective dissemination (e.g. through social media) and use of its research by society. The marks of societal recognition seem very good. Dissemination reaches into impact in some important ways such as in their long-running research (from 1990s onwards) focusing on new institutional arrangements for landscape management. More recently, impact in the area of urban food policy has also been increasing. This impact is underpinned by an explicit and effective two-way interactive approach between RSO staff and their societal partners. Overall, the Committee finds that the group's impact is very good if mostly stable, rather than growing. However, there is a sense that dissemination of their research is rising, which bodes well for future societal impact.

Viability

The research group is, for Wageningen, relatively large with a composition of a stable level of permanent staff and a large number of PhD scholars. The economic viability seems very good, and the group is excellent at attracting external EU funding. The group also has a clear sociological profile and research vision, while being able to include and collaborate interdisciplinary. The group seems to be slightly 'project overloaded' and should consider further focusing on quality of their publications in the future.

The question remains of how to move from 'stable and very good' to 'leading and internationally influential'. Stability is obviously positive, but can also be negative if innovation within the group is too slow. It may be that the balance between breadth and depth can be re-thought to increase quality within the existing group and with world-class new posts in the next period.

The research culture seems to be very good, and research integrity is taken care of in various relevant manners, formal and informal.

The overall evaluation is that the RSO research group is very well equipped for the future.

Recommendations

RSO has consolidated its position as a very good and internationally recognised research group. It is making a very good contribution to society and is very well equipped for the next period. The Committee recommends:

- That the group develops a strategy to think a little more 'out of the box' so as to build a more ambitious approach to strengthening its international reputation. 'Out of the box' is, by definition, hard to detail but examples of increasing ambition might be: submitting to the very toughest journals, producing articles that gain very high academic impact, gaining ERC grants, and building on the very high profile work of van der Ploeg in *Journal of Peasant Studies*;
- The group has built strong relations with other groups within WASS and WU, particularly with Sociology of Development and Change and one approach is to go for a bigger, global, centre of excellence;
- The publication productivity and quality of the group would benefit from making more room for carrying out publication plans under conditions of 'project overload'.

4.20. Sociology of Consumption and Households (SCH)

Leader research group: Prof. dr. Hilde Bras (2014-present)
Prof. dr. Maria Koelen (interim, 2013)
Prof. dr. Anke Niehof (2009-2013)

Research input tenured staff in 2014 : 1.71 FTE / 6 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 3 |
| | Relevance to society | 2 |
| | Viability | 3 |

Motivations for scores:

Research quality

The scientific quality of the SCH group's research is good. SCH employs a mixed methods approach to investigate practices (qualitatively) as well as behaviour (quantitatively) in analysing social inequalities in food consumption, health and care. The group addresses a very important research domain which links the analytical focus on stratification (in terms of inequality in life chances) to key concerns regarding access to food, health, and care. The group's mixed methods approach and multi-level analysis are at the forefront of this field of inquiry. The new SCH chair has brought new strategic thinking in terms of a core framework, life course analysis, to the research group. This is a positive move in aligning the interests of group members and promoting research coherence, a task necessary to sustain collaboration, attract external funding, increase the quality and quantity of publication, and bolster co-publishing. Since the new SCH chair has started quite recently, the building of programmatic coherence is, not surprisingly, still in process.

For the period under review, the SCH group's research lines, grant activity, and publication output largely follow past patterns, with limited concentration in identified priority areas. Although the group has demonstrated its ability to garner outside funds, success has varied year to year particularly in the area of research grants. The publication quantity and quality of the SCH group is on an upward trajectory, but there remain significant challenges. Research productivity is relatively low as evidenced in the number and quality of publications described in the group's own assessment; the same goes for academic reputation measured in terms of citations and impact. The number of refereed articles has gone up in the review period, but publication in T10 journals is low (averaging 5%) and article impact is below the world average. The broader output strategy of going after a combination of higher ranking international journals, higher citation rates and higher visibility in the general media seems relevant and realistic, but has not yet had time to produce significant results.

Relevance to society

The topic of social inequality in access to food, health, and care is of great social interest and the narrative of the research group on the societal relevance of their research is very good. Target group products and societal use of research products are also very good. Importantly, some SCH projects demonstrate strong collaborative activities with target groups. For example, the project with African Women Leaders in Agricultural Environments provides very good societal influence and reflects the SCH group's important societal impact internationally. Other projects bring good societal impacts in national and EU arenas working with NGOs and taking advantage of new media technologies. The SCH programme has

received a number of marks of societal recognition in the form of awards and appointments. However, the overall narrative of research relevance to society could be communicated in a more coherent manner, underlining the focus on solutions to social inequality. This might be particularly important for taking advantage of the significant opportunities for greater engagement in policy arenas and debates regarding how best to alleviate inequalities in access to food, health, and care at national, continental, and global levels.

The overall evaluation is that the SCH research group makes a very good contribution to society.

