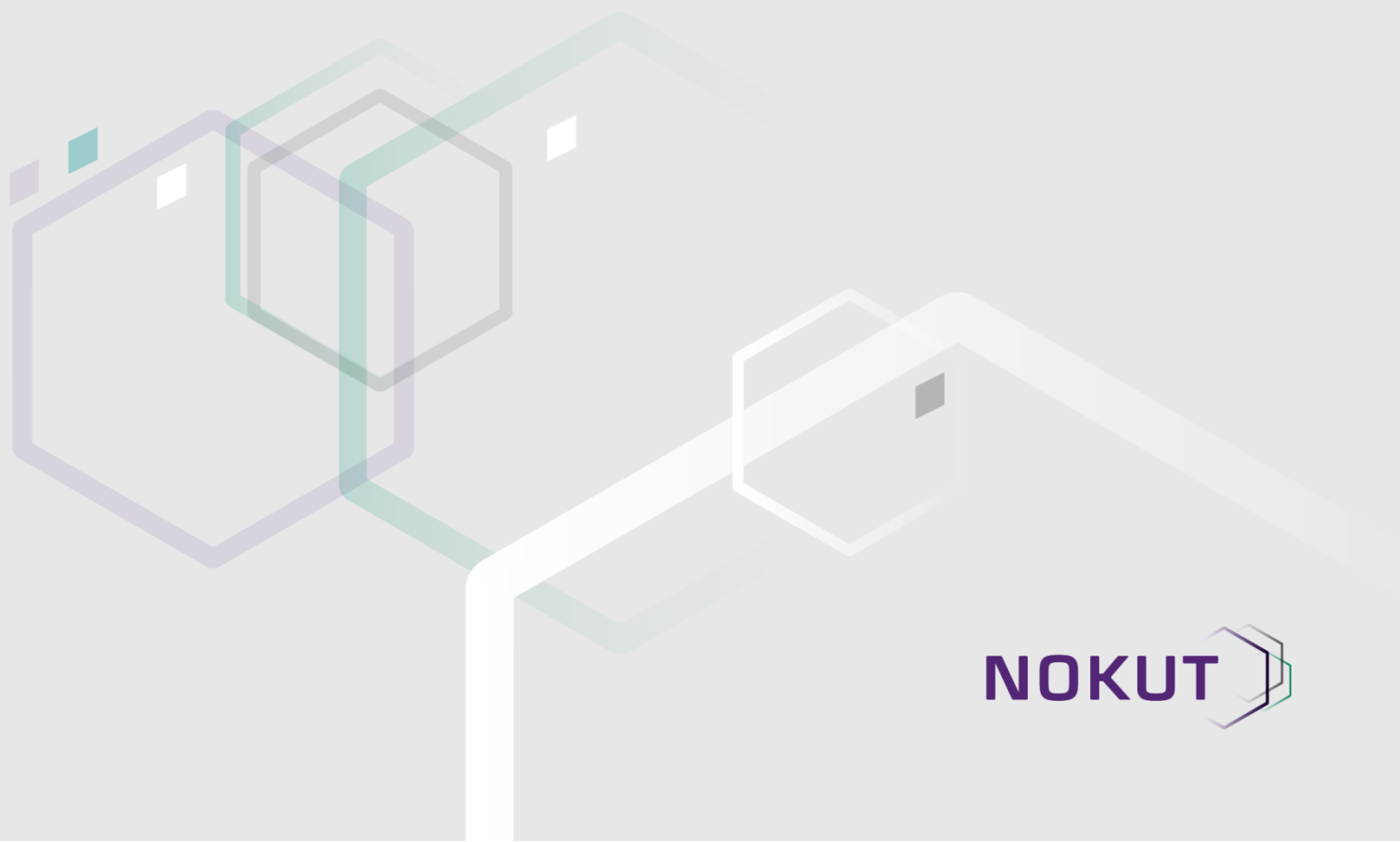


NOKUTs tilsynsrapporter

PhD in Responsible Innovation and Regional Development

Western Norway University College of Applied Sciences
(Høgskulen på Vestlandet)

September 2019



NOKUT 

NOKUT (Norwegian Agency for Quality Assurance in Education) is the controlling authority for educational activity at all Norwegian higher educational institutions. This is achieved, among other, through accreditation of new study programs. Institutions that provide higher education have different authorizations to create new study programs. If an institution wants to create a provision outside of its field of authorization, it must apply to NOKUT for accreditation.

Institution	Westen Norway University College of Applied Sciences (Høgskulen på Vestlandet)
The provisions name	PhD in Responsible Innovation and Regional Development
Degree	ph.d.
Expert Committee	Lene Foss, UiT- Norges Arktiske universitet Teis Hansen, Lunds Universitet Simone Strambach, Philipps-Universität Marburg Raj Kumar Thapa, Universitetet i Stavanger
Date of decision	27.09.2019
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Introduction

The external quality assurance performed by NOKUT consists of evaluating the institution's quality assurance systems, accreditation of new programmes and revision of accredited programmes. Universities and university colleges have different self-accrediting powers. For an institution without self-accrediting powers to establish a programme in a certain cycle an application must be made to NOKUT.

Hereby NOKUT presents the accreditation report of PhD in Responsible Innovation and Regional Development at Western Norway University College of Applied Sciences (Høgskulen på Vestlandet). The expert evaluation in this report is part of the accreditation process following the institution's application for accreditation submitted before the application deadline on 1 November 2017. This report clearly indicates the extensive evaluation performed to ensure the educational quality of the planned programme.

The PhD in Responsible Innovation and Regional Development at Western Norway University College of Applied Sciences (Høgskulen på Vestlandet) fulfils NOKUT's conditions for accreditation and is accredited 27. September 2019.

Terje Mørland
Director General

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1 Information regarding the applicant institution

Western Norway University College of Applied Sciences (Høgskulen på Vestlandet) is a merger of three university colleges; Bergen University College (Høgskolen i Bergen), Sogn and Fjordane University College (Høgskulen i Sogn og Fjordane) and Stord/Haugesund University College (Høgskolen i Stord/Haugesund). The merger took place 1. January 2017. The Board of Western Norway University College of Applied Sciences revised and adopted the institution's quality assurance system 13. November 2018. See attachment 1 for a list of the higher education programmes the institution have obtained accreditation from NOKUT, given in chronological order by year.

As a University College, Western Norway University College of Applied Sciences (HVL) does not have power of self-accreditation for programmes in the third cycle. HVL applied for accreditation of PhD in Responsible Innovation and Regional Development by the application deadline of 1 November 2017.

The University College's description of the programme and the applicant's grounds for the application

HVL presents the description of the PhD programme in Responsible Innovation and Regional Development on page 6 and 7 in the application:

“This application outlines the arguments for the Western Norway University of Applied Sciences (HVL) to establish an interdisciplinary PhD Programme in Responsible Innovation and Regional Development (RESINNREG). The starting point of the programme is an understanding of innovation in which practice, organisational and technological conditions, as well as the social implications of innovation, are subject to critical discussion and analysis. Innovations are new combinations of existing resources that have been brought into practice, and they could be in the form of new products, new methods of production and new modes of organising (Fagerberg, 2005). The programme investigates these new combinations through a responsible innovation approach, meaning that it is concerned not only with creating value from innovation but also with how innovation-related actors respond to the ethical acceptability, sustainability and social desirability of their innovation activities (see Cooke, 2011; Stilgoe et al., 2013; Fløysand and Jakobsen 2016; Holden et al., 2017). Furthermore, RESINNREG links this approach to a special focus on regional development; i.e. it scrutinises how innovations can contribute to economic value creation in parallel with a green shift and the development of a welfare society. This also means that a primary aim of the programme is to contribute to sustainable regional development processes.

This approach forms the backdrop and overarching theoretical position of the PhD programme and it is operationalised through three main research topics.

- Industry Innovation
- Social Innovation
- Green Innovation

For each of these research topics, a research group has been established, and together, the research portfolios of these groups reflect the aspirations of RESINNREG. The programme comprises seven courses that contribute to knowledge on the practices, organisation and technological foundations of innovation and the interlinkages between these three dimensions. It represents a core framework for advancing theoretical and practical knowledge to meet current and future challenges. By encouraging multidisciplinary approaches to industry innovation, social innovation and green innovation, RESINNREG specifically aims to link the strong traditions of applied research (“exploitation”) and basic research (“exploration”) found in traditional university colleges. Thus, RESINNREG explicitly focuses on both the practical dimensions of innovation (“exploitation”) and the theoretical dimension of innovation (“exploration”) (March 1991). RESINNREG achieves this by utilising the competences and resources of both applied and basic research from the different faculties at HVL. In this way, the PhD programme bridges different knowledge fields, disciplines and innovation approaches while contributing to interaction, co-operation and collaboration between the faculties.

In RESINNREG, each PhD candidate will be linked to one of the three research groups, ensuring in-depth knowledge of a particular field. This will also promote excellent academic learning environments for candidates, as they will participate in active research groups with an international outlook. Academic staff members involved in the research groups have extensive experience in teaching and supervision at PhD level. Moreover, they represent stable research groups with a sufficient number of professors and associate professors with relevant research and education competences and skills. The PhD programme will also be highly beneficial for the established research groups (and their members), as PhD students and the programme will contribute to collaboration and co-operation within and between these three groups, as interdisciplinary work is encouraged.

RESINNREG ensures that the candidate receives training in exploiting and exploring innovation, in written and oral dissemination of research results, and in working in interdisciplinary research teams across topics (industry innovation, social innovation and green innovation). By completing the programme, candidates gain in-depth knowledge on how innovation is both implemented (exploitation) and understood (exploration), and on its links to responsible approaches and regional settings. After graduation, students with diplomas from RESINNREG will be able to identify and assess barriers to, and drivers of, responsible innovation and regional development, and will be able to initiate and contribute to innovation projects that involve industry development, social change and green transition. RESINNREG not only scrutinises and informs theories of innovation but also directly influences how a region can take advantage of its particularities to become more innovative, and how R&D actors can improve the innovation capacity of regional firms, industries and the public sector. Therefore, a core activity of the programme is to explore and exploit innovation and to promote regional development by combining insights from basic research and findings from applied research. RESINNREG will do this in close collaboration with regional players. This collaboration is one of the strengths of the university colleges. In the PhD programme, this collaboration will be linked to the commercialisation of research results, joint research projects between the university and industry, and the use of private and public regional organisations for the practical training of PhD candidates. These activities are part of the “third mission” of universities; i.e., their contribution to social and economic development in

the region (Pugh et al. 2016, Foss and Gibson 2015). Years of collaboration on various activities have led to strong links between HVL and local actors in western Norway (both public and private).”

2 Description of procedures

NOKUT makes an administrative assessment to ensure that all basic conditions for accreditation are fulfilled as expressed in the Regulation concerning NOKUT’s supervision and control of the quality in Norwegian higher education¹ (hereafter referred to as the Quality Assurance Regulation on Higher Education), and the Ministerial Regulations concerning quality assurance and quality development in higher education and tertiary vocational education, Chapter 3² (hereafter referred to as the Ministerial regulations). For applications that have been approved administratively, NOKUT appoints external experts for the evaluation of the application. The external experts have declared that they are legally competent to perform an independent evaluation, and carry out their assignment in accordance with the mandate for expert assessment passed by NOKUT’s board, and in accordance with the requirements for educational quality as determined by the Quality Assurance Regulation on Higher Education.

The expert assessment includes a visit to the institution where the following groups are interviewed: the management of the university college, master students, PhD candidates, academic management, the discipline community, administrative management and possibly employers. In addition, the committee inspects the university college’s infrastructure. Based on both the written documentation and information from the interviews, the expert committee shall conclude either with a *yes* or *no*, as to whether the quality of the educational provision complies with the requirements in the Quality Assurance Regulation on Higher Education. NOKUT also requests that the expert committee advise on further improvements of the programme. All criteria must be satisfactorily met before NOKUT accredits a programme.

If the conclusion reached by the expert committee is negative, the report is sent to the applicant institution, which is then given three weeks to comment. Thereafter NOKUT decides whether the comments should be sent to the committee for additional consideration. The committee is given two weeks to submit the revised assessment. The Board of NOKUT then reaches a final decision about accreditation.

The current report presents the accreditation process chronologically. Following the committee’s requirement NOKUT’s board decided that the PhD programme in Responsible Innovation and Regional Development will satisfy all requirements for accreditation, provided that a professor of sustainability transitions is appointed. HVL was given a deadline to submit the documentation on the appointment of a professor in sustainability transitions by 6 February 2020. NOKUT received documentation for appointment of a professor in sustainability transitions on 27 August 2019. The final decision is in part 8 in this report.

¹ <https://lovdata.no/dokument/SF/forskrift/2017-02-07-137?q=studietilsynsforskriften>

² <https://lovdata.no/dokument/SF/forskrift/2010-02-01-96>

3 Expert assessment

This chapter is the expert committee's assessment. The term "we" refers to the expert committee as such.

3.1 Summary of the report

The Western Norway University College of Applied Sciences (HVL) has applied for a PhD programme in Responsible Innovation and Regional Development (RESINNREG). The programme focuses on industry innovation, green innovation and social innovation through the lenses of responsible research and innovation (RRI) and regional innovation. The committee finds the subject Responsible Innovation (RI) very relevant and timely. Linking the subject to regional development, in particular, is original. However, we have some concerns related to the proposal.

The university college needs to complete and adopt the overall quality assurance system prior to an accreditation of the PhD programme. HVL needs to strengthen the application to make sure that all three topics (industry, green, and social innovation) fulfil the learning goals at a high level of international research. HVL needs to clarify how the competence of the staff associated with the programme are connected with the approach of RI/RRI.

The educational content and structure must be revised in order to correspond and adapt to the learning outcomes. Research activities in the fields of sustainability transitions and social innovation has to be strengthened and the regional dimension in the education must be better founded theoretically for students in all three research topics. The linkages between the individual parts of the programme and their connection to RI/RRI and regional development need to be strengthened.

With regard to the academic environment's depth and breadth new recruitments in the field of sustainability transitions and social innovation is suggested. The capacity and recruitment potential to admit at least 15 research fellows is likely, and the academic environment's educational competence is relevant. However, HVL has to clarify the contribution of the academic staff who teaches RI/RRI. Finally, the committee finds that the academic environment actively participates in national and international collaboration and networks that is relevant for the programme.

3.1.1 The doctoral degree programme's field of study

The PhD programme in Responsible Innovation and Regional Development (RESINNREG) is interdisciplinary in character. The programme has a main focus on innovation studies with the lenses of Responsible Innovation (RI) for sustainable regional development and intend to operationalize through three main research topics of industry innovation, social innovation and green innovation. Specialization in the three topics will be offered in the context of Responsible Research and Innovation (RRI) and sustainable regional development³. Being able to identify and assess drivers and barriers of RI and regional development within innovation projects involving industry development, social change and green transition, the programme envisions its contribution to social and economic development in the region.

³ Currently, there has been ample concept development in responsible research and innovation (RRI) (Genus and Stirling, 2017; Stilgoe et al., 2013; Owen et al., 2013) and the narrower "responsible innovation" (RI). While RRI often focus behind the scientific aspect and the development process of grand challenges like climate change, resource depletion, poverty alleviation, ageing societies, etc. RI has a more fine-grained focus on the innovation itself (cf. von Schomberg 2013; Blok and Lemmens, 2015).

