

Geography research in Norway

An evaluation

Evaluation
Division for Science



Geography research in Norway

An evaluation

Evaluation

Division for Science

© The Research Council of Norway 2011

The Research Council of Norway
P.O.Box 2700 St. Hanshaugen
N-0131 OSLO
Telephone: +47 22 03 70 00
Telefax: +47 22 03 70 01
bibliotek@forskningsradet.no
www.forskningsradet.no/english

The report can be ordered at:
www.forskningsradet.no/publikasjoner

or green number telefax: +47 800 83 001

Design: Blanke Ark
Photo/illustration: Colourbox.com
Printing: 07 Gruppen / The Research Council of Norway
Number of copies: 350

Oslo, February 2011

ISBN 978-82-12-02889-0 (printed version)

ISBN 978-82-12-02890-6 (pdf)

Preface

The panel for the evaluation of geographical research in Norway hereby submits the following report to the Research Council of Norway. The panel is unanimous in its assessments, conclusions and recommendations.

The evaluation is based on seven research environments where geographical research is conducted. Although the whole field of geography is encompassed the emphasis is on human geography and on the interdisciplinary aspects of geography. A total of 109 publications by 57 researchers were reviewed. Altogether, 23 persons from the evaluated units (management, academic staff, and Ph.D. students) were interviewed in Oslo.

The panel wishes to thank the individual researchers for participating in the evaluation and the representatives of the research units for stimulating discussions during the interview sessions. The panel also wishes to thank the Research Council of Norway for giving us this opportunity to a stimulating exploration and reflection on the status of our discipline. Dr. Jannecke Wiers-Jenssen, Nordic Institute for Studies in Innovation, Research and Education (NIFU), acted as a most efficient and knowledgeable secretary to the panel.

January 2011

Mats Widgren, Chair of the panel
Stockholm University

Kirsten Simonsen
Roskilde University

Ari Lehtinen
University of Eastern Finland

Mats Lundmark
Örebro University

Madelene Ostwald
Lindköping University

Table of contents

Executive Summary	7
1.1 Objectives and scope of the evaluation	11
1.2 Terms of reference and the evaluation tasks	12
1.2 Data sources and the tasks of the evaluation panel	13
2 Overview of Norwegian geography research	16
2.1 Overview of the Norwegian geography research community and the delimitation of the evaluation.....	16
2.2 National collaboration	21
2.3 Personnel at the selected units.....	22
2.4 Master's candidates, researcher training and recruitment.....	27
2.5 Major funding sources.....	28
2.6 Overview of scholarly publications.....	33
2.7 Summary of background statistics	36
3 Unit profiles	38
3.1 Norwegian University of Science and Technology (NTNU): Department of Geography	38
3.2 University of Bergen (UiB): Department of Geography.....	41
3.3 University of Oslo (UiO): Department of Sociology and Human Geography.....	44
3.4 Agder (University of Agder and Agder Research).....	48
3.5 University of Tromsø (UiT): Department of Sociology, Political Science and Community Planning.....	51
3.6 University of Life Sciences (UMB): Department of International Environment and Development Studies, Noragric.....	55
3.7 Nord-Trøndelag University College (HiNT): Faculty of Agriculture and Information Technology.....	57
3.8 Summary of main observations and overall structural issues	60
4 Scope and quality of research: Subfield profiles	63
4.1 Subfield and major thematic areas in Norwegian geography.....	63
4.2 Economic geography	64
4.3 Social and cultural geography	70
4.4 Political geography and development studies	75
4.5 Landscape geography	79
4.6 Environment and livelihoods.....	82
4.7 Physical geography and climate	84
4.8 Summary of main observations: Subfields in an international perspective	90
5 Conclusions	93