Viability

The SCH group seems to compare favourably with other groups in the area, as they are benchmarking themselves against a mixture of larger and less specialised groups of sociology of consumption and more life course analysis oriented groups. External funding has provided important financial resources to the group, and the Committee hopes this can be maintained and developed. The group is relatively small in terms of staff, due to the departure of an earlier subgroup, and has had challenges with staff long-term illness. Additionally, the group has a relatively low percentage of research time and quite a high teaching load. As noted above, the group seems to be at a watershed with the very recent arrival of the new chair. But leadership seems to be establishing itself in the group with good strategic goals and choices related to the hiring of new staff, enhancing of the coherence and focus of the group's research vision and profile, and bolstering the research publication strategy to encourage more and better quality publications. External funding has provided important financial resources to the group. However, the results in the form of e.g. higher publication productivity and impact are not yet visible.

The overall evaluation is that the SCH research group is well equipped for the future.

Other remarks

The group seems to have a good research culture with lots of enthusiasm and a positive collaborative environment, and they employ sufficient strategies for dealing with issues of integrity.

Recommendations

- Continue and strengthen the trajectory of building coherence in the overall research vision. While the life course analysis framework has been good in creating research coherence among faculty members, the collective research profile on social inequalities across the three sub-areas (food, health and care) needs to be further clarified and strengthened;
- Continue and significantly strengthen the new strategy of supporting and achieving higher productivity and publication impact by increasing the number of publications and more importantly the targeting of high quality journals and article citations;
- Continue the level of acquisition of external funding focusing particularly on research grants;
- Gaining critical mass in FTEs is essential to carry out the research mission of the group. This can be done either by the hiring of new staff, or by enhancing research collaboration and strategic alliances with other related chair groups at the University.

4.21. Sociology of Development and Change (SDC)

Leader research group: Prof. dr. Bram Büscher (from 2015 onwards)
Drs. G. Spaas & Mw. E. Oudendijk (interim management 2012-2014)
Prof. dr. Leontine Visser (2009-2012)

Research input tenured staff in 2014: 4.65 FTE / 13 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 2 |
| | Viability | 2 |

Motivations for scores:

Research quality

The Sociology of Development and Change (SDC) group's research quality is very good. Several scientific staff members are well recognised internationally for their contributions to this field. SDC grows out of a well-established group with a strong international reputation for promoting scientific knowledge and programmatic efforts in Latin America, Africa and Asia linking development sociology to the life sciences. Over the years it has extended its scope beyond development sociology to include political ecology, legal anthropology and disaster studies. For most of the review period, SDC had a stated focus on: 1) Resources, rights and access; 2) Crises, reordering and resilience; 3) Fragile rural and urban spaces; and 4) Agricultural commoditisation and global markets. In 2014 it consolidated to three research areas, repositioning work on Fragile rural and urban spaces and Agricultural commoditisation and global markets within the first two research streams and a new stream 3) Reassessing divides and boundaries. In 2015 a new Chair Group head from outside the University was appointed. While SDC has substantial research strengths and its revised focus holds promise, the new Chair has a lot of work to do to help the group rebound after all these changes and to foster the research collaborations and synergies required to achieve scientific excellence and become, as they aspire to be, "a world-leading" research and educational center.

The SDC group has maintained a solid stream of external funding, including prestigious research grants. This funding success is impressive given programmatic and staff changes. Research efforts are bolstered by SDC's strong collaborations within the University and outside, in national, European, and more global networks. The group is well known for its international ties, particularly in the global South. SDC has increased its faculty size (largely via programme mergers) and has a large number of predominantly international PhD candidates who fuel the vitality of the group.

SDC research productivity and impact is very good, though uneven across time and staff. The rise in publications is largely due to growing group size, but research productivity looks good if we consider the number of refereed articles per FTE. Citation rates have declined over recent years, due perhaps to the integration of other units and programme reorganisation. The impact of SDC articles remains somewhat above the world average (RI=1.22). Although 12% of articles have been published in the top 10% of most cited journals, in half of the review period years there were no publications in these journals and many articles are not cited.

Relevance to society

The goal of promoting positive societal change is central to SDC's vision, mission, and objectives. Societal impact is pursued via the democratisation of scientific knowledge and development of research capacity around the world and efforts to enhance socially just, economically equitable and sustainable development. The group's relevance to society is generally very good, but much more can be done to leverage their work for societal impact. The mechanisms by which SDCs research is intended to - and actually does - influence society are not as yet well defined. There is a challenge in translating the group's considerable engagement efforts into tangible social changes.

SDC has historically had, partly via its international PhDs, very strong stakeholder ties with civil society, academic and policy groups in Europe and the Global South. As shown in the group's self-assessment, academic knowledge has been shared with partners in Africa, Latin America, and Asia via numerous workshops, local courses offerings, and policy consultations. Many of these activities appear to involve individual faculty efforts rather than robust institutional ties. The SDC group has published a number of articles for the general public, development practitioners and policy groups. Enhancing their impact, many pieces are written in languages found in the localities of interest in the Global South. The SDC group contributes positively to public debates at national and European levels as well as in Africa, Latin America, and Asia addressing central policy issues like sustainable development, livelihood strategies, disaster prevention and slum renewal.