Accreditation of a PhD programme will give institutions the power to establish new study programmes in the first and second cycle within the field of study of the doctoral degree programme without applying to NOKUT. A clear definition of the field of study is thus important to clarify the self-accrediting powers. The doctoral degree programme's field of study is interdisciplinary in character. It has a main focus on innovation studies, sustainability research and geography. The PhD programme is ambitious since the scientific field and the scholarly debate on RI has developed only in recent years. HVL has currently limited competences and is still not scientifically recognized in the field of RI and RRI. Based on our assessment, our concerns (referred in the sections 3.3.1, 3.3.2, 3.3.4., 3.3.6, 3.4.1, 3.4.2, 3.4.3, 3.4.4, 3.4.5 and 3.4.9) need to be addressed clearly for self-accrediting powers.

3.2 Basic prerequisites for accreditation (§ 3-1 (4) in Ministerial Regulations concerning quality assurance and quality development in higher education and tertiary vocational education and § 2-1 in Quality Assurance Regulation in Higher Education)

3.2.1 Requirements assessed by NOKUT

From the Ministerial Regulations:

§ 3-1 (4) It is a condition for accreditation being granted that the requirements of the Universities and University Colleges Act are met. Regulations adopted under the authority of Section 3-2 of the Universities and University Colleges Act shall form the basis for the accreditation.

From the Quality Assurance Regulation:

§ 2-1 (1) The requirements of the Act relating to Universities and University Colleges and its corresponding regulations must be met.

Assessment

The University College Board is responsible for all the managerial decisions. The Board adopted regulations and the quality assurance (QA) system for PhD programmes at HVL in December 2016. This was the same QA system for PhD programmes from Bergen University College approved in 2014. However, the institution's overall system for quality assurance for the newly merged university college is still not in place. The Board will make a decision regarding the overall QA system in November 2018. It remains to see how the adopted QA system for PhD programmes will fit the overall quality assurance of HVL.

HVL has a central PhD committee and a faculty-based PhD programme committee. The responsibilities, structures and processes between these committees are well defined. The University College Board has approved the mandate and composition of the central PhD committee, the PhD programme committee and the Research Ethics Committee. The central PhD committee is an advisory board to the university college regarding strategic questions, and is responsible for formulating rules and instructions according to the Regulations for the PhD Degree at HVL. The central PhD committee has 7-9 members. The size of the committee depends on the number of approved PhD programmes. The Rector, or Pro-Rector in charge of research, chairs the Central PhD committee. The faculty-based PhD programme committee has five members. The dean or a person designated by the dean chairs the committee. Other members are three academic staff members and one candidate from the PhD programme.

Important to the quality assurance at HVL are other committees, such as the Learning Environment Committee, the Education Committee, and the Research and Development Committee. During the site visit in August, it was conformed that all committees were established and have had their first meetings.

The PhD diploma and the Diploma Supplement (DS) follow the normal structure of higher education diplomas and the required content of the DS. If the learning outcomes, the subjects and content are changed, the diploma and DS should be updated.

Conclusion

No, the requirements are not fulfilled. The university college lacks an overall quality assurance system that must be completed and adopted prior to accreditation of the PhD programme.

The institution is required to:

- complete the work with the Quality Assurance System at HVL
- provide a decision by the HVL Board regarding the approval of an overall quality assurance system

3.2.2 Information about the educational provision

§ 2-1 (2) Information provided about the programme must be correct and show the programme's content, structure and progression, as well as opportunities for student exchanges.

Assessment

Attachment 2.1 *Programme Description* in the application gives a detailed and clear overview of the programme's content, structure and progression, as well as opportunities for student exchanges. The information provided in the programme description is adequate.

Conclusion

Yes, the requirements are fulfilled.

3.3 Demands to the educational provision (§ 2-2 in the Quality Assurance Regulation in Higher Education)

3.3.1 Learning outcome and title of educational provision

§ 2-2 (1) The learning outcomes for the programme must be in accordance with the National Qualifications Framework for Lifelong Learning, and the programme must have an appropriate title.

Learning outcome of the programme

Upon completion of the programme, the candidate:

Knowledge

K1: is at the forefront of researching responsible innovation and regional development and with a specialisation in industry innovation, social innovation or green innovation;

K2: has comprehensive knowledge of state-of-the-art concepts and methods in the research field of responsible innovation and regional development and in his/her topic of specialisation;

K3: contributes to new knowledge and potential new theories and concepts, methods and documentation in the field of exploring innovation;

K4: has comprehensive knowledge of methods and practices for exploiting research knowledge and transforming research findings into innovations;

Skills

S1: can formulate research hypotheses and can plan and conduct independent theoretical and applied research work within his/her topic of specialisation;

S2: can conduct research work of a high international standard that advances the forefront of knowledge and application of responsible innovation and regional development in his/her topic of specialisation;

S3: can review research work in his/her topic of specialisation, relate it to the forefront of knowledge, and assess its applicability to society;

S4: can perform research that challenges established theories, concepts, approaches and methods in the research field of responsible innovation and regional development;

S5: can identify and assess the need for responsibility in innovation and regional development;

S6: becomes a change agent initiating and contributing to projects involving industry innovations, social innovations or green innovations

General competence

G1: can identify relevant ethical issues pertinent to innovation and regional development research and its application in society;

G2: can conduct research work with scholarly integrity and in accordance with the established scientific norms and traditions for research in the field of responsible innovation and regional development;

G3: can participate in interdisciplinary assignments and projects involving and applying research on one or more of the topics of industry innovation, social innovation, and green innovation;

G4: can disseminate and publish research results through recognised channels, including scientific workshops, conferences and journals in the research field of innovation; and

G5: can participate in international research discussions and collaborations on scientific topics in his/her topic of specialisation.

Successful completion of the programme of study leads to the degree of Philosophiae Doctor (PhD)

Assessment

The learning outcomes of the programme follow the description defined in the Norwegian Qualification Framework in terms of knowledge, skills and general competence for level 8 PhD.

RESINNREG is described as “a doctoral programme for candidates who wish to qualify for research and scientific work at a high international level in the field of innovation studies”. The overall objective of the programme is to make a novel and original contribution to a newly emerging field of innovation studies. Indeed, the subject Responsible Innovation (RI) is very relevant and timely. Linking the subject to regional development, in particular, is original. The orientation of the overall programme is towards exploration and exploitation of innovation. The latter is linked to the HVL tradition of educating

candidates with practical professional qualifications. Accordingly, the programme has an explicit focus on innovation as practice. There is not necessarily a trade-off between international research excellence and practical professional qualifications. However, in general, the proposal is stronger on the latter point.

The other aspect of the programme is to produce change agents in the region. This was also emphasized during interviews. Being able to act as change agent requires specific competencies and skills, beyond the participation in innovation practices and real change processes. However, a profound elaboration on the required specific competencies and skills that enable the candidates to act as change agent in RI and how they will acquire these learning outcomes is missing.

The formulated learning outcomes are satisfactory. However, we have some doubts whether the programme in the present form can fulfil the formulated learning outcomes. To make sure that the formulated learning outcomes will be reached, the PhD programme has to be strengthened in accordance with the overall subject RI. Moreover, in the present form, the three pillars are unequally developed in breadth and depth, as outlined in more detail in the following sections (see 3.3.4., 3.3.6, 3.4.1, 3.4.2, 3.4.3 and 3.4.4). Therefore, the institution is required to strengthen the application to make sure that PhD candidates in all three topics covered by the programme – industry, social and green innovation – have equal opportunities to fulfil the learning goals at the level of international research excellence.

The overall objective of the programme, intended outcomes and subsequent contribution to the regional development is well aligned with the title of the programme “Responsible Innovation and Regional Development”. However, the programme in the current status fails to reflect on the successful execution to hold the proposed title.

Conclusion

No, the descriptions of the programme’s learning outcome and title are not satisfactory.

The institution is required to:

- strengthen the PhD programme in accordance with the overall subject RI
- ensure that PhD candidates in all the three pillars – industry, green and social innovation – have equal opportunities to fulfil the learning goals at the level of international research excellence
- clarify the required specific competencies and skills that enable the candidates to act as change agents in RI processes and how these are related to the modules

3.3.2 The educational provision’s academic update and professional relevance

§ 2-2 (2) The programme must be academically up-to-date and have clear academic relevance for further studies and/or employment.

Assessment

RI is an emerging highly relevant scientific field and academically up-to-date. Linking the subject to regional development and the application fields, in particular, is novel and a strength of RESINNREG. The involvement of a user group outside academia and the already established networks of HVL provide opportunities to develop professional networks, relationships and links to regional actors for the candidates. This may also provide job opportunities for the candidates. Furthermore, the SIVA incubator, which is part of Bergen Technology Office and where HVL is a co-owner, provides opportunities for entrepreneurship. These aspects were further justified with the commitment from the potential employers during interviews.

The application highlights that the programme is embedded in ongoing research at HVL. This is also reflected in the offered courses. However, while the general topic of the PhD programme is highly relevant and interesting, the embedding of the PhD programme in ongoing international scientific debates is fairly weak. Even though the three research groups have a good record of publications in international journals and they participate at international conferences in their respective fields, their strengths in RI - the core subject of the programme - is not convincing. The application somewhat fails to define the core concept of RI. Furthermore, the committee found that the level of understanding of the core concepts in the programme – in particular RI – varied significantly between faculty members in interviews during the site visit.

Even though RI is a new approach and there is currently no unified understanding, the committee emphasizes the necessity to develop a profound definition of the understanding in the framework of the PhD programme. A deeper elaboration on the linkages of the three pillars and RI as well as RRI is needed. This weakness was also obvious during the interviews. How the specific research fields of the staff affiliated with the programme, are connected more narrowly with the emerging field of RI is vague. Furthermore, how the academic staff will contribute to the development and implementation of RI is unclear.

Conclusion

No, the requirements are not fulfilled.

The institution is required to:

- clarify the definition of responsible innovation (RI) vis-à-vis other related concepts, such as responsible research and innovation (RRI) and the need for directionality in innovation policy
- build a common understanding of the core concept of RI among the faculty members involved in the programme and grounded in the scholarly debates (this can be ensured, for example by conducting internal seminars and workshops)
- clarify how the competences and research fields of the staff affiliated with the programme, are connected more narrowly with the approach of RI/RRI
- give a more profound elaboration on the linkages of the three pillars and RI as well as RRI

3.3.3 The provision's workload

§ 2-2 (3) The total workload of the programme must be between 1,500 and 1,800 hours per year for full-time students.

Assessment

HVL's allocated workload for full-time students is 1688 hours per year. This is equivalent to the workload for a full-time academic staff.

Table 1: *Workload divided by scheduled teaching activities, self-directed study and exam preparation* (table 3 from the application, page 29)

Course titles	Learning activities (hours)	Self-study (hours)	Exam preparation (hours)
PHDINN901 <i>PhD Dissertation in Responsible Innovation and Regional Development</i>		4224	
PHDINN902 <i>Philosophy of Science, Research Ethics and Responsible Innovation</i>	45	60	35
PHDINN903 <i>Understanding and Exploring Innovation</i>	20	30	90
PHDINN904 <i>Doing and Exploiting Innovation</i>	20	30	90
PHDINN905 <i>Decision-making for Responsible Innovation</i>	20	30	90
PHDINN906 <i>Innovation and Industry Development</i>	40	70	30
PHDINN907 <i>Innovation in the Public Sector</i>	40	70	30
PHDINN908 <i>Innovation and Sustainable Transition</i>	40	70	30

The workload for the programme is within the limit (336 hours less than the maximum). This allows room for attending additional courses, seminars and conferences relevant for the programme. These facts were also touched upon during interviews. The committee has no further comments on this part.

Conclusion

Yes, the requirements are fulfilled.

3.3.4 The educational provision's content, structure and infrastructure

§ 2-2 (4) The programme's content, structure and infrastructure must be adapted to the programme's learning outcomes.

Assessment

The RESINNREG programme is structured in two main parts: the training courses for all PhD students (in total 30 ECTS) and the individual PhD dissertation. The training courses are designed as three mandatory and four elective modules. All courses are each five ECTS. The committee has some reservations concerning the structure and content of the programme. Our main concern is whether the structure and the content of the programme in the present form can fulfil the formulated learning

outcomes. Particularly the ambitious objective to qualify for research and scientific work at a high international level in the core subject RI. Below we elaborate in relation to the individual courses.

PHDINN902: Philosophy of Science, Research Ethics, and Responsible Innovation

Only in this mandatory course, RI is one out of three modules with 10 hours of lectures and 5 hours of colloquia (Attachment 2.1, pages 13-14). This does not seem sufficient to build a common ground for the PhD students who may have diverse educational backgrounds. The emphasis on RI in this course is valid, but also raises the question of the role of this concept in the overall PhD programme.

PHDINN903: Understanding and Exploring Innovation

The objective of the course is to provide state-of-the-art knowledge, skills, and competence in the research field of innovation. It contains an overview of the approaches for RI, innovation systems, cluster development, actor-network theory and different types of entrepreneurship. The emphasis on the relation between the PhD candidates' work and the state-of-the-art is important.

PHDINN904: Doing and Exploiting Innovation

The course focuses on handling innovation in practice and the emphasis is mainly on managing technological innovation. The focus is placed on the understanding of the context of innovation with its social, cultural, economic and business roots. This is the traditional perspective of analysing the social dimension in technological innovation. It seems that differences in the emerging and scaling of different types of innovation, as for example social or green innovation, are not treated. Moreover, how RI is linked with different types of innovations is not explained in details.

From the limited course description, it is difficult to see the coherent learning and knowledge outcomes related to the overall subject of the programme. The literature list entails partially fairly old publications while new approaches like design thinking, user involvement or co-creation of innovation are missing.

PHDINN905: Methodology – Decision-making for Responsible Innovation

The course has a special focus on decision making mostly in the business field. According to the course description, the course contains mainly quantitative methods. This was also confirmed during the interviews. From the course title Decision-making for Responsible Innovation, one would expect to find a link to the first module philosophy of science (Wissenschaftstheorie) by reflecting quantitative and qualitative methods as well as triangulation or mixed methods approaches. Regarding the subject of RI including pronounced ethical and value-based research issues, the course covers only a narrow methodological field. Even though candidates may take other courses related to their respective research, the methodology is an essential component to build a common ground for the candidates' understanding of RI. Finally, decision-making is the only mandatory methodological course and we find it too narrow to provide an appropriate knowledge base for carrying out empirical research in the field of RI. In this perspective, it is very difficult to see how the current course fits into the overall topic of the PhD programme.

PHDINN906: Innovation and Industry Development

Overall, the course seems adequate and reflects the research focus of HVL.

PHDINN907: Innovation in the Public Sector

The course covers public and service innovation and represents the social innovation pillar. The subject of social innovation is, however, much broader in scope than outlined in this course. Thus, the committee

finds that the current scientific debates on social innovation theories are not sufficiently represented in the course content.

During the site visit, it became obvious that the different faculty members of the social innovation group have not developed a common and solid theoretical understanding of social innovation. This is due to the short history of the establishment and the collaboration of the group members representing different research fields such as public sector innovation, health care, social community work and social entrepreneurship. In the present form, it is hard to see the coherent learning and knowledge outcomes related to social innovation and the overall subject of the programme.

PHDINN908: Innovation and Sustainable Transition

This course focuses mainly on technology and quantitative methods as reflected in the modules and the literature (attachment 2.1). The outlined modules do not cover theoretical perspectives to sustainability transitions. In the last years, the ‘socio-institutional perspective of sustainability transitions’ and the ‘geography of sustainable transitions’ has gained importance in the scholarly debates theoretically as well as empirically. Consequently, we question why these strands are not integrated into the modules. The committee finds this integration important, in particular, as regional development plays an essential role in the overall programme.