5.1 The evaluation – scope and limitations.....	93
5.2 Norwegian geography in perspective.....	93
5.3 Summary of main observations.....	96
5.4 Recommendations.....	98
References	100
Appendix 1: Evaluation documents and evaluation panel.....	103
Appendix 2. Publications reviewed.....	119
Appendix 3 General Information about the Norwegian research system.....	128
Appendix 4 Notes on data sources	132
Appendix 5 Journals/series at Level 1 and Level 2 per 2010	134
Appendix 6 NIFU STEP report on Scholarly publications	140

Executive Summary

This evaluation of the research in geography in Norway has been carried out for the Research Council of Norway (RCN). The intention of the evaluation is to contribute to the further development of geography research in Norway. The evaluation is based on information from seven research environments conducting geographical research in Norway. Three of these are geographical departments at the oldest, traditional universities, three others are (related to) multidisciplinary units at new universities, and one is at a university college.

A panel of five Nordic geographers has performed the evaluation. In accordance with the Terms of Reference, the evaluation is based on the following sources of information: self-evaluation reports prepared by the selected research units, publications submitted by senior personnel at the selected research units, CVs and publication lists from the selected researchers, interviews with representatives from the units evaluated and background reports from NIFU. In addition, the panel has used different internet resources such as the homepages of the institutions evaluated, the RCN and the Frida database.

The evaluation gives a description of research activities of the evaluated research communities. The quality of research is mainly evaluated according to subfield.

The research communities

In their self-evaluations and in the interviews, the different units reveal different perspectives and experiences in building creative research environments, and in the cooperation between different fields, especially between physical and human geography. In all cases the boundaries between different research groups and clusters appear to be rather porous at all of the units. The evaluated units are all small enough to promote creative interaction between research groups. Where they differ, however, is in their ambition to create synergies.

The geographers at NTNU have launched a common research programme to inspire cooperation across research groups as well as across the traditional divide between human and physical geography. Despite the lack of an explicit strategy for collaboration the human geographers in Oslo have, nevertheless, managed to renew research at the interface between different research clusters, especially in the field of environmental geography, a field which has benefited from the strong tradition of critical human geography in Oslo. In Bergen the signs of integration are less obvious and the department has not yet drawn the full intellectual benefits from the amalgamation with research groups and individuals outside geography that have lately been included.

The other universities face a different challenge; here the geographers are integrated with other social sciences, where geographers could add new perspectives. These environments

exhibit individual characteristics. The Agder environment hosts a rather large group of geographical researchers, but these belong to different departments of social science. With the exception of the well-established and visible research group in economic geography it is difficult to assess the geography in Agder as a common research environment. At the University of Tromsø, geographers are part of a broader research environment in social sciences and have their strength in cultural approaches and planning. At the University of Life Sciences, the interdisciplinary Department of International Environment and Development Studies carries out research of high quality which is also highly relevant from a geographical perspective. The Nord-Trøndelag geography group is too small and too focused on teaching to be able to really establish itself as a strong research environment. Its specific thematic focus, however, provides a potential for intellectual development if stronger economic support for research can be raised.

Norwegian geography today is to a large degree published in international, refereed journals. The four most frequently used journals are *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography*, *The Holocene*, *Geografiska Annaler. Series B. Human Geography*, and *GeoJournal*. There are however large variations both between and within units, and there is great potential for increased international publication in some research environments. The primary national channel for international publication is *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography*, which during the last decade has taken active steps to enhance its quality and international visibility and is now indexed in the Web of Science.

Subfields and research topics

Three subfields and their related clusters of researchers stand out in terms of international visibility, influence and close contact with the international research frontier in their respective fields, although the international standing for some of these relies heavily on single individuals. *Political geography* in Norway has a clear international orientation of high standard. In recent years, political geography related to development studies has emerged as a key area of renewal at the University of Oslo. *Climate vulnerability research* is another field that has shown strength in recent years, mainly through the small, but productive group at University of Oslo. This research holds a high international standard and is a good example of innovative integration of methods in physical and human geography. *Environment and livelihoods* is a third field where a few individuals have made Norwegian geography visible internationally. It has a clear theoretical foundation in social science and most of the research may be categorised as *critical political ecology*, looking at local land use in a social, economic and cultural perspective. The leading environment is the creative and productive interdisciplinary department of International Environment and Development Studies department at University of Life Science (UMB), but researchers in Bergen and NTNU also contribute to making this a strong research field.