Viability

The SDC programme has a firm institutional foundation and appears very well equipped for the future. Programme fundamentals are strong, with solid staffing, interesting and important research foci, very good research quality and quantity, robust external funding, and strong integration in research, development programme, and policy networks. Past leadership decisions have caused overly frequent programmatic redirections. The future strength of this programme depends in large measure on the success of the newly hired Chair in making good strategic decisions in fostering programmatic coherence, collaborative opportunities, and excellence in research and societal engagement. Careful selection in the filling of upcoming staff openings will be critical in maintaining and hopefully enhancing group viability.

Recommendations

- Bolster SDC's traditionally strong position at the nexus of development studies and life sciences to ensure that recent programme shifts and research line consolidation do not erode collaborative opportunities and dilute international standing, particularly in research on agriculture and rural sectors;
- Upcoming staff openings offer opportunities to energise and consolidate this group, but these positions must be filled strategically by strong scholars positioned at the heart of the field of Sociology of Development and Change in areas of cross cutting programme interest (e.g. food, water, land, sustainability, etc.), rather than at the margins of new research areas;
- Create a detailed strategic plan to maintain and if possible increase outside funding, including seeking new types of funding sources;
- Create a detailed strategic plan to enhance publication impact by targeting high quality journals and drawing public attention to research via digital and other media outlets;
- Work to translate societal engagement into real world social changes through more strategic communication and attention to the mechanisms through which societal impacts are brought about.

4.22. Strategic Communication (COM)

Leader research group: Prof. dr. Peter Feindt (2013-present)
Prof. dr. Cees Leeuwis, Prof. dr. Noelle Aarts,
Prof. dr. Hedwig te Molder (Interim 2011-2013)
Prof. dr. Cees Van Woerkum (2009-2011)

Research input tenured staff in 2014: 2.88 FTE / 10 people

| | | |
|--------------|-----------------------------|----------|
| Score | Research quality | 2 |
| | Relevance to society | 2 |
| | Viability | 1 |

Motivations for scores:

Research quality

The group conducts research on communication between individuals and organisations in relation to life science goals, including healthy eating, natural resource management and controversy in science/society relations. In addressing these areas, the group focuses on dialogues rather than a one-way model of communication.

The quality of the research is very good. There is an upward trajectory in terms of research quality. The group has been productive in terms of the number of refereed papers and the citation relative impact is consistently above world average (1.84). There are increasing numbers of T10 and T1 papers. The group has a mixed strategy of publishing in top journals but also in some cases of publishing in the most relevant journals for its specific fields, even if not top ones.

The research foci are broad and are driven both by knowledge and by application. In general the research starts from life science problems rather than from communication theory with the development of theory following from life sciences applications. The group publishes in diverse fields and, while this can be considered a strength, it must be careful not to dilute the effort with too many areas.

Relevance to society

There is clear evidence of strong broader impacts, media visibility and the problem/stakeholder driven approach which all contribute to societal impact. There are also publications for professionals, significant numbers of speaking engagements and of providing evidence to various bodies, e.g. government. There is robust collaboration with societal groups in different areas of application, which is a definite plus. There are clear targets for the coming years in terms of increasing impact.

The relatively large proportion of contract-funded research suggests high relevance. International collaboration and networks could be better, given the diversity of the group and its potential to produce top-notch research/application.

PhD graduates hold positions in a number of areas, including universities, research institutes, government, industry and NGOs. A number of PhD scholars are external, providing direct links to the organisations in which they work.

The overall evaluation is that the COM research group makes a very good contribution to society.

Viability

The group has a clearly articulated set of integrated research themes, with sub-theme leaders. The mixture of disciplinary expertise within the group provides a strong base for contributing to Strategic Communication research positioned within the core life science mission of Wageningen University. The group has carved out a strong niche in this area and its expertise is in high demand within and outside Wageningen University.

Around 50% of the group's funding is from external sources, which is a reasonably healthy position. Since the members of staff are mostly young, this offers promising continuity. Although the group is relatively large the research covers diverse fields and this might lead to its being a relatively small player in each of the fields.

The enthusiasm and collegiality within the group was self-evident and impressive. There is strong collaboration within the group, with other groups within the sub-department/cluster and also with organisations outside Wageningen. The group comes out well in the benchmark comparison (UC Davis).

The group is comfortable with its current size with no immediate plans to expand but rather to keep the group at a size where there is very active collaboration within the group.

The overall evaluation is that the COM research group is excellently equipped for the future.

Recommendations

- The group should not dilute too much with too many areas of research and application;
- The group should ensure that it continues to publish in the outlets which will maximise the academic and societal impact of its work. In particular it should seek to increase the number of T1 publications;
- The group will have to be strategic in where they place their effort as they become more in demand;
- There is a need to make sure that all members perform strongly in terms of publications and impact;
- The group should increase their international collaboration and networks in order to maximise the impact of their research.