Some of the issues regarding the courses were clarified during the interviews with the academic staff and the academic leadership at HVL. According to them, the courses may be modified and adjusted as the programme is carried out. HVL offers relevant courses at other PhD programmes, and courses may be obtained from other national and international institutions. Methodology courses, for instance, are expected to be acquired externally. However, we find that the aspects mentioned above related to the educational content still needs to be addressed.

The research infrastructure for RESINNREG seems appropriate. The library facilities and access to databases are well in place. We were informed that all staff and students have the same access to data at all campuses. Currently HVL has access to 168 databases. In case there is a demand for more, HVL provides the staff and students with databases through other universities in their networks. In addition, we find that the Center for New Media, the Mohn Centre, the incubator, etc. strengthens HVL in terms of supportive infrastructures for the proposed programme.

Conclusion

No, the programme’s content and structure are not adapted to the learning outcomes.

The institution is required to:

- revise the educational content regarding RI/RRI to build a common ground for the PhD students who may have diverse educational backgrounds
- revise the educational content regarding innovation in practice to account for the diversity of innovations, and thereby go beyond only technological innovations
- revise the educational content regarding methodology to make it relevant for the objective of the PhD programme

- revise the educational content regarding the theoretical foundations and the conceptualization of social innovation and ensure that the linkages to the main subject of the PhD programme are clearly developed
- revise the educational content in order to cover theoretical perspectives on sustainability transitions
- revise the educational content to ensure that the regional dimension is clearly implemented in the education, not just at a practical level but also when it comes to theoretical foundations, for students connected to all three research topics

3.3.5 Teaching-, learning- and assessment methods

§ 2-2 (5) The teaching, learning and assessment methods must be adapted to the programme's learning outcomes. The programme must facilitate students taking an active role in the learning process.

Assessment

The assessment forms for the PhD students are adequately described. In general, the teaching, learning and assessment methods are acceptable. Varieties of teaching methods are included. The lectures, colloquia and self-study demonstrate that the programme is adapted to the learning outcomes.

The committee appreciates the active participation of the PhD candidates in one of the three research groups since this involvement provides further learning opportunities for the candidate's own research projects. A rewarding component of the proposal is the 'fellowship forum' that will take place regularly throughout the PhD period. This will support networking and self-learning among the PhD candidates and may foster synergy effects. Furthermore, the PhD candidates have the possibility to participate in the annual retreat for all HVL researchers. This will promote their integration in the wider research community.

Conclusion

Yes, the teaching-, learning- and assessment methods are suited for the students' attainment of the learning outcomes.

3.3.6 Links to research and academic and/or artistic development work

§ 2-2 (6) The programme must have relevant links to research and academic development work and/or artistic research.

Assessment

The committee appreciates that the PhD candidate is allocated to one of the research groups (industry, social or green innovation) in the programme. Furthermore, the research group will organize the PhD candidates' participation in scientific discussions at seminars and meetings. The active participation and engagement of candidates into research projects (significant research projects with participating

academic researchers associated with PhD programme) is stated in the application. The assignment of supervisors and facilitation of networking among research groups are well outlined in the application. The PhD students will be supervised in developing research skills and may choose a co-supervisor from other national or international institutions. We furthermore acknowledge that the current PhD students at HVL expressed their satisfaction with the overall academic environment at HVL during our site visit. Although a number of relevant research projects are taking place at HVL, parts of the PhD programme cover areas where HVL has limited research activities – see elaboration in part 3.4.4 concerning research activities in the fields of RI/RRI, sustainability transitions and social innovation. The committee's understanding in this respect was also reinforced during the interviews. Thus, despite the positive aspects outlined above, links to research activities and the theoretical foundation have to be strengthened.

Conclusion

No, the programme does not have relevant links to research and academic development work and/or artistic research.

The institution is required to:

- strengthen research activities in the field of RI/RRI
- strengthen research activities in the fields of sustainability transitions and social innovation

3.3.7 The educational provision's internationalisation arrangements

§ 2-2 (7) The programme must have internationalisation arrangements adapted to the programme's level, scope and other characteristics.

Assessment

Several internationalisation arrangements are mentioned in the application. PhD candidates are encouraged to participate and disseminate their research in at least one international venue during their studies. Additionally, researchers from international partner institutions may be involved in the programme as co-supervisors and/or guest lecturers. The institution also initiates PhD workshops conducted by senior international guest lecturers and hosts international conference at HVL. Furthermore, the researchers associated with the programme demonstrate network and collaboration with national and international researchers. Finally, the programme is open for competent international students.

Conclusion

Yes, the programme has internationalisation arrangements adapted to its level, scope and other characteristics.

The institution is advised to:

- further strengthen the link to the international environment, particularly in fields where HVL does not have long research tradition

3.3.8 The educational provision's systems for international student exchange

§ 2-2 (8) Programmes that lead to a degree must have arrangements for international student exchanges. The content of the exchange programme must be academically relevant.

Assessment

The programme has international arrangements for student exchange and the content of the exchange is of academic relevance. The researchers involved in the programme have previously collaborated and established these agreements. Since researchers at the host institution are working within similar or related topics, it appears possible for the PhD candidates to write articles related to their own research project abroad with international researchers.

Conclusion

Yes, the programme has arrangements for international student exchanges.

3.3.9 Supervised professional training

§ 2-2 (9) Programmes that include supervised professional training must have formal agreements between the institution and the host for the supervised professional training.

Assessment

Not relevant for this programme.

3.4 Academic environment (§ 3-3 in Ministerial Regulations concerning quality assurance and quality development in higher education and tertiary vocational education and § 2-3 in the Quality Assurance Regulation in Higher Education)

3.4.1 Quality and scope of the education and research

§ 3-3 (1) The institution shall offer education and research in the doctoral programme's field of study of a quality and scope that ensure that the programme can be completed at a high academic level. The institution shall offer a wide range of first and second-level degree programmes within the doctoral degree programme's field of study.

Assessment

In quantitative terms, HVL offers a wide range of more than 40 bachelor's degree programmes (see attachment 1). Four relevant master's degree programmes are established. These are considered the key recruitment channel for the RESINNREG programme.

In the application, it is mentioned that two of the four master's degree programmes (Master in Innovation and Entrepreneurship / Master in Innovation Management) cover industry innovation. The Master in Community Work emphasizes on social innovation, while the Master in Climate Change Management specialises in green innovation.

In addition, other master's degree programmes relevant for the proposed PhD programme are Master in Maritime Operation, Master in Change Management and Master in Collaboration in Health and Care. The recruitment from other equivalent and relevant educational programmes outside HVL, both national and international, is not specified in the application.

Within the three main topics, the Industry Innovation group has the strongest basis regarding the number of professors involved and the possibility to recruit internal PhD candidates. During the interviews, the emphasized recruitment from other equivalent and relevant educational programmes outside HVL were specified. This involves both national and international institutions. HVL has also included governance and aspects of social innovation in a master course and they consider this as a source for the third pillar - social innovation.

In summary, we find the current educational offer at HVL satisfactory. However, as will be elaborated in section 3.4.4, we do not arrive at a similar positive conclusion concerning the research activities. The research activities need to be strengthened in the fields of RI/RRI, sustainability transitions and social innovations in order to fulfil this criterion as well.

Conclusion

No, the requirements are not fulfilled.

The institution is required to:

- strengthen research activities in the field of RI/RRI
- strengthen research activities in the fields of sustainability transitions and social innovation

3.4.2 The programme's field of study shall constitute a scientific whole

§ 3-3 (2) The doctoral degree programme's field of study shall constitute a scientific whole, and the individual parts that make up the programme shall be internally coherent.

Assessment

The committee finds that the coherence of the whole programme has a clear potential for improvement. Only to a minor degree does the application reflect relations between the individual parts and the overall subject of RI, and regional development. During the site visit, it was visible that the level of understanding of the core concepts in the PhD programme varied significantly between faculty members. Moreover, the already established collaborative research between the three groups varies strongly. The industry and green innovation group have longer traditions compared to the newly established social innovation group. This is also reflected in differences in the coherence of the modules. Established collaborative projects are already in place and new collaborative projects are in

the development process. However, there is a need to elaborate more profoundly on the conceptual and theoretical linkages between the individual parts and the overall objective of the programme, in order to achieve a stronger scientific coherence of the programme (see also 3.3.2 and 3.3.4).

Conclusion

No, the requirements are not fulfilled.

The institution is required to:

- implement the regional dimension in the education, not just at a practical level but also when it comes to theoretical foundations, for students connected to all three research topics
- elaborate more profoundly on the linkages of the individual parts of programme and their connection to RI/RRI and regional development

3.4.3 The academic environment's educational and research expertise

From the Ministerial Regulations:

§ 3-3 (3) The doctoral degree programme shall be affiliated to an academic environment with a high level of expertise in education and research. The academic environment shall be able to document research results, including publication, at a high international level, and results from collaborations with other national and international academic environments.

From the Quality Assurance Regulation:

§ 2-3 (5) The academic environment must be actively engaged in research and academic development work and/or artistic research, and be able to demonstrate documented results with a satisfactory quality and scope in relation to the programme's content and level.

Assessment

The educational expertise within all three groups at HVL is strong. The academic publications both in level 1 and level 2 academic journals of the researchers associated with the programme are solid. Besides, researchers in all three groups have contributed in book chapters. The researchers also collaborate with national and international researchers.

Furthermore, the researchers associated with the programme are actively involved in teaching and supervision of bachelor, master and PhD theses.

In summary, we find that the requirements from the Ministerial Regulations are fulfilled. However, the requirement from the Quality Assurance Regulation also stipulates that the research expertise must be "in relation to the programme's content and level". As described in section 3.4.4, we do not arrive at a similar positive conclusion concerning research competence in all research fields covered by the programme.

Conclusion

No, the requirements are not fulfilled.

The institution is required to:

- strengthen research activities in the fields of sustainability transitions and social innovation
- strengthen research activities in the field of RI/RRI

3.4.4 The academic environment's depth and breadth

§ 3-3 (4) The academic environment shall have depth and breadth in all important parts of the doctoral degree programme, so that the doctoral candidates can participate actively in different academic relations and be introduced to different perspectives.

Assessment

The three groups have currently only limited competences in the field of RI and RRI. In the application, the contribution of the groups' research profiles to the emerging field of RI is only vaguely developed.

Among the three groups, the industry innovation group has a convincing depth and scope in its specialization. This is reflected in the national and international publications and networks, the recent research projects, and the sound theoretical basis in the module description of PHDINN906. Hence, the group demonstrates sufficient depth and breadth for the PhD programme.

The green innovation group carries out high-quality research. It is, however, not clear that this research focuses on the core topics in the PhD programme. The research group is well positioned in sustainability science, but less in sustainability transitions and innovation studies, which are core to the programme and the teaching responsibility of the green innovation group.

The research of the social innovation group focuses on two main topics: (i) innovative governance and public service provision, and (ii) innovation in health and social care services. The group is well established nationally and internationally in both fields, reflected in the national and international networks and publications. This is also demonstrated in a very solid track of externally funded research projects. If the group operated under the name public and service innovation group, there would have been no concerns regarding the depth and breadth of this part. It would also have been in line with the name of elective course PHDINN907: Innovation in the Public Sector. However, the committee considers the pronounced research profile and the content of the course too narrow to cover all important parts related to social innovation (see also 3.3.4). The subject 'social innovation' is much broader in scope. Social innovation is not a new research topic, and we find the scientific debates on the social innovation theories not sufficiently acknowledged. The research group is very well positioned in public sector innovation, but less so in social innovation. There are two possible ways to achieve the necessary depth and breadth: 1) narrow down the focus from social innovation to public sector innovation, or 2) invest in new competences to make the conceptualization and theoretical foundations much more explicit and thereby integrating the recent scientific debates in a broader and more thorough way. The second option would also place the group's research profile into the field of

social innovation. The committee finds the second option the most ambitious, but also the most interesting, way forward.

During the interviews, there was agreement on these issues. There was a strong commitment from the Board and leadership to strengthen the areas with less depth and breadth in the programme and to support the collaboration of the social innovation group to build a common knowledge base. It was mentioned that they are already in process of recruiting a professor who could contribute to the proposed programme.

Conclusion

No, the requirements are not fulfilled.

The institution is required to:

- make the contribution and relationship of the groups' research profiles' and the core concept of RI /RRI more clear
- develop depth and breadth in the fields on sustainability transitions, for instance, through new recruitment(s)
- develop depth and breadth in the fields of social innovation, for instance, through new recruitment(s) or alternatively narrow down the focus from social innovation to public sector innovation

3.4.5 Sufficient and stable academic environment

From the Ministerial Regulations:

§ 3-3 (5) The doctoral degree programme shall be affiliated to a stable academic environment consisting of a sufficient number of staff with professor and associated professor qualifications within the breadth of the field of study. An overall assessment shall be carried out of whether the academic environment has a sufficient number of employees to cover subjects and courses and the supervision provided in the field of study. The academic environment shall consist of employees with the relevant expertise. The institution's assessments shall be documented so that NOKUT can use them in its work

From the Quality Assurance Regulation:

§ 2-3 (1) The academic environment for each programme must be of a size proportionate to the number of students and the programme's characteristics, be stable over time in terms of competence and have a composition that covers the programme's topics and subjects.

Assessment

In total 52 researchers are associated with the programme, of which 26 are professors and 26 are associate professors. Each research group (industry, green and social innovation) demonstrates a uniform distribution of researchers' affiliation.

Thus, while the quantity of affiliated researchers is sufficient, the above-mentioned regulations also require that the team of researchers must "have a composition that covers the programme's topics and

subjects” and “cover subjects and courses and the supervision provided in the field of study”. As described in 3.4.4, we do not find this adequate.

Conclusion

No, the requirements are not fulfilled.

The institution is required to:

- develop depth and breadth in the fields on sustainability transitions, for instance, through new recruitment(s)
- develop depth and breadth in the fields of social innovation, for instance, through new recruitment(s) or alternatively narrow down the focus from social innovation to public sector innovation

3.4.6 Capacity and recruitment potential

§ 3-3 (6) The institution shall document that it has the capacity and recruitment potential to admit at least 15 research fellows to the doctoral degree programme during the first five years after its inception. In addition, the institution shall substantiate that it has the capacity to maintain a doctoral degree environment comprising at least 15 research fellows over time. Persons appointed under the Industrial PhD and Public Sector PhD schemes can count towards the number of research fellows pursuant to this paragraph and Section 3-8 (5). At least eight of the research fellows must have their main place of work at the institution. The institution may also accept doctoral candidates with other financing.

Assessment

Currently, 13 PhD students are active and classified according to the three main topics (pages 85-87 in the application). However, the PhD students are not evenly distributed between the groups (5 in industry innovation/5 in social innovation/3 in green innovation). Whether HVL has the capacity to attract at least 15 research fellows to the doctoral degree programme and is able to maintain this number cannot be justified with the presented data alone.

In the application, 18 PhD candidates are considered as a realistic number to be supervised and funded as a part of the programme (page 28). Based on the national and international networks of all three groups, strategies for external recruitment seem promising.

During the interviews, it was emphasized that applications for the PhD programme will be open internationally and the recruitment will be ensured through both national and international institutes. It was also stated that HVL is prepared to set aside the necessary funds for PhD positions if the groups are less successful than expected in attracting external funds.

