



Position statement Executive Board
Wageningen University & Research

Regarding the WIAS clusters peer review assessment (2015-2021)

According to the Strategy Evaluation Protocol (SEP 2021-2027) the Wageningen Institute for Animal Sciences (WIAS) and its clusters have been evaluated. An assessment committee of independent experts assessed the performance of WIAS and its clusters based on a self-evaluation and a site visit.

The Executive Board has received the final report of the assessment committee, and has read it with interest. The Executive Board is very content that the committee concludes that WIAS has developed and implemented good practices regarding the education and training of PhD candidates and early career researchers that are exemplary. The Executive Board would like to thank the peer review committee for carrying out the evaluation.

The response to the main recommendations of the committee has been put together by WIAS and its associated clusters and the Executive Board has integrally accepted the response, in which is described how the recommendations will be addressed and how the outcomes of the research evaluation will be used to further strengthen WIAS's performance. The Executive Board encourages WIAS to intensify and formalise collaborations with the Faculty of Veterinary Sciences. Moreover, WIAS is encouraged to increase the collaborations with WR institutes WMR, WLR and WBVR even further.

Also on a general (WGS-wide) level the committee makes very useful recommendations. We are in the middle of a 'Recognition and Rewards' trajectory and agree with the committee that a movement away from the strictly quantitative performance indicators for tenure track positions is needed. Moreover, the Executive Board agrees that it is beneficial to investigate the current research organisation of the university and determine an appropriate organisational level for future evaluations. Special attention will be paid to the expectation of the clusters as a structuring principle. Under the umbrella of WUR we make use of the synergy between Wageningen University and Wageningen Research. We will continue this collaboration and keep on investigating the possibilities of even further strengthening the bond between these two natural partners. We use Open Science as a leading principle in this regard and will organise thorough discussion on all aspects of Open Science (beyond open access publishing). Progress on follow-up actions will be monitored in our yearly quality assurance cycle.

The assessment report together with the response to the recommendations will be published on the WUR website, together with summaries of the WIAS self-evaluation reports and the case studies.

Wageningen
University & Research

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With kind regards,

A handwritten signature in blue ink, consisting of a large, stylized 'A' followed by a horizontal line and a small flourish.

Prof. dr Arthur P.J. Mol
Vice-president of the Executive Board

Response to Peer Review recommendations

* = central level

WIAS would like to thank the committee for their recommendations. We largely supports the recommendations. The responses to the individual recommendations can be found below.

Response of WIAS

- To continue the use of clusters as a structuring principle, providing excellent opportunities for synergy, multi- and cross-disciplinary collaboration and to address societal challenges. But also to maintain the identity and autonomy of the chair groups, allowing them to remain at the forefront of their individual research fields.

In the coming years, WIAS will continue to support the three clusters in their ambitions to develop inter-and cross- disciplinary research projects of excellent research quality and high societal relevance. We will do this for example by our calls for PhD and post-doc proposals, aimed at high potential graduate students that want to pursue a PhD and future scientific career. Successful proposals should then involve at least two chair groups from a cluster and should fit within the research strategies defined by the clusters. Projects are expected to focus both on either national (European) societal challenges, or serve the societal development goals of the UN at large.

- * To simplify the current research organization and to update the executive rules and regulations (BBR 2018), to better align them with the new SEP requirements. To clarify and simplify the division of tasks, responsibilities, and operating space between the management of the Animal Sciences Group, the chair holders and WIAS management.
- * To reconsider, in light of the above, what is taken as the basic unit of evaluation under the current SEP to ensure that this unit has the mandates, responsibilities, and operating space, and can hence be held accountable.
- * To determine and implement what is expected from the clusters. These must then define their own ambitions and strategies in light of that expectation and in alignment with those of the participating chair groups.
- To use the NLAS investment programme as a tool to stimulate and support the strategies and ambitions of the clusters, rather than focusing primarily on chair group benefits.