Regarding other fields, Norwegian *landscape geographers* play a key role in the conceptual debate and take a practice-orientated approach to qualitative empirical analyses of landscapes, as a human-environment relation. Geographers at NTNU have been of particular importance, and have made a clear mark on the map of European landscape research. *Economic geography* is perhaps the largest sub-discipline of Norwegian geography. In general the research is based on sound empirical research and is well informed by contemporary international theoretical and conceptual debate. In this respect economic geographers in Norway are part of a relatively strong and successful Nordic vein of research on agglomerations, clusters and regional innovation systems. *Social and cultural geography* is a relatively new field in Norway that started out as empirically-orientated applied research directed towards planning issues, but has now developed into a field with a solid theoretical foundation and an increasing level of international publication. Although there are promising exceptions among younger researchers, it appears that researchers in this field consider themselves users of theoretical and conceptual developments, rather than as producers or initiators of theory in conceptual debates. Norwegian research within this field has not yet made a mark in the international debate within the subject.

The focus of the research within the “pure” *physical geography* assessed in this evaluation is on areas of paleoclimatology, glacial, periglacial and hydrological research, and represents solid and strong contemporary physical geography in the Nordic countries. Thus, it is in line with mainstream research in its field.

Overall issues and recommendations

Seen from an overall view probably the most significant theme within Norwegian human geography is economic geography or rather, in its broader form, regional development. The panel views this as a contextual feature, connected to social, political and cultural discourses within Norwegian society, where regional perspectives and spatially balanced settlement patterns are important priorities. The dominance of a single perspective could lead to the underrepresentation of other perspectives. The most evident example of this is the status of *urban geography* in Norway. In comparison with the other Nordic countries, little research is carried out in this subfield in Norway. However, the few researchers that are represented in this evaluation have managed to show the potential of the field. Other thematic areas that are underrepresented in Norwegian university geography, but that have great relevance for Norwegian society, include studies of petroleum, fisheries and natural resource management in the circumpolar North. Another observation which is also related to the history of geography in Norway is the weak development of *quantitative methods* and the handling of *large datasets*.

In addition to recommendations targeted towards the units evaluated, the panel has provided a number of general recommendations. These involve increased contributions to the international debate, more support for post-docs and researcher initiated independent

projects, broader recruitment of Ph.D. candidates and increased national collaboration e.g. in the form of Ph.D. courses.

1.1 Objectives and scope of the evaluation

This evaluation of the research within the field of geography in Norway has been carried out for the Research Council of Norway (RCN), and is intended to contribute to the further development of geographical research in Norway. More specifically, the objectives of the evaluation are to:

- Provide an overall assessment of the quality of the geographical research being conducted by the selected groups, in an international perspective.
- Facilitate learning and development within the research groups and offer insight into the strengths and weaknesses of and challenges facing geographical research.
- Help to identify measures to increase quality.
- Enhance the knowledge base of the research groups, the Research Council and the ministries to further develop geographical research.

The evaluation is based on information obtained from eight research units (two of which have been evaluated together) conducting geographical research in Norway. Three of the units are departments or sections of departments at the well-established universities¹, three are multidisciplinary units at other universities, one is a regional research centre, and one is a faculty at a university college. The institutions and units included in the evaluation are listed in Table 1.1 Selection criteria are described in Section 2.1.