Overall, we therefore find it convincing that HVL upon accreditation of the proposed programme will be able to recruit a sufficient number of research fellows and has the capacity to uphold this number of research fellows over time.

Conclusion

Yes, the requirements are fulfilled.

3.4.7 The academic environment's educational competence

§ 2-3 (2) The academic environment must have relevant educational competence.

Assessment

Twenty-eight researchers have formal pedagogical education (distributed over all three research groups). They are involved in teaching and supervision at bachelor's, master's and PhD levels. HVL arranges yearly courses in university and university-college pedagogy to ensure and develop the pedagogic competencies of their academic staff. In addition, all new academic employees and PhD students with teaching duties are offered courses in pedagogy. Attending pedagogy courses are mandatory. HVL's Centre for Educational Research performs research on teaching in higher education, which contributes to the competence building within the academic community. Furthermore, the Centre for New Media offers courses and teaching in the use of interactive pedagogical tools. These demonstrate the well-established educational competence in HVL.

Conclusion

Yes, the academic environment associated with the provision has relevant educational competence.

3.4.8 Academic management

§ 2-3 (3) The programme must have a clear academic leadership with defined responsibilities for quality assurance and the development of the study programme.

Assessment

The programme coordinator together with the programme committee for RESINNREG are responsible for quality assurance and development of the programme. Their duties and responsibilities are noticeably specified in the application. Overall structure, processes and responsibilities are clearly outlined in the application.

During the interviews, the committee was informed that the academic leadership is in the process of establishing a PhD coordinator in each faculty to facilitate coordination among the PhD students from different pillars. Furthermore, they are in the process of forming a central PhD committee with representatives from all the faculties. We find this satisfactorily.

Conclusion

Yes, the programme has an academic leadership with defined responsibilities for quality assurance and the development of the programme.

3.4.9 Staff with primary employment

§ 2-3 (4) At least 50 per cent of the academic full-time equivalents affiliated to the programme must be staff with their primary employment at the institution. Of these, academic staff with at least associate professor qualifications must be represented among those who teach the core elements of the programme. In addition, the following requirements apply to the academic environment's level of competence:

- a) For first-cycle programmes, at least 20 per cent of the members of the academic environment must have at least associate professor qualifications.
- b) For second-cycle programmes, at least 50 per cent of the members of the academic environment must have at least associate professor qualifications. Within this 50 per cent, at least 10 per cent must have professor or docent qualifications.
- c) For third-cycle programmes, the academic environment must consist of academic staff with at least associate professor qualifications. At least 50 per cent must have professor or docent qualifications.

Assessment

There are 52 academic staff members (23.8 full-time equivalent) associated with the proposed RESINNREG programme. Of these, 26 (13.8 full-time equivalent) are full professors and 26 (10 full-time equivalent) are associated professors, i.e. at least 50 per cent are full professors and have their primary employment at HVL. Quantitatively the application is able to meet the required criteria. There was some concern regarding the direct contribution of all researchers to the respective content of the programme. However, the academic leadership specified these concerns during the interview. According to them, the total number are those involved in the three research groups. For the proposed programme, only a few will participate in the teaching and a larger part will be involved in supervision.

The core elements in terms of disciplines are innovation studies, sustainability research and geography. The core elements of the programme are RI, regional development, industry innovation, green innovation and social innovation. Academic staff with at least associate professor qualifications must be represented among those who teach in the disciplines of innovation, sustainability and geography. Consequently, associate professor competence is required for teaching the core elements of RI/RRI, green innovation, social innovation and industry innovation. As mentioned in earlier sections, all elements of the programme are not covered in breadth and depth (see 3.1.1, 3.3.1, 3.3.2, 3.3.4, 3.3.6, 3.4.1, 3.4.2, 3.4.3, 3.4.4, 3.4.5 and 3.4.9).

Conclusion

No, the criteria and the demands specific to the cycle of the educational provision are not fulfilled.

The institution is required to:

- clarify the contribution of the academic staff who teaches the core elements of the programme, especially in RI/RRI

3.4.10 The academic environment's external participation

§ 2-3 (6) The academic environment for programmes that lead to a degree must actively participate in national and international partnerships and networks that are relevant for the programme.

Assessment

The letter of intent from the national and international researchers (from renowned academic institutions), the network with external researchers and co-operation in research projects (publication co-authored with external researchers) demonstrate active external participation from the researchers associated with the programme. In addition, the researchers are involved in editorial boards of international academic journals. Furthermore, initiation to host international conference (Host of 13th Regional Innovation Policy Conference in 2018 including workshop for PhD students) and the probability of involving researchers from international institutions as co-supervisors and guest lecturers are positive.

Conclusion

Yes, the academic environment actively participates in national and international collaborations and networks relevant for the programme.

3.4.11 Supervision of professional training

§ 2-3 (7) For programs involving mandatory supervised professional training, the members of the academic environment must have relevant and updated knowledge from the field of the professional training. The institution must ensure that professional training supervisors have relevant competence and experience in the field of the professional training.

Assessment

Not relevant for this programme

4 Conclusion

Based on the written application with attached documentation and supplementary information the expert committee concludes the following:

The committee does not recommend accreditation of the PhD Programme in Responsible Innovation and Regional Development (RESINNREG) at Western Norway University College of Applied Sciences (Høgskulen på Vestlandet).

The expert assessment states which demands the institution is required to meet in order to achieve accreditation. In addition, the committee has provided advice for the further development of this study programme.

The following requirements are not satisfied:

- § 2-1 (1) The requirements of the Act relating to Universities and University Colleges and its corresponding regulations must be met.
- § 2-2 (1) The learning outcomes for the programme must be in accordance with the National Qualifications Framework for Lifelong Learning, and the programme must have an appropriate title.
- § 2-2 (2) The programme must be academically up-to-date and have clear academic relevance for further studies and/or employment.
- § 2-2 (4) The programme's content, structure and infrastructure must be adapted to the programme's learning outcomes.
- § 2-2 (6) The programme must have relevant links to research and academic development work and/or artistic research.
- § 2-3 (1) The academic environment for each programme must be of a size proportionate to the number of students and the programme's characteristics, be stable over time in terms of competence and have a composition that covers the programme's topics and subjects.
- § 2-3 (4) At least 50 per cent of the academic full-time equivalents affiliated to the programme must be staff with their primary employment at the institution. Of these, academic staff with at least associate professor qualifications must be represented among those who teach the core elements of the programme.
- § 2-3 (5) The academic environment must be actively engaged in research and academic development work and/or artistic research, and be able to demonstrate documented results with a satisfactory quality and scope in relation to the programme's content and level.

- § 3-3 (1) The institution shall offer education and research in the doctoral programme's field of study of a quality and scope that ensure that the programme can be completed at a high academic level. The institution shall offer a wide range of first and second-level degree programmes within the doctoral degree programme's field of study.
- § 3-3 (2) The doctoral degree programme's field of study shall constitute a scientific whole, and the individual parts that make up the programme shall be internally coherent.
- § 3-3 (3) The doctoral degree programme shall be affiliated to an academic environment with a high level of expertise in education and research. The academic environment shall be able to document research results, including publication, at a high international level, and results from collaborations with other national and international academic environments.
- § 3-3 (4) The academic environment shall have depth and breadth in all important parts of the doctoral degree programme, so that the doctoral candidates can participate actively in different academic relations and be introduced to different perspectives.
- § 3-3 (5) The doctoral degree programme shall be affiliated to a stable academic environment consisting of a sufficient number of staff with professor and associated professor qualifications within the breadth of the field of study. An overall assessment shall be carried out of whether the academic environment has a sufficient number of employees to cover subjects and courses and the supervision provided in the field of study. The academic environment shall consist of employees with the relevant expertise. The institution's assessments shall be documented so that NOKUT can use them in its work.

The following requirements must be satisfied in order to achieve accreditation:

- complete the work with the Quality Assurance System at HVL
- provide a decision by the HVL Board regarding the approval of an overall quality assurance system
- strengthen the PhD programme in accordance with the overall subject RI
- ensure that PhD candidates in all the three pillars – industry, green and social innovation – have equal opportunities to fulfil the learning goals at the level of international research excellence
- clarify the required specific competencies and skills that enable the candidates to act as change agents in RI processes and how these are related to the modules
- clarify the definition of responsible innovation (RI) vis-à-vis other related concepts, such as responsible research and innovation (RRI) and the need for directionality in innovation policy
- build a common understanding of the core concept of RI among the faculty members involved in the programme and grounded in the scholarly debates (this can be ensured, for example by conducting internal seminars and workshops)
- clarify how the competences and research fields of the staff affiliated with the programme, are connected more narrowly with the approach of RI/RRI
- give a more profound elaboration on the linkages of the three pillars and RI as well as RRI
- revise the educational content regarding RI/RRI to build a common ground for the PhD students who may have diverse educational backgrounds
- revise the educational content regarding innovation in practice to account for the diversity of innovations, and thereby go beyond only technological innovations
- revise the educational content regarding methodology to make it relevant for the objective of the PhD programme
- revise the educational content regarding the theoretical foundations and the conceptualization of social innovation and ensure that the linkages to the main subject of the PhD programme are clearly developed
- revise the educational content in order to cover theoretical perspectives on sustainability transitions
- revise the educational content to ensure that the regional dimension is clearly implemented in the education, not just at a practical level but also when it comes to theoretical foundations, for students connected to all three research topics
- strengthen research activities in the field of RI/RRI
- strengthen research activities in the fields of sustainability transitions and social innovation
- implement the regional dimension in the education, not just at a practical level but also when it comes to theoretical foundations, for students connected to all three research topics
- elaborate more profoundly on the linkages of the individual parts of programme and their connection to RI/RRI and regional development
- make the contribution and relationship of the groups' research profiles' and the core concept of RI /RRI more clear
- develop depth and breadth in the fields on sustainability transitions, for instance, through new recruitment(s)

- develop depth and breadth in the fields of social innovation, for instance, through new recruitment(s) or alternatively narrow down the focus from social innovation to public sector innovation
- clarify the contribution of the academic staff who teaches the core elements of the programme, especially in RI/RRI

The committee offers the following advice to develop the study programme further:

- further strengthen the link to the international environment, particularly in fields where HVL does not have long research traditions

5 Commentary from the Institution



Høgskulen
på Vestlandet

Nasjonalt organ for kvalitet i utdanningen (NOKUT)

Postboks 578

1327 LYSAKER

Deres ref.:

Vår ref.:
17/00004-17

Dato:
27.11.18

Oversendelse av tilsvaer til sakkyndig vurdering av Høgskulen på Vestlandets søknad om akkreditering av ph.d.-studium

Det vises til NOKUTs oversendelse av utkast til rapport fra sakkyndig komité 6.11.2018 i forbindelse med Høgskulen på Vestlandets søknad om akkreditering av ph.d.-studiet Responsible Innovation and Regional Development. Høgskulen på Vestlandet takker for et konstruktivt utkast til tilsynsrapport og gode råd for videre utvikling av studiet. Vedlagt følger høgskolens tilsvaer til rapporten.

For å imøtekomme alle krav som stilles i utkast til tilsynsrapport vedlegges utfyllende informasjon knyttet til utkastet (vedlegg 1) og revidert versjon av studieplan (vedlegg 2). Endringene i studieplan er markert med blå skrift. Styrevedtak om godkjenning av nytt system for arbeid med kvalitet i utdanningene ved HVL ettersendes som avtalt med saksbehandler i NOKUT.

Med hilsen

Berit Rokne

Rektor

Dokumentet er elektronisk godkjent og har derfor ingen håndskreven signatur.

Vedlegg: 27.11.18 Response to the draft accreditation report_ Appendix 1 final, Appendix 2 final_revised programme description

Kopi til: Nasjonalt organ for kvalitet i utdanningen (NOKUT) v/Luna Lee Solheim, Nasjonalt organ for kvalitet i utdanningen (NOKUT) v/Camilla Oppegård

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Response to the draft accreditation report

1. Complete the work with the Quality Assurance System at HVL

- The Quality Assurance System will be discussed and decided upon by the Board of HVL on November 28-29.
- 2. Provide a decision by the HVL Board regarding the approval of an overall quality assurance system
- As agreed with NOKUT, the decision of the Board will be forwarded.

3. Strengthen the PhD programme in accordance with the overall subject RI

- Through conceptual clarification, changes to the programme description (i.e. courses), revisions of research groups and new appointments, RESINNREG is now strengthened in accordance with the overall subject RI
- The research field of RI/RRi represents a narrower approach to 'responsible innovation' than the broad understanding of responsible innovation on which RESINNREG is based. RESINNREG draws on diverse literatures and topics such as 'the evolutionary perspective', 'innovation as a relational phenomenon', 'green innovation', 'sustainable development', 'sustainable transitions', and the RI/RRi literature (see Application, p. 14). The RI/RRi literature primarily links innovation to R&D and the role of research/researchers in innovation (cf. Accreditation Report, p. 6, footnote 3). The academic staff associated with RESINNREG are experienced in innovation studies (broadly defined), especially in studies of innovation in industrial settings and user-driven innovation, but also research-driven innovation.
- RI/RRi can be traced back to the literature on Science and Technology Studies (STS), and the governing of research and innovation is focal in the RI/RRi literature (see Appendix 1, pp. 1-3). Building on insight from the RI/RRi literature, we have strengthened the program. RESINNREG is now more explicit on critical reflections of the normative dimensions of the role of research and researchers in innovation (see revised course PHDINN904 in Appendix 2).
- The contributions of the research groups towards responsible innovation has been clarified. Furthermore, in future research we will explore how the RI/RRi literature can inform, and be informed by, our broader understanding of responsible innovation (see also response 6).

4. Ensure that PhD candidates in all the three pillars – industry, green and social innovation – have equal opportunities to fulfil the learning goals at the level of international research excellence

- Three new professors, two new adjunct professors, five new associate professors have been added to the research groups. In addition, four new appointments for Full professors will be announced in 2019 (see responses 21 and 22). The new appointments are aligned with the new strategy of HVL, where 'responsible innovation' is a key area.
- Research activities on sustainable transitions, Public Sector Innovation and RRI have been strengthened (see responses 16 and 17).
- The programme description (i.e. courses) has been revised (see responses 10-15).

5. Clarify the required specific competencies and skills that enable the candidates to act as change agents in RI processes and how these are related to the modules

- The content and learning outcomes of PHDINN904 and 905 have been revised (see Appendix 2).

6. Clarify the definition of responsible innovation (RI) vis-à-vis other related concepts, such as responsible research and innovation (RRI) and the need for directionality in innovation policy

- In our understanding, 'RI' and 'RRI' is treated interchangeably in the literature. The seminal work of Stilgoe et al. 2013 (p. 1570) conceptualises 'responsible innovation' (RI) by referring to von Schomberg's definition of RRI. Von Schomberg (2011, p. 9), with his foundation in STS, defines RRI as 'A transparent, interactive process by which societal actors and innovations become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society).' However, some authors have used the term RRI to highlight the fundamental role of research in innovation (Koops 2015, p. 3). Given the interchangeability of the terms 'RI' and 'RRI,' we have chosen to apply the term

'RRI' in our response and revisions to account for the role of science in innovation (as it is understood within this literature), and in order to separate the RI/RRI literature from the broader understanding of responsible innovation informing the RESINNREG program (see response 1).