The program "next level animal science" (NLAS) specifically aims at bringing innovative and cutting-edge research methodology and knowledge to the animal sciences research community. WIAS will support the NLAS program by organizing dissemination and liaison events (PhD courses; hackathons), facilitating societal outreach through its lunch lecture series, newsletters and WIAS magazine and organisation of (mini) symposia. Over the last years several new post-doctoral researchers have been hired, creating a sizeable and vibrant post-doc community. WIAS will support this group in their academic career with dedicated (soft)-skills and support training [].

- To strengthen the synergy between WIAS and the faculty of Veterinary Medicine by formulating a shared ambition, vision, and strategy at the level of WIAS and the clusters.

Increasing collaboration between the animal sciences group of WUR and the faculty of Veterinary Medicine is expected to become more formalized in the coming years. An important element in this process is the possibility to allow staff, post-docs and Ph.D students from the Veterinary Faculty to become a member of the graduate school WIAS, instead of the graduate school for life sciences of UU. Such collaboration would lead to WIAS becoming a "national" graduate school for Animal Sciences, rather than a graduate school exclusive for the Animal Science group at WUR. Current collaboration between WUR and UU is characterized by sharing BSc and MSc education, dual appointed professorships and joint initiatives such as the Centre for Sustainable Animal Stewardship. PhD students so far have not been part of these collaborations. Yet it is clear that both PhD and post-docs from both the Veterinary faculty and WIAS share a large part (if not all) of the disciplinary knowledge base of their research, and could benefit from the courses (disciplinary and skills) offered by WIAS. For the coming years, WIAS will actively seek cooperation and collaboration with Utrecht in the development of shared courses, and by actively offering its existing course portfolio to the PhD and post doc students employed at the veterinary faculty of UU. At the organisational level, the WIAS director will take part in the ongoing discussions on more formal collaboration and the possible extension of the graduate school to include students from Utrecht University.

- To strengthen the WU-WR synergy by formulating a shared ambition, vision, and strategy at the level of WUR, ASG and WIAS.[.].

Over the last years, collaboration between WR institutes WMR, WLR and WBVR and the department of Animal Sciences have intensified. Researchers were appointed as Special chairs and increasing numbers of PhD projects are being initiated with WR (co)funding and co-supervision. At the same time, WIAS, its PhD training program and the WIAS quality requirements for supervision and supervisors are not well known in the WR community. WIAS will develop a strategy to actively engage more WR researchers in WIAS. As a first step, WIAS will go "on tour" and visit each research institute to present itself, its tasks and mandate, and the training program we provide for PhD, post-docs and early stage researchers. WIAS will also re-evaluate and adjust the requirements for admission to WIAS. WR researchers often find it difficult to meet the stringent requirements for scientific publication. On the other hand, their research is generally targeted at creating societal impact, and this should be recognized in the admission requirements. At the organisational level, WIAS will continue to seek and lobby for collaborative WU-WR research initiatives by linking WU research programmes such as INREF, strategic investment themes, and WGS graduate programmes with the KB programmes of WR. Finally, WIAS would like to see more researchers of WR to be involved in outreach, either by participating in dedicated disciplinary courses, or by contributing to our outreach activities (wias science day, wias magazine, lunch lectures, etc) .

- * To align the self-evaluation reports better with SEP requirements for future evaluations and to include descriptions of how Open Science, Academic Culture and HR ambitions are implemented by the units being evaluated besides those at WUR-level.
- * To organise a thorough discussion on all aspects of Open Science (beyond open access publishing) to further align the clusters' strategies with the WUR ambitions and to identify possible challenges and impediments.
- * To move away more quickly from the strictly quantitative performance indicators for tenure track positions and adopt an evaluation system more in line with the Dutch Recognition and Rewards programme. Similarly, the committee recommends revisiting the evaluation system for personal chairs and award them permanent status after the first positive evaluation.
- To improve diversity in terms of gender, disability, cultural background, and nationality. For example, investigate potential bias in hiring and unconscious obstacles potentially reducing attractiveness to a more diverse range of candidates.