Table 1.1. Institutions and units included in the evaluation

Institution	Abbreviation	Department
Norges teknisk-naturvitenskapelige universitet/ Norwegian University for Science and Technology	NTNU	Geografisk institutt/Department of Geography
Universitetet i Bergen/ University of Bergen	UiB	Institutt for geografi/Department of Geography
Universitetet i Oslo/ University of Oslo	UiO	Institutt for sosiologi og samfunnsgeografi/Department of Sociology and Human Geography
Universitetet i Tromsø/ University of Tromsø	UiT	Institutt for planlegging og lokalsamfunnsforskning/ Department of Community Planning (From 2009: Department of Sociology, Political Science and Community Planning)
Universitetet for miljø- og biovitenskap/Norwegian University of Life Sciences	UMB	Institutt for internasjonale miljø- og utviklingsstudier, NORAGRIC/Department of International Environment and Development Studies, NORAGRIC
Universitetet i Agder og Agderforskning/University of Agder and Agder Research	Agder*	Selected personnel from various departments are included in the evaluation.
Høgskolen i Nord-Trøndelag/ North Trøndelag University College	HiNT	Avd. for landbruk og informasjonsteknologi/ Faculty of Agriculture and Information Technology

*These two units have been evaluated together, and this report will mainly refer to them collectively as Agder rather than UiA/University of Agder and Agder Research.

¹ At UiO, the geography unit evaluated is part of the Department of Sociology and Human Geography.

The primary target groups of the evaluation are the evaluated units, their management and host institutions and the Norwegian research policy authorities (the Research council of Norway and the Ministry of Education and Research).

A panel comprising the following members was appointed by the Research Board of the Division for Science at the RCN to perform the evaluation:

- Professor Mats Widgren (Chair), Department of Human Geography, Stockholm University, Sweden
- Professor Kirsten Simonsen, Department of Geography and International Development Studies, Roskilde University, Denmark
- Professor Ari Lehtinen, Department of Geographical and Historical Studies, University of Eastern Finland, Finland
- Professor Mats Lundmark, School of Humanities, Education and Social Sciences, Örebro University, Sweden
- Docent Madelene Ostwald, Centre for Climate Science and Policy Research, Linköping University, Sweden

Jannecke Wiers-Jenssen at the Nordic Institute for Studies in Innovation, Research and Education (NIFU)² has served as secretary to the panel.³ Bjørg Ofstad has coordinated the project on behalf of the RCN.

The terms of reference, the tasks of the panel, data sources and limitations of the evaluation are described in the sections below.

1.2 Terms of reference and the evaluation tasks

The RCN's disciplinary evaluations of research in Norway follow fairly standardised procedures. The complete terms of reference (mandate) for this evaluation is found in Appendix 1. The following five dimensions were to be incorporated into the evaluation:

Quality and relevance

- Scientific merit and quality of the research community as a whole and the individual researcher groups
- International standing of the research
- Strong and weak research areas
- Influence of the research activities and their relevance relative to:

² NIFU changed its name from NIFU STEP in December 2010. In this report the institute is mainly referred to as NIFU, except when referring to publications.

³ In 2008 the RCN issued a call for tenders for assistance in connection with five subject-specific evaluations in the humanities and social sciences. NIFU was awarded the commission. Providing secretaries to the panels is one of NIFU's tasks under its contract; other tasks include generating statistics about personnel, resources and scholarly publication.

- the international researcher community
- Norwegian society, trade and industry, and working life

Organisation, cooperation and doctoral-level education

- Researcher groups and research institutes
 - Research management and research strategy
 - Balance between junior and senior-level researchers and between women and men
- National and international research cooperation
 - Cooperation and distribution of research tasks at the national level
 - Contact and cooperation at the international level
- Recruitment and renewal
 - Researcher mobility nationally and internationally
 - Capacity and quality of doctoral-level education
 - Recruitment to doctoral degree programmes, post-doctoral fellowship positions and permanent positions

Publication and dissemination

- National and international publication channels
- Dissemination to students, users and the public at large

Capacity and funding

- Overall volume of geographical research in Norway
- Distribution and utilisation of research resources
- Funding structure

Recommendations and follow-up

- Recommendations targeted towards the research groups under evaluation and the top administration of the institutions
- National-level recommendations targeted towards the RCN and the ministries

According to the terms of reference, the panel is free to address topics other than those listed if the evaluation process reveals a need for bringing up other issues.