4.23. Water Resource Management (WRM)

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|--|---|
| Leader research group: | Prof. dr. ir. Petra Hellegers (2013-2014) Prof. dr. Linden Vincent (2009-2013) |
| Research input tenured staff in 2014: | 2.48 FTE, 9 people |
| Score | |
| Research quality | 2 |
| Relevance to society | 2 |
| Viability | 1 |

Motivations for scores:

Research quality

Over the period since the last assessment, there is clear evidence of improvement in research productivity and quality from this interdisciplinary group. In addition to maintaining a solid portfolio of contract research projects, the volume of competitively awarded research grants has increased noticeably, providing resources for an increase in staff numbers and in the volume of peer reviewed publication in leading journals. Overall research productivity is good: over the review period the Committee sees more than a two-fold increase in the number of refereed articles per year (from 17 to 39) although measured by the number of research staff in this group it appears there is significant potential to increase publication numbers further. The strategy of emphasising higher prestige, international peer review journals over book chapters and other outputs is paying dividends in terms of citations and international visibility. There is a four-fold increase in the number of articles in top A journals per year (from 2 to 8) and citation rates are above world averages (RI=1.28). That said, the group has tended to emphasise publication in more applied environmental journals, applying insights developed elsewhere to the case of water resource management, rather than trying to bring the insights from water management *back* to the mainstream social sciences so as to intervene in wider conceptual debates beyond the immediate field of water research, or indeed even wider environment domains.

Conceptually the group has developed a distinctive approach to studying hydro-social systems that challenges traditional engineering-based approaches to water management as a purely technical activity by combining the practice-based methodologies of actor-network theory and science and technology studies with critical attention to relations of power/knowledge honed in political ecology. While these approaches are already well-established internationally in several social science disciplines, their application to hydro-social systems is relatively novel, and the group has made valuable empirical contributions to understanding conflict over water rights and water 'grabbing' and the multi-scalar politics of hydropower development, irrigation, water scarcity, and trade. The bibliometric data and other measures of esteem, such as prize-winning papers and keynote conference invitations, reinforce our own expert judgment that this group is producing very good quality, internationally recognised research.

Relevance to society

The group is also making a very good contribution to society. The societal contributions of its research were recognised by the NWO-WOTRO, which singled out the group's research programme on water justice as one of just six research programmes nationally that combine scientific excellence with social relevance. Internationally group members have also contributed to the development of the Mekong Delta Plan. The societal relevance of the

research area and the group's commitment to action research approaches provide a strong foundation for even greater societal impacts from its research in years to come, if better support mechanisms to generate impact from dissemination can be established within the group and WASS more generally. Although the ambition to effect social change is widely shared among group members, over the period under review the key demonstrable impacts were associated with just a few individuals. There does not seem to have been a clear and formalised strategy in place to support group members in realising their admirable ambition to support positive social change. If those ambitions are to be achieved, more work will need to be done to develop an impact strategy and establish formal institutional mechanisms to support staff and PhDs in developing the pathways to impact, so as to be able to translate the group's strong research and end user engagement activity into demonstrable impacts on society.

The group's commitment to publishing in local languages and outlets that are more accessible to the people in the places they study is admirable and should help to ensure that those groups benefit from the research undertaken by WRM, increasingly in collaboration with local partners in developing countries. The strong contributions of the WRM group to international societal impacts are also made via their PhDs who now hold important jobs in national government and policy institutes in the Global South and Europe. Making more effort to document the effectiveness of different civil society engagement mechanisms, such as the *Justicia Hidrica* network, would help in identifying and sharing best practice, as well as in providing an audit trail for future evaluation exercises like this one.

Viability

The group looks excellently placed for future improvements in performance. The group has successfully rejuvenated its core research staff after some retirements and the departures of several junior academic staff to promotions at other universities and/or international water agencies. That the group is now a place to which other institutions look to for future research leaders is itself a sign of the wider esteem in which the group is held, but it will be important to ensure both that early career staff are supported in ascending the career ladder and that there are clear progression routes for mid-career staff, so that the group is better able to retain talent.

The newly appointed chair group leader takes over a group with a strong track record of success. There are clearly articulated plans for placing even more of its work in high profile international journals and for continuing to attract further research grants and PhD students. The prospect for creating a larger water group at Wageningen should provide complementarities in research expertise, economies of scale in administrative support, and greater financial resiliency in the face of any future fall-offs in research income, while also building critical mass and raising the profile and visibility of water research at Wageningen. A larger staff complement should enable the group the scale required to compete more effectively with major international competitors which also span the natural and social sciences but are substantially larger than the WRM group.

Recommendations

- Continue with plans to develop a larger water group, which will provide the economies of scale and critical mass to compete more effectively with other leading research groups internationally which typically are substantially larger than WRM;
- Establish a clear strategy and formal institutional mechanisms to support staff and PhDs in developing the pathways to impact from their research. This will not only help to identify and spread best practice across WASS and indeed the wider University but should also ensure a much better evidence trail for future evaluation exercises;

- Continue strategic efforts to maintain and if possible increase outside funding, particularly important research grants, and enhance publication impact through the targeting of high quality journals and efforts to draw attention to important research.

Annexes

Annex 1 Criteria and scores of national protocol SEP

Criterion 1: Research quality

The Committee assesses the quality of the chair group's research and the contribution that research makes to the body of scientific knowledge. The Committee also assesses the scale of the chair group's research results (scientific publications, instruments and infrastructure developed by the group, and other contributions to science). The following elements are to be considered in assessing this criterion:

- scientific quality;
- productivity to the scientific community (in relation to the volume of the tenured scientific staff);
- the academic reputation of the group;
- the strategy to provide the output at the highest relevant level possible.