- The 'need for directionality in innovation policy' is associated with the 'normative turn' in innovation studies. Recently, discussions have emerged on how innovation and innovation policy could be an instrument to solve Grand Challenges such as welfare issues and environmental concerns (Schlaile et al. 2017, Todtling and Trippl 2018). Examples of recent contributions from the research group to this literature are listed in Appendix 1, pp. 3-4.

7. Build a common understanding of the core concept of RI among the faculty members involved in the programme and grounded in the scholarly debates (this can be ensured, for example by conducting internal seminars and workshops)

- A 'Responsible Innovation Learning Community' will be established at HVL (see Appendix 1, p. 4).

8. Clarify how the competences and research fields of the staff affiliated with the programme, are connected more narrowly with the approach of RI/RRI

- The research groups have a long tradition for research on responsible innovation (broadly understood), without necessarily linking this to the narrower RI/RRI literature. However, as shown in Appendix 1, p. 5, we believe that a closer connection between RESINNREG's broad approach and the RRI literature is interesting.

9. Give a more profound elaboration on the linkages of the three pillars and RI as well as RRI

- The learning community (response 7) and the revised courses (especially PHDINN0904) are important arenas for developing shared understandings among RESINNREG researchers. Furthermore, we are in the process of developing research proposals and publications across the three research groups in order to critically examine the application of the term RRI (see also Appendix 1 pp. 5-7).

10. Revise the educational content regarding RI/RRI to build a common ground for the PhD students who may have diverse educational backgrounds → See revisions to PHDINN904 (Appendix 2, pp. 21-25).

11. Revise the educational content regarding innovation in practice to account for the diversity of innovations, and thereby go beyond only technological innovations → See revisions to PHDINN904 (Appendix 2, pp. 21-25).

12. Revise the educational content regarding methodology to make it relevant for the objective of the PhD programme → See revisions to PHDINN905 (Appendix 2, pp. 26-29)

13. Revise the educational content regarding the theoretical foundations and the conceptualization of social innovation and ensure that the linkages to the main subject of the PhD programme are clearly developed → The pillar is now redefined to 'Public Sector Innovation' in order to correspond to the original content of the course 'PHDINN907 Innovation in the Public Sector' (see Appendix 2).

14. Revise the educational content in order to cover theoretical perspectives on sustainability transitions → See revisions to PHDINN908 (Appendix 2, pp. 39-43)

15. Revise the educational content to ensure that the regional dimension is clearly implemented in the education, not just at a practical level but also when it comes to theoretical foundations, for students connected to all three research topics.

- We have revised the contents, learning outcomes and reading lists for the courses PHDINN902, PHDINN903, PHDINN904, PHDINN905, PHDINN907 and PHDINN908 (see Appendix 2).

16. Strengthen research activities in the field of RI/RRI

- Recent publications critically investigating RRI and new proposals for research projects have strengthened our research activities in the field of RRI (see Appendix 1, pp. 5-7)
- Paul Benneworth has been employed as a Full professor in Innovation and regional development. He is experienced in studies of responsibility and has contributed towards the RRI literature (see Appendix 1, p. 6).

- In new appointments (see responses 21 and 22) experience on RRI will be emphasised.

17. Strengthen research activities in the fields of sustainability transitions and social innovation

- Sustainable transitions (see Appendix 1, pp. 7-9):
 - RESINNREG researchers contribute towards this literature, as exemplified by several new publications. Sustainable transitions theory provides a bridge between Industry Innovation and Green Innovation, and RESINNREG will continue to pursue research topics contributing to this literature.
 - New appointments have strengthened research on sustainable transition: Prof. Arnt Fløysand, Adjunct professor Elvira Uyarra, Assoc. Prof. Rune Njøs and Assoc. Prof. Øystein S. Høvig (see also response 23).
- Public sector innovation (previously Social innovation Group) (Appendix 1, pp. 9-10):
 - 'Social Innovation' is now defined as 'Public Sector Innovation.' This has strengthened the pillar and clarified how it links up to the overall subject of RESINNREG.
 - Recent publications within the pillar investigate how regional characteristics influence development of public sector innovation. Research projects on this topic have recently been granted funding, involving researchers across pillars.
 - New appointments and promotions have strengthened research on public sector innovation: Grete Netteland is promoted to Full professor, Mai-Camilla Munkejord is appointed as Adjunct Professor in innovation in public sector, and Kjetil Lundeberg, Synnøve Bendixen and Masego Katsi have been appointed as Associate Professors.

18. Implement the regional dimension in the education, not just at a practical level but also when it comes to theoretical foundations, for students connected to all three research topics

- We have specified the regional dimension in the education. See revised courses PHDINN902, PHDINN903, PHDINN904, PHDINN905, PHDINN907 and PHDINN908 (see Appendix 2).

19. Elaborate more profoundly on the linkages of the individual parts of programme and their connection to RI/RRI and regional development

- Several new initiatives have been initiated. See Appendix 1 pp. 10-11.

20. Make the contribution and relationship of the groups' research profiles' and the core concept of RI /RRI more clear

- This is clarified in Appendix 1, response 8, pp. 4-5.

21. Develop depth and breadth in the fields on sustainability transitions, for instance, through new recruitment(s)

- Two new Profs. (Benneworth and Fløysand), one Adjunct Prof. (Uyarra) and two new Assoc. Profs. (Njøs, Stavø Høvig) have been appointed.
- Two new positions as Full professors (one in 'Technology Management and Sustainable Transition' and one in 'Green Innovation') will be announced early in 2019.

22. Develop depth and breadth in the fields of social innovation, for instance, through new recruitment(s) or alternatively narrow down the focus from social innovation to public sector innovation

- One Professor (Netteland), one Adjunct Professor (Munkejord) and three Associate Professors (Lundeberg, Bendixen, Katsi) have been added to the group
- Two new positions as Full professors (one in 'Health and Care Technology' and one in 'Innovation Management') in Public Sector Innovation will be announced in 2019

23. Clarify the contribution of the academic staff who teaches the core elements of the programme, especially in RI/RRI

- Academic staff teaching the core elements of the programme are listed in Appendix 1, p. 11.

Appendix 1: Supplementary information to the response to the draft accreditation report

Below we elaborate on our responses to the draft accreditation report (cf. numbering in the response to the draft accreditation report) where we find this necessary.

Appendix 2 is a revision of the programme description of RESINNREG (i.e. the study plan and courses). In Appendix 2, changes made to the original submission are shown using the 'track changes' function in Microsoft Word.

3) Strengthen the PhD programme in accordance with the overall subject RI

In retrospect we acknowledge the need for specifying and clarifying upon our understanding of, and approach towards, the RI/RRRI literature (as it is defined in Footnote 3 on p. 6 in the draft accreditation report). Below we provide a discussion of the RI/RRRI literature and describe how a more explicit engagement with this literature connects with RESINNREG's approach to responsible innovation. Correspondingly, we have embedded the PhD programme in ongoing scientific debates, contributing to a more profound definition of 'responsible innovation and regional development' in RESINNREG (see Appendix 2, p. 2 and responses below).

RESINNREG is a PhD program that will stimulate research that investigate how innovation can meet welfare and environmental challenges in addition to economic tasks in regional contexts (see Application p.14). This is the academic ambition of RESINNREG, and the approach builds on a broad understanding of 'responsible innovation'. RESINNREG's broad understanding of responsible innovation draws upon a diverse literature foundation such as 'the evolutionary perspective', 'innovation as a relational phenomenon', 'green innovation', 'sustainable development,' 'sustainable transitions,' and, important to the following text, the literature on *RI (Responsible Innovation) / RRI (Responsible Research and Innovation)* (see Application, p. 14).

Hence, the research field of RI/RRRI represents a narrower approach to 'responsible innovation' than the one of RESINNREG. For instance, the RI/RRRI literature primarily links innovation to R&D and the role of research/researchers in innovation. In a broader manner, RESINNREG builds on insights from the field of innovation studies (cf. Fagerberg et al. 2006), i.e. it also covers studies of e.g. innovation in industrial settings and user-driven innovation, in addition to R&D-based innovation.

RI/RRRI has gained prominence in the literature and in policy spheres in the last decade or so. This is particularly the case within the European Union, where debates centre on European research and innovation policy (von Schonberg 2013, European Commission 2014, Stilgoe and Guston 2017), i.e. closely linking research and the impact of research, and innovation. This stream of the literature, and its understanding of RI/RRRI, can be traced to the Science and Technology Studies (STS) literature. STS literature has for a long time debated issues on science and 'responsibility', exemplified by discussions on the negative impacts (and how to avoid them) of research (Jasanoff et al. 1994, Schuurbiers 2011, Zwart et al.2014). Linked to this tradition, the more recent literature on RI/RRRI contributes insight on how to ensure the stewardship of research and to make it more inclusive and sustainable. It offers forward-looking approaches, methods and frames of reference for reflecting on the societal impact of

research and innovation. Furthermore, it involves a focus on participatory ways of doing research and innovation (Owen et al 2012, Uyarra et al. forthcoming).

There is no agreed-upon distinction in the literature between RI and RRI, and the concepts are used interchangeably¹. Some employ the RRI concept to highlight the fundamental role of research in innovation (e.g. Kooops 2015, p. 3). Similarly, in their policy documents, the European Union employ the concept of RRI to signal the importance of including research and research activities in innovation. However, the seminal work of Stilgoe et al. 2013 (p. 1570) apply the concept of ‘responsible innovation’ (RI), building on von Schomberg’s definition of ‘*responsible research and innovation*’ (RRI). Von Schomberg (2011, p. 9), with his foundation in STS, defines Responsible Research and Innovation as ‘*A transparent, interactive process by which societal actors and innovations become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products (in order to allow a proper embedding of scientific and technological advances in our society).*’

In our response and revision of RESINNREG we have chosen to apply the term ‘RRI’ to account for the role of science in innovation (as it is understood within this literature), and in order to separate this literature from the broader understanding of responsible innovation informing the RESINNREG program. As discussed, the RRI literature has its origin in Science and Technology Studies (STS), and the RRI concept typically connotes a focus on science and research. Thus, most RRI research can be considered to be concerned with ‘*a policy and socio-ethical perspective and focusing on academic R&D environments*’ (Blok and Lemmens 2015 p.20). However, the explicit link to policy formulation (and in turn policy implementation) gives RRI a strong normative dimension. As already pointed out, as RRI particularly addresses questions such as how to ensure the ‘right’ societal impacts of research and innovation (Owen et al. 2012, Genus and Stirling 2018), it also opens for discussing ‘desirable’ societal benefits. Thus, as it argues for an extended poll of legitimate actors to influence policy-making and innovation processes, RRI taps into the issue of directionality and normativity, bringing up the question of what kinds of public value that is being fostered by research and innovation (Uyarra et al. forthcoming). Importantly, though, there is no general agreement on the principles, methods and tools for achieving such ‘beneficial’ outcomes or how to stimulate the ‘right’ processes to achieve these goals. We consider Stilgoe et al.’s (2013) four dimensions of RRI (*anticipation, inclusion, reflexivity and responsiveness*) as a promising approach towards clarifying this discussion. Stilgoe et al.’s approach and the four dimensions provide theoretical, analytical and empirical clarity towards a more coherent understanding of RRI. This also evidenced in the recent RRI literature and policy implementations, where the approach of Stilgoe et al. has become focal for defining RRI and its applicability to academic work and policy implementation.

Consequently, we argue that, at its core, the RRI literature is particularly occupied with the governing of research and research-driven innovation. This also means that RRI, through its theoretical foundation and current academic and policy application, represents a narrower approach to innovation than the broad approach of RESINNREG.

¹ This can be illustrated by the following citation from the seminal work of Stilgoe et al. (2013 p.1570): ‘*This reframing of responsibility and the approaches aimed at opening up scientific governance described above provide important foundations for responsible innovation. The phrase, sometimes lengthened to ‘responsible research and innovation’ is starting to appear in academic and policy literature*’

RESINNREG's aim is to study economic, environmental, ethical and welfare dimensions of different types of innovation, where, importantly, we wish to investigate innovations that originate not just from research activity but also from industry settings and other spheres of society (e.g. the public sector). There is a growing body of literature within innovation studies investigating topics such as the environmental risk of innovation (Lundvall 2013), the unequal distribution of the benefits of innovation (Lee and Rodriguez-Pose 2013, Perez 2013), the need for directionality within the innovation policy (Todtling and Tripl 2018) and the ongoing transition towards more sustainable modes of production and consumption (Coenen et al 2012) (see also response 6 and 16). Scholars argue for new ways of investigating innovation and its societal impact (Martin 2016, Godin and Vinck 2017), but much of this discussion has been conducted without a specific link to the emerging RRI literature. RESINNREG has contributed to the ongoing debate on responsibility within innovation studies, but we also acknowledge that this debate can benefit from a closer link to the RRI literature. Vice versa, RRI would prosper from broadening its scope by moving beyond a narrow focus on research-driven technology towards considering the modulation of more 'mundane' innovations (including public sector innovation), particularly in the context of regional development (Uyarra et al. forthcoming).

We are confident that demarcations and clarifications such as the one above is highly beneficial for strengthening the RESINNREG program. Hence, in the revisions made to RESINNREG following the draft accreditation report, we now explicitly incorporate the RRI literature in order to critically reflect on normative dimensions of the role of research and researchers in innovation. Inter alia, this means that the applied dimensions and 'practical aspects' of the RESINNREG (in particular PHDINN904 'Doing and exploiting innovation') is now revised accordingly (see Appendix 2, pp.21-25) in order to better account for critical reflections on the role of research and researchers in innovation processes. In addition, PHDINN902 'Philosophy of science, research ethics and responsible innovation', provides, as outlined in the original application, an introduction to the RRI literature and its scientific foundation. Furthermore, the methods course PHDINN905 (formerly 'Decision-making for Responsible Innovation') has been completely revised in order to account for methods and approaches towards conducting research on responsible innovation following RESINNREG's broad approach. PHDINN905 (now titled 'Production and Interpretation of Qualitative Data in Innovation Studies') is now focused towards qualitative methods and methodologies. It also focuses on critical reflections of choice of methods in the doctoral candidates' PhD projects (see Appendix 2, pp.26-29). Moreover, as will be elaborated on below (see response 16), new appointments and research activities towards the field of RRI have also contributed towards strengthening RESINNREG.

Taken together, the clarifications made above, revisions to the programme description (see Appendix 2), new research activities towards the field of RRI and new appointments (see 16), has strengthened RESINNREG in accordance with the overall subject of RI/RRI.

6. Clarify the definition of responsible innovation (RI) vis-à-vis other related concepts, such as responsible research and innovation (RRI) and the need for directionality in innovation policy

For definitions, please see the above discussion.

Furthermore, given the interchangeability of the terms 'RI' and 'RRI,' we have chosen to apply the term 'RRI' in our response and revisions to account for the role of science in innovation (as it is

understood within this literature), and in order to separate the RI/RRI literature from the broader understanding of responsible innovation informing the RESINNREG program.

The 'need for directionality in innovation policy' is associated with the 'normative turn' in innovation studies. Recently, discussions have emerged on how innovation and innovation policy could be instruments to solve Grand Challenges such as welfare issues and environmental concerns (Schlaile et al 2017, Todtling and Trippel 2018). RESINNREG researchers have also begun investigating this topic. Examples of recent contributions from the research group to this literature include

Isaksen, A., Jakobsen, S-E. (HVL), Njøs, R. (HVL), & Normann, R. (2018): Regional industrial restructuring resulting from individual and system agency. *Innovation: The European Journal of Social Science Research*, 31.