1.2 Data sources and the tasks of the evaluation panel

In accordance with the terms of reference, the evaluation is based on the following sources of information:

- Self-evaluations carried out by the selected research units.

- Publications submitted by senior personnel at the selected research units. The researchers were asked to submit two scientific works each⁴ and explain why those particular works had been selected. A total of 109 publications by 57 researchers were reviewed (Appendix 2).
- CVs and publication lists for the selected researchers for the 1999-2008 period.
- Interviews with representatives of the evaluated research units, conducted in April 2010. A total of eight group interviews of approximately two hours' duration were conducted: one interview with representatives of each of the units and one interview with Ph.D. students from all of the units. Altogether, 23 persons affiliated with the evaluated units (management, academic staff, and Ph.D. students) were interviewed. The entire panel took part in all of the interviews, with one exception.⁵
- Background reports from NIFU, commissioned by the RCN, on personnel, economic resources and scholarly publication in the field of geography in Norway:⁶
 - Gunnes, H and S. Slipersæter (2009) Research within geography, social anthropology and sociology in Norway: Institutions, personnel and economic resources. (This report provides the basis for Chapter 2.)
 - Piro, F. N. (2009) Norwegian geography: Scholarly publications 2004-2008. (Appendix 6).

In addition, the panel has made use of various internet resources such as the homepages of the evaluated units/institutions, the RCN website and the Frida database.

Regarding data sources, the panel has placed the greatest weight on the publications, the meetings with the evaluated units and other information obtained from the units (self-evaluations, CVs and publication lists). The background statistics have been treated mostly as indicative figures, and the panel has paid limited attention to details regarding statistics.

The panel met five times in Oslo during the period from October 2009 to November 2010 (three one-day meetings, one one-and-a-half-day meeting and one three-day meeting, including the meetings with the evaluated units). All of the panel members were present at all of the meetings, with one exception.⁷

All of the panel members have provided written contributions to the report, and the chair and the secretary have had the main responsibility for compiling the final report. With regard to the review of the research, publications were divided between the panel members according to their area of expertise.

⁴ Some researchers submitted only one publication.

⁵ One Ph.D. student was interviewed by phone and Professor Kirsten Simonsen did not take part in this interview as she is the student's co-supervisor.

⁶ Parts of these documents are published as appendices to this report.

⁷ Docent Madelene Ostwald was not present at the first meeting.

As the main task of the evaluation is to evaluate the quality of geographical research at the selected units, the panel decided to focus on the research units and the knowledge environments, rather than on the individual researchers. The scope and quality of research is mostly assessed by subfield (Chapter 4), but is also addressed in the descriptions of the research units.

Chapter 2 and the descriptive parts of Chapter 3 were sent to the units prior to publication so that they could check the accuracy of the facts. Some changes were made in response to this feedback.

It is important to note that this evaluation does not encompass all of the geography research being conducted in Norway. It covers a limited period of time, and only a limited number of units and senior-level staff (mainly human geographers) have been included. The panel has also had to confront a number of other challenges and limitations related to the selection of units/researchers for evaluation, and the background information available. These include:

- There are more geographical researchers in Norway than those working in the selected units.
- Research units in the ‘Institute sector’ are scarcely represented in the evaluation.
- Not all of the researchers included in the evaluation have a degree in geography.
- Information on some of the staff members was lacking.
- Not all the research output of the selected units is covered in the evaluation.
- The small number of researchers included in the evaluation limits the utility of the background statistics.
- The self-evaluations are of varying informational value.
- A handful of physical geographers were incorporated into an evaluation that initially targeted human geography.