Criterion 2: Relevance to society

The Committee assesses the quality, scale and relevance of contributions targeting specific economic, social, or cultural target groups, of advisory reports for policy, of contributions to public debates, and so on. The point is to assess contributions in areas that the chair group has itself designated as target areas. The following elements are to be considered in assessing this criterion:

- a narrative in which the group demonstrates its relevance for society;
- research products for societal target groups such as
 - professional publications and outreach to the general public;
 - other research output to society;
- use of research products by societal groups such as
 - patents, licences, training courses;
 - projects in cooperation with societal partners (European Union, Top-sectors, international funds);
 - contract research (including consultancies), also co-publications and use of facilities
 - present jobs of alumni;
- demonstrable marks of recognition by societal groups such as demonstrated by
 - advisory reports for the government;
 - media exposure as presentations on radio / TV, invited opinion articles etc.;
 - membership societal advisory boards.

Criterion 3: Viability

The Committee assesses the strategy that the chair group intends to pursue in the years ahead and the extent to which it is capable of meeting its targets in research and society during this period. It also considers the governance and leadership skills of the chair group's management. The following elements are to be considered in assessing this criterion:

- leadership of the chair;
- (scientific) visibility and recognition;
- research vision and strength of the research lines;
- innovative strength;
- strategic choices and decisions;
- composition of the group (expertise, people);
- acquisition capacity.

The meaning of the scores for the three main assessment criteria:

| Score | Meaning | Research quality | Relevance to society | Viability |
|-------|---------------------------|--|--|---|
| 1 | Excellent / world leading | One of the few most influential research groups in the world in its particular field | An outstanding contribution to society | Excellently equipped for the future |
| 2 | Very good | Very good, internationally recognised research | A very good contribution to society | Very well equipped for the future |
| 3 | Good | Good research | Makes a good contribution to society | Makes responsible strategic decisions and is therefore well equipped for the future |
| 4 | Unsatisfactory | Does not achieve satisfactory results in its field | Does not make a satisfactory contribution to society | Not adequately equipped for the future |

Annex 2 Programme Site visit WASS Peer Review June 7 – 10

| Sunday June 7 | | |
|--------------------------|--|-----------------------------------|
| 16.00-18.00 | Internal meeting of the Committee | All |
| 18.00-19.00 | Drinks with chair holders WASS | All |
| 19.00 | Dinner | All |
| Monday June 8 | | |
| 8.00-9.00 | Welcome and briefing by Rector Wageningen University | All |
| 9.00-9.30 | Internal meeting | All |
| 9.30-10.30 | Economics of Consumption and Households (ECH) | Shepherd, Romano, Hobbs |
| | Knowledge, Technology and Innovation (KTI) | Wield, Demeritt, Reardon |
| | Sociology of Consumption and Households (SCH) | Halkier, Raynolds, Lemos |
| 11.00-12.00 | Agricultural Economics and Rural Policy (AEP) | Romano, Reardon, Halkier |
| | Strategic Communication (COM) | Shepherd, Lemos, Hobbs |
| | Water Resources Management (WRM) | Demeritt, Wield, Raynolds |
| 12.30-14.00 | Lunch and internal meeting | |
| 14.00-15.00 | Development Economics (DEC) | Reardon, Romano, Hobbs |
| | Land Use Planning (LUP) | Demeritt, Raynolds, Lemos |
| | Philosophy (PHI) | Wield, Shepherd, Halkier |
| 15.30-16.30 | Business Economics (BEC) | Romano, Hobbs, Reardon |
| | Law and Governance (LAW) | Halkier, Shepherd, Wield |
| | Forest and Nature Conservation Policy (FNP) | Lemos, Raynolds, Demeritt |
| 17.00-18.00 | <i>PhD poster session</i> | All |
| 19.00 | Dinner and internal meeting | All |
| Tuesday June 9 | | |
| 8.30-9.30 | Internal meeting | All |
| 9.30-10.30 | Operations Research and Logistics (ORL) | Hobbs, Romano, Reardon |
| | Public Administration and Policy (PAP) | Lemos, Demeritt, Wield |
| | Health and Society (HSO) | Shepherd, Halkier, Raynolds |
| 11.00-12.00 | Information Technology (INF) | Hobbs, Reardon, Wield |
| | Sociology of Development and Change (SDC) | Raynolds, Lemos, Demeritt |
| | Marketing and Consumer Behaviour (MCB) | Shepherd, Romano, Halkier |
| 12.30-14.00 | Lunch and internal meeting | |
| 14.00-15.00 | Rural History (RHI) | Reardon, Raynolds, Demeritt |
| | Rural Sociology (RSO) | Halkier, Wield, Lemos |
| | Education and Competence Studies (ECS) | Hobbs, Shepherd, Romano |
| 15.30-16.30 | Management Studies (MST) | Hobbs, Romano, Raynolds |
| | Cultural Geography (GEO) | Demeritt, Lemos, Wield |
| | OPEN OFFICE for faculty and PhD candidates | Irwin, Reardon, Shepherd, Halkier |
| 17.00-18.00 | <i>PhD poster session</i> | All |
| 21.00 | Internal meeting | All |
| Wednesday June 10 | | |
| 8.30-9.30 | WASS Board, WASS Scientific Director, and chairs of Education Committee & Assessment Committee | All |
| 10.00-11.00 | WASS PhD council | All |
| 11.30-12.30 | SSG and ESG Management | All |
| 12.30-16.00 | Lunch and internal meeting | |
| | <i>Final questions to the WASS Director</i> | |
| 16.30-17.30 | Public presentation preliminary findings | All |
| 17.30 | Drinks WASS | All |
| 19.00 | Dinner | All |