Sjøtun, S. (HVL) and Njøs, R. (HVL) (forthcoming): Cluster policy and greening of industry: Technology, organization and discourse – insight from EEG and Transition Studies. Forthcoming in *European Planning Studies*.

Jakobsen, S-E. (HVL) and Fløysand, A. (HVL) (forthcoming): På den grønne eng – hvilke bedrifter introduserer grønne innovasjoner? (Book chapter to be published in the book 'Bærekraftig verdiskapning', Fagbokforlaget).

Uyarra, E. (HVL), Marzocchi, C. and Sorvik, J. (forthcoming): How outward looking is smart specialisation? Rationales, drives and barriers. *European Planning Studies*, 26, 2344-2363.

7. Build a common understanding of the core concept of RI among the faculty members involved in the programme and grounded in the scholarly debates (this can be ensured, for example by conducting internal seminars and workshops)

A 'Responsible Innovation Learning Community' will be established at HVL. The learning community will arrange seminars every second month the first year. After this, seminars will be less frequent (twice per year). The community will consist of RESINNREG researchers, both its academic staff and PhD students, from all three pillars. Topics for the seminars within the first year will, inter alia, be directed towards conceptualising RRI in light of RESINNREG's broad approach to responsible innovation, methods and tools for RRI (linked to the curriculum of PHDINN904, see Appendix 2, pp.21-25), presentation and discussion of research conducted by researchers in the group, and discussions of the 'applicability' of RRI to research and innovation practice. In the latter topic we will also involve practitioners from the private and public sectors. In addition, seminars will focus on new research activities within the group (i.e. all three pillars) towards RRI and responsible innovation, e.g. new proposals for research projects, publications, ideas for publications etc.

The objective of the 'Responsible Innovation Learning Community' will be to build a strong research community within the fields of responsible research (i.e. RESINNREG's approach) and RRI. Administrative resources will be dedicated to the organization of the learning community, and a group of three staff members (one from Industry, one from Green and one from Social) and one PhD-candidate will constitute a scientific committee for the learning community.

8. Clarify how the competences and research fields of the staff affiliated with the programme, are connected more narrowly with the approach of RI/RRi

The competence of the staff affiliated with the programme resonates with RRI, but in general the pillars have been dealing with the issues of responsibility without linking it specifically towards the RRI literature and its associated terminology. This is elaborated on below.

The grand challenge of environmental sustainability is an important topic within the RRI literature. This topic is also of focal interest to RESINNREG. For instance, Industry Innovation has conducted research on the implementation of green technologies within different sectors (Application, p. 60) (see e.g. Fløysand (HVL) and Jakobsen (HVL) 2017; Christensen and Jakobsen (HVL) 2017; Sjøtun (HVL) and Njøs (HVL) 2019). Furthermore, research on the restructuring of the industrial landscape in light of the 'green shift' is also ongoing, i.e., the project '*Drivers of regional economic restructuring: Actors, institutions and policy*', funded by the Research Council of Norway. Linked to this project, there is also research emerging from Industry Innovation that deals more specifically with RRI. Moreover, a special issue in *European Planning Studies* titled '*Responsible Research and Innovation (RRI) in a Spatial Planning and Regional Development Perspective*' is forthcoming (to be published early in 2019). Two of the guest editors (Stig-Erik Jakobsen and Arnt Fløysand) of this special issue are associated with RESINNREG. The special issue consists of 10 articles. Five researchers from RESINNREG contribute to the special issue.

Main research topics for Green Innovation has been conceptual sustainability studies, 'green innovation' and sustainable transition pathways, and sustainability impact assessments (Application, p. 75). All these topics link up to core elements of RRI, but prior research from Green Innovation has been conducted without employing RRI terminology or through publication in 'RRI journals.' A clear aim of the 'Responsible Innovation Learning Community' (see response 7) is to discuss the research on sustainability conducted by Green Innovation researchers considering the RRI literature. We believe that there is a high level of common ground between prior research in Green Innovation and RRI, and that interactions between the two literatures can trigger highly interesting and novel research.

Public Sector Innovation (previously Social Innovation, see response 17 for an elaboration) focuses on i) innovative governance and public service provision, and ii) innovation in health and social care services (Application, p. 67). The literature on RRI has not been discussed explicitly by the Public Sector Innovation group. However, the key elements of RRI as outlined by Stilgoe et al. (2013) (*anticipation, reflexivity, inclusion and responsiveness*) resonates with prior research in the Public Sector Innovation group. Topics such as identification of new and promising practices, discussions of the beneficiaries of innovation, action learning intervention, co-creation and use of creative research and practice, are in line with the key elements of RRI. Again, the establishment of the 'Responsible Innovation Learning Community' will support explicit discussions on contributions of Public Sector Innovation researchers towards the RRI literature. We also believe that this will contribute towards introducing RRI to a larger international research community within the field of health and social care.

16. Strengthen research activities in the field of RI/RRi

HVL is currently strengthening its research activities in the field of RI/RRi. First, several of the researchers have recently been exploring RRI literature. An example is the special issue titled '*Responsible Research and Innovation (RRI) in a Spatial Planning and Regional Development*

Perspective' (see response 8). Second, several researchers affiliated with RESINNREG participate in a joint application to the Research Council on 'a learning and development network for Corporate Social Responsibility (CSR) and Responsible Research and Innovation (RRI), designed as a virtual center with geographically distributed nodes and affiliated projects' (the call is organized through the program 'Responsible Innovation and Corporate Social Responsibility' (SAMANSVAR) in the Research Council of Norway). HVL is one of several national partners that have submitted a 'project outline'. The next step is a full project proposal (due in February 2019). The consortium includes strong national partners such as NTNU, BI, UiB, OsloMet, NIFU and UIS, in addition to HVL, and is coordinated by NTNU. For the February deadline it is also possible to apply for 'traditional' research projects, and RESINNREG researchers are currently developing a proposal together with some of the consortium partners. Researchers from Industry, Green and Public Sector Innovation are involved in this work. Regardless of funding or not, participation in applications for the centre and affiliated research projects have contributed towards strengthening the national and international RRI networks of the involved researchers, and, hence, RESINNREG.

Third, HVL has also conducted several new appointments (after the application was submitted) that will strengthen the topic of RRI in RESINNREG. *Paul Benneworth* is employed as a full professor in Innovation and regional development. Benneworth is an internationally recognized innovation expert, and his research focuses on the dynamics of innovation and regional development and in particular the ways in which cooperation's and coalitions function in supporting regional innovation processes. Since 2016, he has been active in RRI-oriented research, participating in the project '*Digitalize or Die — Dynamic Drivers of Responsible Research and Innovation in Health and Welfare services*' (the SAMANSVAR program, funded by the Research Council of Norway). Benneworth will bring valuable expertise and insight into RESINNREG. His RRI publications include:

- Benneworth, P. S. (forthcoming): The responsible university: beyond a happy family model, in M. P. Sørensen, et al. (eds) *The Responsible University: Exploring the Nordic Context and Beyond*, London, Palgrave Macmillan.
- Benneworth, P. S., Schulze Greiving, V. & Konrad, K. (2018): *Modes of innovation and responsibility within regional innovation systems: reflections from the Twente region*. CHEPS Working Paper series 08/ 2018.
- Fitjar, R.D., Benneworth, P.S. and Asheim, B. (2019): Towards Regional Responsible Research and Innovation?. Paper submitted to *Science & Public Policy* (under review).
- Konrad, K., Schulze Greiving, V. & Benneworth, P. S. (forthcoming): The role of user-led regional innovation networks in shaping responsible innovation in eHealth: Lessons from the East of the Netherlands, in T. Iakovleva, et al. (eds.) *Responsible innovation in the e-health sector*, Cheltenham: Edward Elgar.
- Ribeiro, B., Bengtsson, L., Benneworth, P., Bühner, S., Castro-Martínez, E., Hansen, M., Jarmai, K., Lindner, R., Olmos-Peñuela, J., Ott, C., Shapira, P. (2018): Introducing the dilemma of societal alignment for inclusive and responsible research and innovation. *Journal of Responsible Innovation*, 5 (3), pp. 316-331

Furthermore, HVL has appointed *Elvira Uyarra* as an Adjunct Professor (from December 2017). She is a recognized international expert in innovation policy, and she has also started to investigate the RRI domain. In her most recent publication (Uyarra et al. forthcoming) she discusses how the concept of RRI can provide a lens for recasting innovation-related decision towards a stronger focus on challenge-oriented and transformative missions.

Overall, we believe that a growing interest in RRI among RESINNREG researchers together with the new appointments provide a solid foundation for developing novel contributions to the RRI literature. Some of the existing literature on RRI is 'static' and would benefit from insight from the field of innovation studies and regional development. Moreover, and generally speaking, the RRI literature has lacked a focus on research and innovation as 'localized' phenomena organized in systems characterised by their context-specificity. Thus, the literature can be claimed to be spatially blind, ignoring the 'regional' dimension. For instance, we believe that the RRI literature should better account for multi-level dynamics, particularly towards investigating the interlinkages between the micro-level (e.g. rationales of the scientists and innovators), the meso-level (e.g. governance networks where pertinent dilemmas of research arise) and the macro-level (e.g. incentive structures of public research vs. commercialization of innovations in a market).

17. Strengthen research activities in the fields of sustainability transitions and social innovation

Sustainable transitions

The literature on sustainable transitions is focal for understanding the ongoing shift towards sustainable modes of production and consumption (Coenen et al 2012). We agree that this growing literature should be better incorporated in the research and teaching activities of RESINNREG in general and Green Innovation in particular. Currently, Green Innovation is anchored within 'traditional' sustainability research, and we recognize the need to expand research in this group towards the more social science-informed sustainable transitions perspective. However, the sustainable transition literature is also relevant for Industry Innovation. For RESINNREG, the sustainable transition literature is an important perspective that can bridge concepts and approaches between Industry Innovation (with its expertise on market-driven innovations and evolutionary theory) and Green Innovation (with its expertise on sustainability and green policy formulation). Ongoing research activities in RESINNREG apply the sustainable transition perspective. For instance, the project '*Drivers of regional economic restructuring: Actors, institutions and policy*' (funded by the Research Council of Norway) combines theory from sustainable transitions studies with evolutionary economic geography in order to investigate the main barriers and drivers for green regional restructuring. The project involves researchers from Green Innovation and Industry Innovation, and has been running for a year. Publication and dissemination have begun, and we expect many more publications in this field over the next years. Examples on publications involving RESINNREG researchers discussing or applying the sustainable transition approach are listed below.

Isaksen, A., Jakobsen, S-E. (HVL), Njøs, R. (HVL), & Normann, R. (2018): Regional industrial restructuring resulting from individual and system agency. *Innovation: The European Journal of Social Science Research*, 31.

- Jakobsen, S-E. (HVL) and Fløysand, A. (HVL) (forthcoming): På den grønne eng – hvilke bedrifter introduserer grønne innovasjoner? (Book chapter to be published in the book 'Bærekraftig verdiskapning', Fagbokforlaget).
- Steen, M. and Njøs, R. (HVL) (forthcoming): Editorial: Green restructuring, innovation and transitions in the Norwegian economy: The role of economic geography. Special issue for *Norwegian Journal of Geography*, to be published in early 2019.
- Sjøtun, S. (2018): A ferry making waves: A demonstration project 'doing' institutional work in a greening maritime industry. *Norwegian Journal of Geography*, doi.org/10.1080/00291951.2018.1526208
- Sjøtun, S. (HVL) and Njøs, R. (HVL) (forthcoming): Cluster policy and greening of industry: Technology, organization and discourse – insight from EEG and Transition Studies. Forthcoming in *European Planning Studies*.
- Skauge, T.; Hansen, H.S.; Brekke, O.A.; Jensen, T. Ø. (2017): Implementing Carbon Free Ferry Technology on West Coast Norway - The Electrical Route. Proceedings. *PROMITHEASnet*.

In addition, Paul Benneworth has published research investigating the sustainable transition perspective. Most notable is his article in *Research Policy* together with L. Coenen and B. Truffer (2012): 'Towards a spatial perspective on sustainability transition', *Research Policy* 41.

Moreover, also in the field of sustainability/sustainable transition, HVL has recently (i.e. after the application was submitted) recruited researchers that will contribute to strengthening linkages between innovation studies and sustainability research in general and the sustainable transitions literature in particular.

Arnt Fløysand has previously been engaged by HVL as an adjunct professor. However, he was employed full-time as coordinator for the RESINNREG application from September 2016 to August 2017. From January 2019, he will be employed in a permanent full-time position as Professor in Innovation and regional development at HVL. Fløysand is part of the Green Innovation group, where he contributes with his experience from studies of development and economic restructuring at the community and regional levels. He is also highly skilled within the field of innovation studies and has done several analyses on the development of sustainable technology. Fløysand is currently supervising three PhD students within the field of energy transitions and green growth. He has a broad publication record.

Olav A. Kvitastein is promoted to Full professor from 2018. He is an expert in innovation policy, policy evaluations, and how regional industry structures influence firm R&D investment and innovation activity.

Rune Njøs and *Øystein Stavø Høvig* have defended their dissertations (supervised by Arnt Fløysand and Stig-Erik Jakobsen). Njøs and Høvig have been part of Industry Innovation.

Rune Njøs was engaged as an Associate Professor at HVL from August 2018. His PhD thesis investigated the role of multilevel dynamics and agency in regional industry renewal. Recently, Njøs has investigated the formation of new, green industries in the region, and he is also working on 'the greening' of Norwegian innovation policy through applying sustainable transition theory.

Øystein Stavø Høvig is engaged as Associate Professor at HVL from January 2019. His PhD thesis investigated efforts to facilitate entrepreneurship in various contexts, and recently he has been working on green entrepreneurship within the Norwegian salmon farming industry.

In addition two new position as Full professors (one in 'Technology Management and Sustainable Transition' and one in 'Green Innovation') will be announced early in 2019.

Researchers associated with RESINNREG (from both Industry Innovation and Green Innovation) also participate in a consortium with national and international research partner that in September 2018 applied to the Research Council of Norway for a research centre on 'Innovation and regional restructuring' (under the 'FORINNPOL' program). The consortium includes researchers from the University of Stavanger, University of Agder, HVL, NORCE, Utrecht University and University of Melbourne, and is coordinated by the University of Stavanger. In the application, HVL is ascribed responsibility for the research theme 'Sustainable Consequences'. The consortium includes several leading international experts on sustainable transition (such as L. Coenen and R. Boschma), and, granted funding, this project will further strengthen HVL's research expertise and focus on the field of sustainable transitions.

In addition, researchers associated with RESINNREG (from both Industry Innovation and Green Innovation) are partners in IMPROVE, a research proposal submitted to the 'societal challenges' pillar in HORIZON 2020. The project will investigate how the agriculture, food, fisheries and aquaculture sector in Europe deal with the grand challenges of food security, climate change, resource scarcity and sustainability of rural areas. The project will provide the public and private decision makers with tools and methods for how to better monitor public and private R&I investments and assess their impact. The consortium includes 20 R&D institutions, with HVL as the only Norwegian partner. The project are coordinated by INFRA, and is one of two projects competing for funding in the final round.

Public Sector Innovation (previously Social Innovation)

As stated in the draft accreditation report, HVL are 'very well positioned in public sector innovation' (Accreditation report p. 20). A narrowing of the focus from social innovation to public sector innovation has strengthened the pillar and clarified how the pillar links up to the overall subject of RESINNREG. The academic environment's research and networks are, as acknowledged by the committee, mainly related to public innovations in a regional and international perspective.