WIAS participates in the advice committees that are responsible for hiring new (special) professors and evaluation and promotion of tenure track positions. To increase awareness on possible bias related to cultural diversity, disability and gender, a working group was started to evaluate and update our procedures. This working group is supported by an external diversity advisor. Tasks are to contribute to the drafting of the vacancy texts to make them as gender neutral as possible, for example by avoiding words such as inspiring successful, strong vision, ambitious, etc. The committee will also prepare an interview guide, in which the same questions can be asked to each person, regardless of background or gender. Finally the external advisor will sit in with BAC interviews to provide feedback to its members when a committee is subconsciously biased or not treating candidates equally. Regarding TT, WIAS will follow the recommendations from the working group on recognition and rewards, when evaluating TT candidates for promotion.

Response of the FFS cluster

- To reappraise the aims of the cluster to address the collaborative strength of the chair groups so that they build multi-disciplinary delivery to major challenges facing the livestock sector.

The mission of the cluster FFS is 'to develop knowledge for the transition towards a sustainable role of animals in food systems and society'. Future food systems (all processes and infrastructure involved in feeding the human population) are sustainable if they have socio-economic, environmental and food security outcomes meeting the societal and political demands. The role of livestock and aquatic animals in such sustainable food systems is determined by these outcomes (research line 1), and this role determines the issues at stake for animal health and welfare (research line 2) and biomass use for feeding (research line 3). The cluster will bring scientific evidence and scientific debates to the societal and political debates about sustainability of food systems. Research providing this evidence will be multi- and interdisciplinary and will involve the

chair groups in the cluster but also outside partners. Future food system images can be mixtures or sole reflections of circular, nature-inclusive, equitable, and other objectives. Roles of livestock and aquatic animals comprise Animal Sourced Food production, support of crop production, livelihood support, ecosystem services and companionship and leisure, among others.

- To clarify and clearly articulate in the mission the major challenges the cluster will address for the next six years, building on the combined strengths of the chair groups, in particular regarding societal aims.

Operational objectives for the next 6 years are:

- Reduce emissions (N, CH₄) from livestock, livestock and aquatic production systems, their value chains, and overarching food systems.*
 - Develop tools for allocating biomass resources to different livestock and aquatic species, accounting for various sustainability goals related to future food production systems.*
 - Increase biodiversity within food systems*
 - (continue to) Develop animal production systems that optimize health and welfare, as well as develop ways to measure and minimize behavioural and physiological disturbances in current production systems*
 - Develop non-invasive alternatives for animal experimentation*
 - Improve resilience of animals to environmental perturbations*
 - Develop a food vision that integrates land-based and marine-based (aquatic) food systems taking a regional approach*
- To make clear whether tackling wider aspects to animals in society (eco-system services, livelihoods, companionship, and leisure) is among the primary ambitions of this cluster or whether this can be achieved through connections to other clusters or groups outside WIAS.

The FFS cluster confirms this to be a primary ambition as explicitly stated in the extended mission (see response 1.)

- To define specific KPIs which assess impact between different stakeholder groups (e.g., economy/industry, policy/government, outreach/public support), this would make it easier to assess the true impact and further potential of the cluster's research.

Proper KPI's require clear objectives, a strong support base, and be provided within a feasible timeline. At present, the FFS cluster considers it preliminary to formulate such KPI at cluster level. Of course, no matter the exact support base, the cluster strives for clear objectives to be achieved in a timely manner

- To increase the cluster's external visibility, and emphasize their common themes, shared mission, vision, and collaborations so the clusters are shown to be a functional entity outside WIAS.

See response below

- To strive for growth of the cluster's expertise and capacity in niches less well covered at present, allowing realization of its broad mission, and further strengthening its potential for impact and its viability. This calls for more concerted cluster actions and less thinking in terms of chair group priorities, but this needs to have bottom-up support as well as top-down instigation.

The cluster FFS aims to establish a joint research programme with 4 to 6 cross-cutting PhDs, under the programme title: Animals in Future Food Systems and Society. This programme will have two research lines: 1) feed and feeding management of livestock and aquatic animals and economic and environmental impacts in diverse food system scenario's and 2) health and welfare of livestock and aquatic animals and societal impacts in diverse food system scenario's. This joint PhD-programme will be used to a) increase the visibility of the chair groups operating as a cluster also outside WIAS and b) to integrate cluster-wide expertise on the FFS cluster' broad mission.