Annex 3 Bio-sketches of the Committee members

Prof. dr. A. (Alan) Irwin (chair)

Copenhagen Business School (CBS), Denmark

Alan is a Professor in the Department of Organization at Copenhagen Business School. He was the Dean of Research at CBS from 2007-14 and Acting President in 2011. Previously he was Professor of Science of Technology Policy and Dean of Social and Environmental Studies, at the University of Liverpool. His PhD is from the University of Manchester and he has held previous appointments at Manchester and at Brunel University (where he was also Pro-Vice-Chancellor for Research and Enterprise). Alan has chaired the UK BBSRC (Biotechnology and Biological Sciences Research Council) Strategy Panel on 'Bioscience for Society'. Currently, he is a member of the Strategy Advisory Board for the UK Global Food Security Programme. In 2009, Alan Irwin was awarded the David Edge prize for best paper in science and technology studies. He was part of the group which received the John Ziman prize in 2014 for the ESF report *Science in Society: caring for our futures in turbulent times* (chaired by Ulrike Felt). He has published over several years on issues of scientific governance, risk and decision-making, environmental sociology and science-public relations.

Prof. dr. D. (David) Demeritt

King's College London

David is Professor of Geography at King's College London. Combining technical expertise in the natural sciences with an interest in social theory, his research focuses on environmental politics and policy, especially the understanding and management of climate change and other environmental risks, and on the articulation of scientific knowledge with power and the policy process. He is one of the editors of *Environment & Planning A* and sits on the steering board for the UK Government's Natural Hazards Partnership as well serving as a member of the Peer Review Colleges for Natural Environment Research Council (NERC) and the Economic and Social Research Council (ESRC). Within King's he served for nearly a decade as Director of Graduate Studies for the School of Social Sciences and Public Policy and was the founding director of the College's £5.2m ESRC doctoral training centre, the KISS-DTC.

Prof. dr. B. (Bente) Halkier

Roskilde University, Denmark

Bente is a sociologist and professor in communication at Department of Communication, Business and Information Technologies, Roskilde University, Denmark. Her empirical research focuses on food consumption in everyday life, sustainability and consumption, political consumption, public consumption campaigns and the construction of consumption in media. She is the author of the book *Consumption Challenged: Food in Medialised Everyday lives* (Ashgate, 2010). She has also published on consumption and sustainability in e.g. *Anthropology of Food; International Journal of Consumer Studies; Journal of Consumer Culture; and Journal of Environmental Policy and Planning*. She has been a member of the National Danish Social Scientific Research Council 2009-14.

Prof. dr. J.E. (Jill) Hobbs

University of Saskatchewan in Canada

Jill is a Professor in the Department of Bioresource Policy, Business & Economics (formerly the Department of Agricultural Economics) at the University of Saskatchewan in Canada and chaired the department from 2006 to 2011. She received her Ph.D. (Agricultural Economics) from the University of Aberdeen in 1995. She is also a graduate of the University of Calgary, Canada (M.A. in Economics) and Aberystwyth University, UK (B.Sc. (Econ) in Economics). Her research interests encompass food policy, supply chain economics and consumer behaviour. Jill has 6 co-authored books and over 90 journal articles on a variety of topics including the economics of food safety, quality assurance and traceability, agri-food supply chains, consumer preferences, and various food policy issues. Her most recent book *Regulating Health Foods: Policy Challenges and Consumer Conundrums* was published by Edward Elgar Publishing in 2014. Presently she is a co-editor of the Canadian Journal of Agricultural Economics and served as President of the Canadian Agricultural Economics Society from 2003-2004. In 2014 she was appointed to an Honorary Chair in the School of Management and Business at Aberystwyth University, UK for a five year term

Prof. dr. M.C. (Maria Carmen) Lemos
University of Michigan, Ann Arbor, USA

Maria Carmen Lemos is Professor and Associate Dean for Research at the School of Natural Resources and Environment at the University of Michigan, Ann Arbor and Senior Policy Scholar at the Udall Center for the Study of Public Policy at the University of Arizona. During 2006-2007 she was a James Martin 21st Century School Fellow at the Environmental Change Institute at Oxford University. Her research focuses on environmental public policymaking in Latin America and the U.S., especially related to the human dimensions of climate change (adaptation and adaptive capacity building); the co-production of science and policy and different means to narrow the gap between useful and usable knowledge; and the role of technoscientific knowledge and environmental governance in building adaptive capacity to climate variability and change response. She is a co-founder of Icarus (Initiative on Climate Adaptation Research and Understanding through the Social Sciences), which seeks foster collaboration and exchange between scholars focusing on vulnerability and adaptation to climate change. She was a lead author of the Intergovernmental Panel on Climate Change (IPCC-AR5—Chapter 20) and has served in a number of the US National Research Council of the National Academies of Sciences committees including Restructuring Federal Climate Research to Meet the Challenges of Climate Change (2009), America's Climate Choice Science Panel (2010) and the Board on Environmental Change and Society (2008-present). She has MSc and PhD degrees in Political Science from the Massachusetts Institute of Technology, MIT.