Below we list some of the recent publications from group on how regional characteristics influence development of public sector innovation. Two of the publications, Jacobsen et al. 2017 and Hjelle et al. 2018, illustrate how regionally adapted innovations contribute to innovative and novel practices in the public sector.

Bukve, O. (HVL) & Saxe, H.P. (2017): Institutional Change and System Support – Reforming the Executive in Norwegian Cities and Regions. *Scandinavian Journal of Public Administration* 21(2): 69-88

Sudmann, T. (HVL) and Breivik, J.-K. (HVL) (2018): Special issue on community work and going glocal in Scandinavian Welfare States. *Community Development Journal*, 3, doi:10.1093/cdj/bsy018

Jacobsen, F.F (HVL), Mekki, T.E (HVL), Førland, O. (HVL), Folkestad, B., Kirkevold, Ø., Skår, R. (HVL), Tveit, E-M, Øye, C. (HVL) (2017): How staff and their working contexts influence implementation of person-centered dementia care in nursing homes. A mixed method study of an education intervention to reduce use of restraint. *BMC Nursing*, DOI 10.1186/s12912-017-0244-0

Hjelle, K.M. (HVL), Skutle, O. (HVL), Alvsvåg, H., Førland, O. (HVL) (2018): Reablement team's roles: A qualitative study of interdisciplinary teams' experiences. *Journal of Multidisciplinary Healthcare*, 305-316

The Public Sector Innovation group has also been strengthened by several new externally funded research projects that are highly relevant for RESINNREG and the region of Western Norway. Two of these acquisitions are explicitly focused at innovation in public sector, linking this to regional development:

'Mapping the care of nursing home residents through the lenses of trajectories and care pathways: Employing Western Norwegian healthcare research for innovation and restructuring in the public sector.' The project is funded by RFF Vest/Research Council of Norway and led by HVL (Professor Frode Fadnes Jacobsen).

'Digital & Innovation Skills Helix in Health (DISH).' The project is funded by Erasmus (EU) and involves 7 universities in 5 countries. The project will contribute to stimulation of innovation through exchange of good practices between the world of work and education and training institutions. The project is anchored in the Public Sector Innovation group, but researchers from Industry innovation are also involved.

Public Sector Innovation has also been strengthened by new employments and promotions.

Grete Netteland is promoted to a Full professor from 2018.

Mai-Camilla Munkejord is appointed as Adjunct Professor in innovation in public sector. She currently works with care research, particularly with innovation in home-based elderly care in remote parts of Norway, as well as with recruitment and inclusion of migrant care workers in Norwegian nursing homes. She also leads a strategic collaborative research project on work inclusion, learning and innovation in NAV [The Norwegian Labour and Welfare Administration].

Three new Associate Professors have been employed at HVL. *Kjetil Lundeberg*, *Synnøve Bendixen* and *Masego Katsi* are all working on public innovation with a particular focus on vulnerable or hard to reach populations, and in relation to migration. They will be members of Public Sector Innovation.

In addition, it should also be mentioned that Professor *Oddbjørn Bukve* is appointed as a member of the working committee in a recently established national network on 'Innovation in the public sector.' The purpose of this network is to improve the quality of innovation research in the public sector, and to serve as a link between the research community and the practice field.

Furthermore, two new positions as Full professors (one in 'Health and Care Technology' and one in 'Innovation Management') in Public Sector Innovation will be announced in 2019.

19. Elaborate more profoundly on the linkages of the individual parts of programme and their connection to RI/RRI and regional development

Several new initiatives have been initiated which strengthen the individual parts of programme and their connection to RI/RRI and regional development.

- The 'Responsible Innovation Learning Community' will contribute towards profound discussions of responsible innovation, RRI research and RRI practice among RESINNREG researchers (see response 7).
- A mandatory course building on the RRI literature will contribute towards a more profound discussion of RRI across the research groups (see revised course PHDINN904, Appendix 2).
- The regional dimension has been emphasised in both mandatory and elective courses (see revised versions of the following courses in Appendix 2; PHDINN902, PHDINN903, PHDINN904, PHDINN905, PHDINN907 and PHDINN908). Changes in course content, the learning outcomes and the reading list will ensure knowledge of the importance of the regional context among RESINNREG researchers in all three pillars.
- Several new collaboration projects involving members from all three pillars, and building on key theoretical perspectives connected to RESINNREG, have been launched since the application was submitted. Examples include the application for a research centre for regional restructuring to the FORINNPOL program and the application for a learning and development network for CSR and RRI in the program 'Responsible Innovation and Corporate Social Responsibility' (see response 16 and 17).
- The funding of the project '*Digital & Innovation Skills Helix in Health (DISH)*'. The project is anchored in Social Innovation, but researchers from Industry Innovation are also involved (see response 17).

23) Clarify the contribution of the academic staff who teaches the core elements of the programme, especially in RI/RRI

In the draft accreditation report (p. X), RRI, regional development, industry innovation, green innovation and social innovation (now Public Sector Innovation) are listed as the core elements of RESINNREG. The following members of the staff are the main contributors in teaching these core elements.

- Prof. Stig-Erik Jakobsen (industry innovation, regional development, RRI)
- Prof. Frode Jacobsen (public sector innovation, regional development)
- Prof. Erling Holden (green innovation, regional development)
- Prof. Kristin Linnerud (green innovation)
- Prof. Arnt Fløysand (green innovation, regional development)
- Prof. Paul Benneworth (green innovation, RRI, regional development)
- Prof. Liv Osland (green innovation, regional development)
- Prof. Oddbjørn Bukve (public sector innovation, regional development)
- Prof. Jarle Aarstad (industry innovation, regional development)
- Prof. Chunyan Xie (industry innovation, RRI)
- Prof. Ilona Heldal (industry innovation)
- Prof. Even Nilssen (public sector innovation)

- Associate prof. Tobba Therkildsen Sudmann (public sector innovation, regional dev.)
- Associate prof. Rune Njøs (green innovation, regional development, RRI)
- Associate prof. Ole Andreas Brekke (green innovation)
- Associate prof. Jill Merethe Loga (public sector innovation)
- Associate prof. Inger Beate Pettersen (industry innovation, RRI, regional development)
- Associate prof. Kristin Lofthus Hope (public sector innovation)
- Associate prof. Øystein Stavø Høvig (industry innovation, RRI, regional development)
- Associate prof. Jens Kristian Fosse (public sector innovation, RRI, regional development)
- Associate prof. Natalia Mæhle (industry innovation, regional development)

In addition, the four new Full professors (see 16) will take part in teaching of the core elements of RESINNREG.

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6 Additional Assessment

The committee wishes to acknowledge all the improvements and elaborate discussions regarding RI/RRI HVL has provided. The embedding of RI/RRI in the programme is now clear and the relation between the three pillars and RI/RRI is profound. HVL have also recruited several faculty members that will strengthen the profile of the programme according to our original assessment. Despite all the improvements, the committee still see the need to recruit a professor in Technology Management and Sustainable Transition/Green Innovation that can contribute to research and education in sustainability transitions. As the requirements in the regulations are interconnected, this aspect is reflected in several of the demands in our draft report, and consequently also in our additional assessment. We acknowledge that the recruitment of a professor in sustainable transitions (that HVL is also planning to announce in 2019) will sufficiently fulfil the remaining requirements.

6.1 Additional assessment

From the Ministerial Regulations:

§ 3-1 (4) It is a condition for accreditation being granted that the requirements of the Universities and University Colleges Act are met. Regulations adopted under the authority of Section 3-2 of the Universities and University Colleges Act shall form the basis for the accreditation.

From the Quality Assurance Regulation:

§ 2-1 (1) The requirements of the Act relating to Universities and University Colleges and its corresponding regulations must be met.

The institution is required to:

- *complete the work with the Quality Assurance System at HVL*
- *provide a decision by the HVL Board regarding the approval of an overall quality assurance system*

Assessment

HVL adopted an institution-wide quality assurance system in November 2018, which sets a framework for the systematic work to ensure quality in educational provisions at HVL (*Rammeverk for det systematiske arbeidet med kvalitet i utdanningane ved HVL*). The contribution of educational competence is outlined clearly in the document, as well as the institution's emphasis on the learning environment. HVL further presents specific requirements for accreditation of PhD programmes in the document *Systematisk kvalitetsarbeid i ph.d.-utdanningane ved Høgskulen på Vestlandet*, revised 13 November 2018. It is the opinion of the committee that these documents together constitute a sound basis for quality assurance of the PhD programme. The committee has not considered the system other than in the context of the PhD programme. NOKUT will carry out periodic supervision of HVL's quality assurance practices in 2019, including a full assessment of HVL's quality assurance system.

Conclusion

Yes, the institution's response is satisfactory.

§ 2-2 (1) The learning outcomes for the programme must be in accordance with the National Qualifications Framework for Lifelong Learning, and the programme must have an appropriate title.

The institution is required to:

- *strengthen the PhD programme in accordance with the overall subject RI*
- *ensure that PhD candidates in all the three pillars – industry, green and social innovation – have equal opportunities to fulfil the learning goals at the level of international research excellence*
- *clarify the required specific competencies and skills that enable the candidates to act as change agents in RI processes and how these are related to the modules*

Assessment

In their response, HVL provides elaborated and interesting discussions related to the overall subject RI/RRi. The scientific embedding and the understanding of RRI in relation to the PhD programme is clear. HVL has revised the course content related to RI/RRi. The course PHDINN904 is now more focused on RRI, while the course PHDINN905 is completely revised and renamed as ‘Production and Interpretation of Qualitative Data in Innovation Studies’). The revision of both courses builds a better foundation for the PhD programme, enabling candidates to act as change agents in RRI processes. In addition, HVL has recruited several new staff members within all three groups and plans to announce four new professorships in 2019. Especially the recruitment of a professor and an adjunct professor has strengthened the programme in RRI and regional development.

The change of the third pillar from social innovation into public sector innovation, where the HVL is internationally recognized, enables candidates to fulfil the learning goals at an international level. The revision of the course content will also enable candidates within all three pillars equal opportunities to fulfil the learning goals.

Conclusion

Yes, the institution’s response is satisfactory.

§ 2-2 (2) The programme must be academically up-to-date and have clear academic relevance for further studies and/or employment.

The institution is required to:

- *clarify the definition of responsible innovation (RI) vis-à-vis other related concepts, such as responsible research and innovation (RRI) and the need for directionality in innovation policy*
- *build a common understanding of the core concept of RI among the faculty members involved in the programme and grounded in the scholarly debates (this can be ensured, for example by conducting internal seminars and workshops)*
- *clarify how the competences and research fields of the staff affiliated with the programme, are connected more narrowly with the approach of RI/RRi*

- *give a more profound elaboration on the linkages of the three pillars and RI as well as RRI*

Assessment

The required changes were addressed in a useful way in the response from HVL. The scientific embedding and understanding of RI/RRI in all three pillars (and the overall PhD programme) is clearly addressed (see also our comment to § 2-2 (1)). HVL states in their response that the directionality in innovation policy is associated to ‘normative turn’ in innovation studies in order to address the Grand Challenges such as welfare and environmental issues

The planned ‘Responsible Innovation Learning Community’ should be established to support the learning processes of all faculty members involved in the programme contributing to mutual understanding and the development of a common knowledge base

In their response HVL has clarified how the ongoing research activities at HVL dealing with the issues of responsibility and how researchers affiliated with the programme are making significant contribution to special issues in European Planning Studies on ‘Responsible Research and Innovation (RRI) in a Spatial Planning and Regional Development Perspective’. The recruitment of a professor in RI/RRI will further strengthen the competence and research activities in RI/RRI.

HVL is in process of developing joint research proposals and publications across the three groups to strengthen the link between the three pillars and RI/RRI.

Conclusion

Yes, the institution’s response is satisfactory.

§ 2-2 (4) The programme’s content, structure and infrastructure must be adapted to the programme’s learning outcomes.

The institution is required to:

- *revise the educational content regarding RI/RRI to build a common ground for the PhD students who may have diverse educational backgrounds*
- *revise the educational content regarding innovation in practice to account for the diversity of innovations, and thereby go beyond only technological innovations*
- *revise the educational content regarding methodology to make it relevant for the objective of the PhD programme*
- *revise the educational content regarding the theoretical foundations and the conceptualization of social innovation and ensure that the linkages to the main subject of the PhD programme are clearly developed*
- *revise the educational content in order to cover theoretical perspectives on sustainability transitions*
- *revise the educational content to ensure that the regional dimension is clearly implemented in the education, not just at a practical level but also when it comes to theoretical foundations, for students connected to all three research topics*

Assessment

HVL have made significant changes concerning the course content. The revision of the educational content addresses the requirements. The content of the programme is now stronger connected and the link to RI/RRI is deeper embedded in the different modules as well as the regional dimension.

Conclusion

Yes, the institution's response is satisfactory.

§ 2-2 (6) The programme must have relevant links to research and academic development work and/or artistic research.

The institution is required to:

- *strengthen research activities in the field of RI/RRI*
- *strengthen research activities in the fields of sustainability transitions and social innovation*

Assessment

Overall HVL has strengthened the faculty considerably. Several recruitment have been made and HVL stated that they will also announce several recruitments in 2019. The recruited professor (100 % from April 2019) and an adjunct professor (20 % from 2019) will strengthen the research activities in the field of RI/RRI.

As the changed focal point of the third pillar to public sector innovation (from social innovation) concentrates on the already available strength of HVL, our original requirements is no longer relevant. The planned new appointments will contribute to the further enhancement of the public sector innovation.

HVL have chosen to focus on sustainability transitions in the Green Innovation pillar. The committee sees the need to complete the recruitment of at least one professor that can contribute to research and education in sustainability transitions. In their response HVL, also states that they are planning to announce professorships in Technology Management and Sustainable Transition and in Green Innovation in 2019. This will sufficiently strengthen the research profile in this area.

Conclusion

No, the institution's response is not satisfactory.

The institution must

- complete the recruitment of at least one professor that can contribute to research and education in sustainability transitions

§ 3-3 (1) The institution shall offer education and research in the doctoral programme's field of study of a quality and scope that ensure that the programme can be completed at a high academic level. The institution shall offer a wide range of first and second-level degree programmes within the doctoral degree programme's field of study.

The institution is required to:

- *strengthen research activities in the field of RI/RRI*
- *strengthen research activities in the fields of sustainability transitions and social innovation*

Assessment

See the assessment to § 2-2 (6) above.

Conclusion

No, the institution's response is not satisfactory.

The institution must

- complete the recruitment of at least one professor that can contribute to research and education in sustainability transitions

§ 3-3 (2) The doctoral degree programme's field of study shall constitute a scientific whole, and the individual parts that make up the programme shall be internally coherent.

The institution is required to:

- *implement the regional dimension in the education, not just at a practical level but also when it comes to theoretical foundations, for students connected to all three research topics*
- *elaborate more profoundly on the linkages of the individual parts of programme and their connection to RI/RRI and regional development*

Assessment

The overall scientific coherence of the whole programme has improved.

In all mandatory and elective courses, the regional dimension is now integrated more profoundly. The main subject of RI is taken into account right from the start and deeper embedded in the different modules. Even though, in the PHDINN904 Doing Exploiting Innovation. The revised learning outcomes of the individual modules reflect a stronger connection.

Moreover, the basic change of the third pillar, as well as the methodological course, provide better linkages between the individual parts.