- To draw up a concrete succession plan for the current chair holders, to ensure that the common vision for the cluster is maintained.

The FFS cluster supports timely succession plans for its current chair holders whilst respecting strict appointment procedures and realizing financial constraints

Response of the PDG cluster

- To consider the cluster as a new entity for promoting a common strategy on shared research aims and priorities.

We will keep the PGD chair groups as core entities because the core responsibilities are placed at chair group level, e.g. for teaching in very different contexts. This gives us flexibility and strength. We will, however, develop our common strategy by promoting interactions and cooperation between the experts in the three chair groups and their connected networks. This cooperation requires joint research projects (e.g. state-of-the-art PhD projects) like two joint PhD projects of QVE&ABG and ABG&MAE that are already ongoing.

- To formulate a focused joint mission and to consider renaming the cluster to reflect this shared interest and goals and increasing PDG's external visibility. A mission covering the joint research interests is for example: 'Understanding variation between individuals and how interaction between these individuals and with their common environment shapes population phenomena'.

While we appreciate the suggestion of the committee, understanding the functioning and dynamics of a population, given the genomic variation seen within that population is key to the research of the three chair groups of the PDG cluster. This is very well reflected in the name "Population Dynamics and Genomics", which we therefore consider an excellent name for the cluster.

This name is clear and uncontroversial for our diverse group of researchers, and remains applicable also in the foreseeable future. Our research into complex interactions will lead to new ways to understand how, when and where relevant interactions take place and which interactions we need to study to have the impact that we want to have on the management of complex systems. Research will be done on intra- and inter-species interactions for example into variation among conspecifics, differences in microbiomes, shared pathogens, resource competition, competition-relevant (eco)physiological adaptation to climate change, etc.

- To reflect the above by a number of cross-chair group research lines and projects, for example aimed at the study of responses and adaptations to environmental conditions and hazards at population level, considering genetic variabilities and phenotypic plasticity at individual level.

The PDG cluster therefore will invest in additional cross-chair group research projects. To start with three joint PhDs to further kick-start this process. We have formulated three PhD projects that will be innovative and stimulating for the research interactions within in the PDG cluster and shared developments among the participating groups. The focus will be to better understand the population dynamics of heterogenous populations under varying conditions. While addressing this complexity by studying phenotypic, genomic and epigenetic variations, we will search for simplifications, i.e. mathematical models, to be able to handle it and methods to collect increasing amounts of data more efficiently (sensors, sequencing techniques, phenotyping work-flows). We recently formulated new PhD projects each addressing questions of common strategic interest and contributing to appreciating each other's expertise. These three PhD projects will promote the collaboration between especially also the junior staff of PDG that will be highly involved in supervision:

@ A joint PhD supervised by staff from ABG and MAE focusing on the active restoration of coral reefs by developing a breeding program for stony corals, based on selection of suitable genetic traits from wildtype corals and assisted evolution. The aim is to develop resilient corals with capabilities to withstand predicted changes in seawater temperature due to climate change. Also micro sensors will be used for phenotyping the climate resilience of the coral-zooxanthellae combinations.

*@ A joint PhD supervised by staff from QVE and ABG addressing the selection against *Mycobacterium bovis* and *M. avium paratuberculosis* in cattle populations. The aim is to make current eradication efforts successful which is of great societal importance for human health, the preservation of wildlife, and for animal welfare on farms.*

@ A joint PhD supervised by staff from MAE and QVE focusing on modelling of diadema disease in the Cariben. The aim is to improve the recovery of the population. The lack of facilitation (grazing) by adult diadema also seriously hampers settlement of coral larvae in this region.

- To precise research activities related to the diversification of breeding goals beyond social interactions and animal welfare. To initiate collaboration with groups working on socio-agro-ecosystem modelling of environmental impacts of renewed breeding strategies and farm practices.

The PDG cluster already has research activities related to the diversification of breeding goals in socio-agro-ecosystem modelling of environmental impacts of renewed breeding strategies and farm practices. We will strengthen our collaboration with other research groups in the near future, to increase the impact of our research.