Prof. dr L.T. (Laura) Reynolds
Cornell University, USA

Laura is the co-director of the Center for Fair and Alternative Trade (CFAT) and a Full Professor in the Department of Sociology at Colorado State University. She holds a MSc and PhD in Development Sociology from Cornell University. She is co-editor and a lead author of the book, *Fair Trade: The Challenges of Transforming Globalization*, (Routledge 2007), as well as over 37 articles and book chapters on food and agriculture, globalization, alternative trade, and related themes. Her articles in *World Development*, *Sociologia Ruralis*, and *Agriculture and Human Values* are identified as being amongst the most downloaded and cited articles in these journals. Laura is the recipient of a number of prestigious research grants from the National Science Foundation, Ford Foundation, John D. and Catherine T. MacArthur Foundation, and US Agency for International Development. She has done extensive field research in Latin America and the Caribbean. Laura teaches undergraduate courses in Social Stratification and Gender Roles and graduate courses in Theories of Development and Globalization and advises MA and PhD students in Sociology and related disciplines.

Prof. dr. Th. (Thomas) Reardon
Michigan State University, USA

Thomas is Professor of Agricultural, Food, and Resource Economics at Michigan State University since 1992 and at IFPRI for a decade before that since his Ph.D. at UC Berkeley in 1984. Tom is a global leader on research on transformation of agrifood value chains, including the rapid rise of supermarkets, on agricultural productivity and diversification, and on livelihoods from rural nonfarm employment. He has 12 years of experience in Asia, 10 in Latin America, and 13 in Africa, with 19 years of in-country residence in these. He is listed in Who's Who in Economics, is a Fellow of the Agricultural & Applied Economics Association (AAEA, formerly called American Association of Agricultural Economics), has 17,573 citations in Google Scholar as of February 2015, was a personal invitee by World Economic Forum to Davos, and was featured on the front page of the New York Times and in the proceedings of the UK Parliament.

Prof. dr. D. (Donato) Romano
University of Florence, Italy

Donato is Professor in "Agriculture and Economic Development" and "Natural Resource Economics". After having studied forestry and having obtained his PhD Forest Economics and Management in 1989 at the University of Florence, he proceeded his research career at the University of Tuscia, Italy. In 1992 he returned to Florence as associate professor "Natural Resource Economics", where he became full professor at the School of Agriculture and the School of Economics and Management in 1999. In between he was visiting scholar and visiting professor in resp. Stanford University USA and Namur University Belgium. From 2012 till 2014 he was President of the Italian Association of Agricultural and Applied Economists. Besides his position as professor he currently is Director, PhD Programm "DELoS – Development Economics and Local Systems", jointly offered by the University of Trento and the University of Florence. He is active as international consultant to FAO, IFAD, WFP and the EU Commission and has partnered in several EU research projects concerning food policy, multifunctional land use,

environment and development. The results of his scientific activity have been widely published in national and international scientific journals (more than 100 papers and books).

Prof. dr. R. (Richard) Shepherd

University of Surrey, UK

Richard is Emeritus Professor of Psychology, University of Surrey, UK. He was formerly Director of the Food, Consumer Behaviour and Health Research Centre at the University of Surrey. His research has mainly been concerned with understanding the reasons for people's choice of foods. This has involved the development and application of social psychological models of attitudes and beliefs to understanding food choice, risk perception, risk communication and public engagement. He has published widely, with over 110 refereed papers and an additional 200 publications. He has directed research funded by a number of UK bodies, in addition to several collaborative European projects funded by the EU. He is a Fellow of the British Psychological Society, formerly a Chartered Psychologist and a former Fellow of the Royal Society of Medicine. Richard sat on the Food Standards Australia New Zealand (FSANZ) Social Science Expert Advisory Group, the UK Food Standards Agency Social Science Research Committee and UK Economic and Social Research Council Grants Assessment Panel.

Prof. dr. D. (David) Wield

University of Edinburgh, UK

David is Director of the UK Economic and Social Research Council Centre for Social and Economic Research on Innovation in Genomics (Innogen) and Co-Director of the Innogen Institute, University of Edinburgh and Open University. He is also Professor of Innovation and Development at the Open University. He has a BSc and PhD from Imperial College and the University of London and has also held posts at Imperial College London, Aston, Stanford, UC Berkeley, Dar Es Salaam, Tanzania and Eduardo Mondlane University, Mozambique. His research is focused on the policy and management of technology in public sector institutions and public-private networks; development policy and practice with emphasis on industrialization and technologies; innovation, knowledge and learning in organizations; risk and precautionary regulation of technology; technology capabilities in East and Southern Africa, research policy and higher education in African universities. He has been a member of the UK research evaluation system (RAE/REF) in 2008 and 2014, focused on Anthropology and Development Studies and is a member of a number of peer review panels including the UK ESRC Peer Review College.