The theoretical and conceptual discussion of RI/RRI in Appendix 1 underlines the endeavour to enhance the level of understanding of the core concepts in the PhD programme. The planned 'Responsible Innovation Learning Community' should be established ensuring the further

development of the common knowledge bases in the core subjects in the implementation process. The requirements are sufficiently fulfilled.

Conclusion

Yes, the institution's response is satisfactory.

From the Ministerial Regulations:

§ 3-3 (3) The doctoral degree programme shall be affiliated to an academic environment with a high level of expertise in education and research. The academic environment shall be able to document research results, including publication, at a high international level, and results from collaborations with other national and international academic environments.

From the Quality Assurance Regulation:

§ 2-3 (5) The academic environment must be actively engaged in research and academic development work and/or artistic research, and be able to demonstrate documented results with a satisfactory quality and scope in relation to the programme's content and level.

The institution is required to:

- *strengthen research activities in the fields of sustainability transitions and social innovation*
- *strengthen research activities in the field of RI/RRI*

Assessment

See the assessment to § 2-2 (6) above.

Conclusion

No, the institution's response is not satisfactory.

The institution must

- complete the recruitment of at least one professor that can contribute to research and education in sustainability transitions

§ 3-3 (4) The academic environment shall have depth and breadth in all important parts of the doctoral degree programme, so that the doctoral candidates can participate actively in different academic relations and be introduced to different perspectives.

The institution is required to:

- *make the contribution and relationship of the groups' research profiles' and the core concept of RI /RRI more clear*
- *develop depth and breadth in the fields on sustainability transitions, for instance, through new recruitment(s)*

- *develop depth and breadth in the fields of social innovation, for instance, through new recruitment(s) or alternatively narrow down the focus from social innovation to public sector innovation*

Assessment

In their response HVL has clarified how the ongoing research activities at HVL dealing with the issues of responsibility and how researchers affiliated with the programme are making significant contribution to special issues in European Planning Studies on ‘Responsible Research and Innovation (RRI) in a Spatial Planning and Regional Development Perspective’. The recruitment of a professor in RI/RRI will further strengthen the competence and research activities in RI/RRI.

Concerning the depth and breadth in sustainable transitions, see assessment to §2-2 (6).

In their response, HVL has changed the focus of the third pillar from social innovations to public sector innovation, a field that concentrates on the already available strength of HVL. The planned new appointments will contribute to the further enhancement of the public sector innovation.

Conclusion

No, the institution’s response is not satisfactory.

The institution must

- complete the recruitment of at least one professor that can contribute to research and education in sustainability transitions

From the Ministerial Regulations:

§ 3-3 (5) The doctoral degree programme shall be affiliated to a stable academic environment consisting of a sufficient number of staff with professor and associated professor qualifications within the breadth of the field of study. An overall assessment shall be carried out of whether the academic environment has a sufficient number of employees to cover subjects and courses and the supervision provided in the field of study. The academic environment shall consist of employees with the relevant expertise. The institution’s assessments shall be documented so that NOKUT can use them in its work

From the Quality Assurance Regulation:

§ 2-3 (1) The academic environment for each programme must be of a size proportionate to the number of students and the programme’s characteristics, be stable over time in terms of competence and have a composition that covers the programme’s topics and subjects.

The institution is required to:

- *develop depth and breadth in the fields on sustainability transitions, for instance, through new recruitment(s)*
- *develop depth and breadth in the fields of social innovation, for instance, through new recruitment(s) or alternatively narrow down the focus from social innovation to public sector innovation*

Assessment

Concerning the depth and breadth in sustainable transitions, see assessment to §2-2 (6).

In their response, HVL has changed the focus of the third pillar from social innovations to public sector innovation, a field that concentrates on the already available strength of HVL. The planned new appointments will contribute to the further enhancement of the public sector innovation.

Conclusion

No, the institution's response is not satisfactory.

The institution must

- complete the recruitment of at least one professor that can contribute to research and education in sustainability transitions

§ 2-3 (4) At least 50 per cent of the academic full-time equivalents affiliated to the programme must be staff with their primary employment at the institution. Of these, academic staff with at least associate professor qualifications must be represented among those who teach the core elements of the programme. In addition, the following requirements apply to the academic environment's level of competence:

c) For third-cycle programmes, the academic environment must consist of academic staff with at least associate professor qualifications. At least 50 per cent must have professor or docent qualifications.

The institution is required to:

- *clarify the contribution of the academic staff who teaches the core elements of the programme, especially in RI/RRI*

Assessment

HVL have in their response clarified the contribution of academic staff who will teach the core elements of the programme. In addition, HVL has recruited a professor within RI/RRI.

Conclusion

Yes, the institution's response is satisfactory.

6.2 Conclusion

Based on the written application with attached documentation, supplementary information and the institutions commentary with attachments, the expert committee concludes the following:

The committee does not recommend accreditation of the PhD programme in Responsible Innovation and Regional Development at Western Norway University of Applied Sciences (Høgskulen på Vestlandet).

7 Decision by NOKUT's Board

NOKUT's Board made the following decision on 6 February 2019:

The PhD programme in Responsible Innovation and Regional Development will satisfy all requirements for accreditation, provided that a professor of sustainability transitions is appointed.

The prerequisite for accreditation will be that documentation can be submitted on the appointment of a professor in sustainability transitions by 6 February 2020.

The original decision in Norwegian:

Ph.d.-studiet i Responsible Innovation and Regional Development vil tilfredsstill alle krav til akkreditering forutsatt at det tilsettes en professor innen sustainability transitions.

NOKUT gir tilsagn om akkreditering. Forutsetning for akkreditering vil være at det kan fremlegges dokumentasjon på tilsetting av en professor innen sustainability transitions innen 6. februar 2020.

8 Final decision

NOKUT received documentation for appointment of a professor in sustainability transitions on 27 August 2019. The committee assessed the submitted documentation from HVL. Here is the committee's final assessment and conclusion:

Based on the committee's conclusion of 6 February 2019 that HVL must "complete the recruitment of at least one professor that can contribute to research and education in sustainability transitions" we find that the appointment of Coenen clearly fulfils the requirement. Coenen is a leading researcher in the field of sustainability transitions.

Based on the submitted documents from HVL and the committee's assessment:

NOKUT considers that the terms in the Regulation concerning NOKUT's supervision and control of the quality of education in higher education of 9 February 2017 and in the Ministerial regulations concerning quality assurance and quality development in higher education and tertiary vocational education of 1 February 2010 are now fulfilled. The accreditation is valid from 27 September 2019.

The original decision in Norwegian:

NOKUT anser at vilkårene i forskrift om tilsyn med utdanningskvaliteten i høyere utdanning av 9. februar 2017 og i forskrift om kvalitetssikring og kvalitetsutvikling i høyere utdanning og fagskoleutdanning av 1. februar 2010 er oppfylt.

Ph.d.-studiet i Responsible Innovation and Regional Development ved Høgskulen på Vestlandet akkrediteres. Akkrediteringen er gyldig fra 27. september 2019.

9 Documentation

- 17/09079-1 Høgskulen på Vestlandet – Søknad om akkreditering av ph.d.-studiet Responsible Innovation and Regional Development
- 17/09079-12 Vedrørende ettersending av dokumentasjon – akkreditering av ph.d.-studiet Responsible Innovation and Regional Development ved Høgskulen på Vestlandet
- 17/09079-18 Tilsvaret til sakkyndig vurdering – Høgskulen på Vestlandet – akkreditering av ph.d.-studiet Responsible Innovation and Regional Development
- 17/09079-19 Ettersendelse av bekreftelse – Høgskulen på Vestlandet - akkreditering av ph.d.-studiet Responsible Innovation and Regional Development
- 17/09079-20 Vedrørende dokumenter om felles system for kvalitetsarbeid
- 17/09079-22 SV: RESINNREG
- 17/09079-26 Oversendelse av dokumentasjon i forbindelse med tilsagn om akkreditering av ph.d.-studiet Responsible Innovation and Regional Development ved Høgskulen på Vestlandet

10 Presentation of the expert committee

Professor Lene Foss, UiT- Norges Arktiske universitet

Lene Foss, Dr. Oecon, is Professor of Entrepreneurship and Innovation and Programme Director for the Master of Science in Business Creation and Entrepreneurship at the School of Business and Economics, UiT- The Arctic University of Norway, Tromsø. Her research concentrates on academic entrepreneurship, universities as entrepreneurial institutions, responsible innovation and the role of gender in entrepreneurship and innovation. Foss is faculty member at Norwegian Research School in Innovation (NORSI) and supervises PhDs in innovation and entrepreneurship. She holds board membership at Institute for Small Business and Entrepreneurship (UK) and University Industry Innovation Network (Netherlands). Foss is Editorial Consultant and Board Member for the International Journal of Gender and Entrepreneurship. She has been an Associate Editor for the Journal of Small Business Management, and currently serves on its International Research Board. Foss has been academic visitor at University of North Carolina at Chapel Hill, USA; Cambridge Judge Business School, University of Cambridge, UK, and Säid Business School, University of Oxford, UK. She has been a member of expert groups for NOKUT.

Universitetslektor Teis Hansen, Lunds Universitet

Teis is a senior lecturer at Lund University and senior researcher at NIFU. He holds a PhD in Economic Geography from the University of Copenhagen and a master's degree in Regional and Urban Planning Studies at the London School of Economics and Political Science and Master of Geography and Geoinformatics at the University of Copenhagen. Teis has an interest in the relationship between innovation and sustainability. His research focuses on the importance of spatial aspects of innovation processes for sustainability transitions; transformative innovation policy; the role of innovation in the bioeconomy; opportunities and barriers to green regional development; and technology transfer from industrialized countries to emerging economies in the field of renewable energy. He leads the project *GONST - Where does the Green Economy Grow? The Geography of Nordic Sustainability Transitions (2017-2019)*, funded by NordForsk, Nordic Energy Research and Nordic Innovation. He is a member of several research projects within his field of study, both in Norway and abroad.

Professor Simone Strambach, Philipps-Universität Marburg

Simone Strambach, Dr. Phil, is professor of economic geography and innovation research, at the Philipps-University Marburg, Germany. Her major research areas are the spatial shaping and institutional foundation of innovation and the knowledge economy. The organizational and spatial fragmentation of innovation in global-local value systems, path dependencies and the interconnected institutional dynamics at different spatial scales are in the center. The recent research focuses on the development of 'new forms' of innovation such as social and sustainability innovation in the socio-ecological transformation. She currently leads the project InDiSi – indicators for social innovation, financed by the German Federal Ministry for Education and Research (BMBF). Her advisory and assessment activities include among others the European Commission, DFG - German Federal Science Association, VW-Research Foundation, BMBF - German Federal Ministry for Education and Research, DAAD German Academic Exchange Service, Ministry of Economics and the State Ministry of the federal state Baden-Württemberg. She is scientific board member of the German Journal of Economic Geography and the Leibniz Research Institute for spatial social research IRS Erkner/Berlin. Strambach is a founding board member of the Marburg University Research Academy (MARA) a

university-wide, interdisciplinary institution to facilitate the dialogue of young scientists across scientific cultures and disciplines. Being oriented on national and international standards, MARA has the objective of optimizing the career opportunities of young scientists from the beginning of the doctorate to their establishment in the academic or non-academic environment.

Stipendiat Raj Kumar Thapa, Universitetet i Stavanger

Thapa is a PhD scholar at University of Stavanger Business School. He is associated with the project “Digitalize or Die: Dynamic driver of Responsible Research and Innovation within healthcare and welfare services” since 2016 funded by the Research Council of Norway. The project is an international collaborative project where researchers from seven different countries (Norway, UK, Australia, USA, The Netherlands, Portugal and Brazil) are actively involved. Thapa holds a Master of Science (MSc) in Innovation and Entrepreneurship from BI Norwegian Business School, Oslo. His master thesis is “Measuring Social Entrepreneurial Impact”. At BI Oslo, Thapa was a teaching assistant first in Mathematics and then in Social Entrepreneurship and worked as a summer intern at Oslo Innovation Centre where he assisted start-up company with business plan, business model and marketing strategy. His research interest areas are within Responsible Research and Innovation (RRI), Social innovation and entrepreneurship and digitalization.

11 Attachments

Attachment 1 Accredited higher education programmes at HVL obtained from NOKUT:

Former Bergen University College:

Master Maritime Operations joint degree with Hochschule Emden/Leer 2017

Master Idrettsvitenskap 2016

Master Jordmorfag 2016

Master Spesialpedagogikk 2016

Master Climate Change Management 2016

Master Areal og eiendom 2015

Master Innovasjon og ledelse – samfunnsfaglig retning 2014

Master Fysisk aktivitet og kosthold i et skolemiljø 2014

Master Samfunnsfagdidaktikk 2012

Master Innovasjon og entreprenørskap joint degree with UiO 2011

Master Klinisk sykepleie 2010

Master Barne- og ungdomslitteratur 2009

Master Undervisningsvitenskap 2009

Master Klinisk fysioterapi 2008

Master Informatikk – programutvikling joint degree with UiB 2008

Master Kunnskapsbasert praksis i helsefag 2007

Master Samfunnsarbeid 2006

PhD Computer Science: Software Engineering, Sensor Networks and Engineering Computing 2016

PhD Nautical operations Joint degree with UiT, NTNU, HSN 2016

PhD Studier av danning og didaktiske praksiser 2014

Former Sogn and Fjordane University College:

Master Læring og undervisning 2012

Master Samhandling innen helse og sosialtjenester 2012

Master Landskapsplanlegging 2008 Joint degree with Københavns universitet og Sveriges Lantbruksuniversitet

Former Stord/Haugesund University College:

Master Brannsikkerhet 2015

Master Kreative fag og læreprosesser 2012

Master Klinisk helse- og omsorgsvitenskap 2010

Master IKT i læring 2006

Attachment 2 Programme Site-visit

Institution: Western Norway University College in Applied Sciences (Høgskulen på Vestlandet)

Application: PhD in Responsible Innovation and Regional Development

Date: 27 and 28 August 2018

Place: Campus Kronstad, Bergen, room A825

DAY 1:			
Duration	Time	Event	Name of participants (maximum 6 participants per meeting)
45 min	09:15-10:00	<i>Preliminary meeting for the committee</i>	
45 min	10:00-10:45	Meeting with the leadership at the institution (Rector, Director, Dean, Head of Studies, R&D Coordinator, Student Union representative)	
45 min	11:00-11:45	Meeting with master students (from relevant master programs for recruitment for the PhD, represent different campuses.)	
45 min	12:00-12:45	Meeting with PhD students (at HVLs PhD programs, and PhD students in Responsible Innovation and Regional Development with their main place of work from other institutions)	
45 min	13:30-14:15	Meeting with academic leadership (Faculty, department, section. They should represent different campuses)	
45 min	14:30-15:15	Meeting with academic staff (Industry Innovation)	
45 min	15:30-16:15	Meeting with academic staff (Social Innovation)	
45 min	16:30-17:15	Meeting with possible employers	

	17:15-18:00	<i>Committee meeting</i>	
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DAY 2:			
Duration	Time		
45 min	09:00-09:45	Infrastructure	
45 min	10:00-10:45	Meeting with academic staff (Green Innovation)	
45 min	11:00-11:45	Meeting with administrative staff	
45 min	12:15-13:00	<i>Committee meeting</i>	
60 min	13:00-14:00	Meeting with academic staff (two from each research group)	
60 min	14:15-15:15	Final meeting with the leadership (the same as in day 1)	
	15:15-	<i>Committee meeting and departure</i>	