- To diversify societal impact classification according to ambitions and targets for different groups of stakeholders in livestock, citizens, policy makers.

The PDG cluster sees the societal relevance of many issues that need studying complex interactions. In addition to the already mentioned animal welfare issues, and breeding for adaptation to changing environmental challenges we support the transition to sustainable agriculture and aquaculture. We support science based biodiversity conservation (including genetic diversity of small populations) under water as well as on land and the direct and indirect influence of interaction between people and animals on the spreading of disease. Examples are the breeding of more climate resilient livestock and the combined opportunities of offshore energy and food production and environmental impact of marine food systems.

We already are actively contributing to societal discussions within the field of OneHealth, zoonoses, GMO animals, biodiversity enhancement and the need for eco-inclusive climate change adaptation. This, for example, has led to a KNAW prize for public outreach last year. Actually we certainly will continue participating in the societal discourses and also share the beauty and excitement of scientific discoveries with non-scientists as well.

- To strengthen coherence and viable collaboration by further clarification of anticipated NLAS benefits.

The PDG groups are highly involved in the NLAS innovations, and partially they come back in e.g. the proposed ABG-MAE PhD where microsensors will be used to quantify the energy use by coral polyps of different traits under different climatological conditions. We do not aspire to specifically use NLAS to further strengthen the PDG coherence, although shared NLAS activities will be made visible. Furthermore our research will be more obviously linked to the strategic and investment themes of WUR.

- To better align PDG's research ambitions and available funding with projects led by chair groups.

To further align the research ambitions of the PDG cluster, it is important for the staff of the three chair groups to have insight in the aims and activities of ongoing research projects within the individual chair groups. Our PDG seminars are a first step towards this goal and the establishment of joint (PhD) research projects will further aid in the alignment of PDG's research ambitions and available funding. Within the coming 6 years we expect to also have a partly PDG shared research project portfolio and joint acquisition. Currently we are creating the basis for this by starting 3 joint PhD projects on timely subjects.

Response of the IB cluster

- To further elaborate the future vision and strategy.

The IB is a young Cluster, with varied interests. The IB aims to continue its strong disciplinary research lines while at the same time to integrate our expertise in selected areas. We already have several projects (including shared PhD students) between 2 or 3 chair groups. In addition, the whole cluster will start working on honeybees at multiple connected integration levels. This is an important biological model system in which we plan to deploy our interdisciplinary expertise. Towards these ends, we will set up a Task Force to develop integrated research topics, and invest in a pilot study initiative to generate preliminary data for further funding. Using honeybees as model species, we will link the two themes in the cluster, namely health & metabolism and behaviour & ecology: how physiological processes and biomechanical constraints determine the behaviour and ecology of bees and how environment and behaviour affect physiological processes and bee health and survival.

- To fully exploit the opportunities of coordinated multidisciplinary collaboration for addressing major societal challenges.

Using honeybees as model species, we will exploit the different disciplines in the IB Cluster. To meaningfully connect physiology and ecology/behaviour, we will benefit from input from all chair groups in the Cluster. Our main research topic will be one of the main tasks in a honeybee colony, namely the nursing of the young bees to prepare the future work force of the colony. We will investigate what the influence of parasites and pesticides is on nursing bees, especially on their physiology that may have consequences for the condition of the young bees and their behaviour through which we aim to unravel what the effects are on colony dynamics. In addition, we aim to expand the number of projects between two or more chair groups.

- * Teaching/research balance for tenure track staff and compensation for PhD students.
- To reflect on introducing an agro-ecological approach, a sustainable production system integrating high-end technology, rational husbandry and production systems with diversity and coexistence of humans, wildlife, and domestic organisms in rich, resilient, and vivid landscapes.

We do not understand what the origin is of this recommendation is, as this recommendation falls outside the presented themes of the cluster. We acknowledge that the agro-ecological approach is very valuable and needed in other clusters and other parts of the University. We contribute at places to this theme but it is not central to our cluster activities and core expertise.