External members

Prof. dr. M. (Mark) van den Brand

University of Technology Eindhoven TU/e, Netherlands

Mark started his study computer science in 1982 at the Radboud University Nijmegen. In 1987 he became a PhD student at the Radboud University Nijmegen. In 1992 he started as assistant professor in the Programming Research Group at the University of Amsterdam. In 1997 he started as senior researcher at CWI (Centrum voor Wiskunde en Informatica). Since 2006 he is a full professor of Software Engineering and Technology at TU/e in the Department of Mathematics and Computer Science. In May 2013 he has become vice-dean of the department. Since May 2009 he is visiting professor at Royal Holloway, University of London. His current research activities are on generic language technology, and model driven engineering. A number of his research topics are to investigate the correctness and quality aspects of model transformations, and the use of meta-modeling techniques in the area of functional safety. He is president of the European Association of Programming Languages and Systems and chair of the steering committee of Software Language Engineering. He is associated editor-in-chief for the software section of the journal of Science of Computer Programming, and member of the editorial board of Central European Journal for Computer Science.

Prof.dr. R. (Ruth) Chadwick

University of Manchester, UK

Ruth is Professor of Bioethics at the University of Manchester. From 2002-2013 she directed the ESRC Centre for Economic and Social Aspects of Genomics (Cesagen). Cesagen was a dual site research centre funded for ten years by the Economic and Social Research Council as a partnership between Lancaster and Cardiff Universities. As Director Ruth had overall responsibility for the management of a wide-ranging multidisciplinary research programme, including strategic research direction, staff development and budgetary issues. The objective of Cesagen was to work with the relevant genomic science whilst attempting to clarify the human (social and economic) factors which shape these natural

knowledges. Ruth co-edits *Bioethics* and *Life Sciences, Society and Policy* and has served on the Council of the Human Genome Organisation, the Panel of Eminent Ethical Experts of the Food and Agriculture Organisation of the United Nations (FAO), and the UK Advisory Committee on Novel Foods and Processes (ACNFP). She is Fellow of the Academy of Social Sciences; of the Hastings Center, New York; of the Royal Society of Arts; and of the Society of Biology. In 2005 she won the World Technology Network Award for Ethics and in 2014 she was elected Fellow of the Learned Society of Wales.

Prof. dr. J.F. (Jack) Elliot

Texas A&M University, USA

Jack has served as Professor and Head of the Department of Agricultural Leadership, Education, and Communications (ALEC) at Texas A&M University since January 1, 2009. He provides leadership for over 1,300 ALEC undergraduate, almost 200 graduate students, and 80 faculty and staff. Dr. Elliot received his B.S. in Agricultural Education in 1975 and M.A. in Agricultural Economics in 1978 from Washington State University. He received his Ph.D. in Agricultural Education in 1988 from The Ohio State University. His initial faculty position was as assistant professor in Agricultural and Extension Education at Michigan State University. In 1992, he relocated to The University of Arizona where he moved through the ranks and was promoted to professor in 2002. Dr. Elliot served as Professor and Head of the Department of Agricultural Education at The University of Arizona prior to moving to Texas A&M. The ALEC Department at TAMU is the largest department in any college of agriculture in the United States of America. He organised the 2011 World Conference for Sustainable Value Chain Agriculture for Food Security and Economic Development in Windhoek, Namibia. Dr. Elliot co-chairs the Internal Advisory Committee for the Norman Borlaug Institute for International Agriculture.

Prof. Dr. L. W. Gormley

University of Groningen Faculty of Law, Netherlands

Laurence has been Professor of European Law at Groningen since 1990. He also holds a Jean Monnet Professorship, leads the Jean Monnet Centre of Excellence at Groningen, and heads the Department of Commercial Law, European Law, Private International Law and Law & ICT at Groningen. He is a Barrister (Middle Temple) and a Professor at the College of Europe in Bruges. Prior to being at Groningen he worked as a European civil servant at the European Commission in Brussels. His principal interests are in EU internal market law, customs and trade law, public procurement, and judicial protection and judicial architecture. He is Joint General Editor of *Cambridge Studies in European Law & Policy* and is on the editorial boards or advisory boards of myriad journals. He also has a soft spot for Labradors!

Prof. dr. J. (Janet) Hunter

London School of Economics, UK

Janet is Saji Professor of Economic History at LSE. She has published widely on the economic development of Japan and East Asia, focussing in particular on the development of the female labour market, the history of economic relations between Japan and Britain, and the role of consumption in economic development. She is currently researching on the history of Japanese business ethics in comparative perspective, and the economic effects of the Great Kanto Earthquake of 1923. She was Head of the Economic History Department at LSE 2007-8 and 2010-12, and has since 2010 been an academic member of Council (LSE's governing body). Her teaching has included comparative economic development of Asia and Europe, Gender and Work, and Global History, as well as specialist courses on Korea, China and Japan.

Dr. J. de Groof (secretary)

Freelance, Belgium

Jetje has a PhD in (Socio)linguistics from the Vrije Universiteit Brussel, Belgium. She is a freelance project coordinator of reviews of educational and research programmes in higher education in Flanders and The Netherlands. Next to that, she works as a researcher at the department of Educational Sciences (Social Sciences Faculty) of the University of Antwerp, Belgium.