The limitations of the evaluation in relation to the mandate are further discussed in Sections 2.1. and 5.1. Despite these limitations, the panel believes it has been able to provide a fair picture of research activities in geography in Norway, with an emphasis on human geography and the interdisciplinary aspects of physical and human geography. The evaluation provides a good idea of the major geography research environments at the universities and a selection of interdisciplinary research environments where geographical research is carried out. The terms of reference stipulate that the evaluation should review the international standing of research. As the panel members are from Nordic countries, the perspective is international, but seen from a Nordic point of view.

2 Overview of Norwegian geography research

This chapter provides a brief overview of Norwegian geography research. It also presents the selection criteria and elaborates on the limitations of the evaluation, as well as provides background information and statistics on the selected units and researchers regarding framework conditions, personnel, resources and publication activity.

2.1 Overview of the Norwegian geography research community and the delimitation of the evaluation

Geography is a broad discipline that studies the world as the home of humankind, using a variety of approaches from the natural sciences as well as the social sciences. Spatial relations are central to the discipline. There is an important division of labour between physical geography and human geography. Internationally, geography may be a part of faculties of art, social sciences or natural sciences, or divided into departments of human geography (at faculties of social sciences) or departments of physical geography (often amalgamated into larger departments of geosciences at faculties of natural sciences). An important development in the history of geography in Norway was the emergence of human geography as a well-defined area of social science in the 1970s and 1980s. This was manifested in the establishment of an association for human geography (Norsk Samfunnsgeografisk Forening – NSGF) and the division of the department of geography at the University of Oslo (UiO) into two separate units belonging to different faculties (Jones 2001, Asheim 1987). At present in Norway there are two departments of geography where physical geographers play an important role (Norwegian University for Science and Technology (NTNU) in Trondheim and University of Bergen (UiB)). At UiO human geography forms part of the Department of Sociology and Human Geography (under the Faculty of Social Sciences), while physical geography belongs to the Department of Geosciences (under the Faculty of Mathematics and Natural Sciences). At the more recently-established universities and the university colleges, geography (mainly human geography) is taught and researched at a number of social science or interdisciplinary departments. A large amount of geography research is also carried out at independent research institutes.

Selection of units

Initially, the RCN planned to conduct an evaluation of human geography alone, as the evaluation was being organised under the Department for Social Sciences at the RCN and because physical geography and the other geosciences were to be evaluated separately in 2010-2011. However, two of the units selected for this evaluation (at UiB and NTNU) are full geography departments employing both physical and human geographers, and these units asked for an evaluation not only of human geography but of the discipline of geography as a whole. This was accepted by the RCN, and the terms of reference for the evaluation were adjusted accordingly. The scope of the evaluation was expanded to

encompass physical geography as well as human geography. However, as the evaluation does not cover physical geography at UiO, and many of the smaller units clearly specialise in human geography, human geography and the interdisciplinary aspects of geography are overrepresented.⁸ Some of the background material for the evaluation was prepared at a stage when the focus was solely on human geography, and as a result the broadening of the scope to encompass physical geography is not fully reflected in this chapter. It has been difficult to generate coherent statistical background information on the discipline of geography as a whole.

According to the terms of reference, the evaluation was supposed to include “research units of a certain size” and all senior personnel at these units. A total of 16 research units were considered for the evaluation (based on the information in Table 2.1). After discussions between the RCN and these units, eight were found to have a sufficiently large environment for geography research and were selected for inclusion in the evaluation.⁹ Six of these units are located at universities, one is a university college and one is a regional research centre.

Table 2.1 displays key figures for the units considered for the evaluation. It should be noted that this table has *not* been used *in* the evaluation itself, but has merely served as background information for the RCN when delimiting the evaluation. Selected units are marked in bold. Additionally, this table contains only personnel with a Master’s-level degree in human geography (Master’s degree, cand.polit. or magistergrad).¹⁰ As UiB and NTNU award degrees in *geography* and do not distinguish between human and physical geography, some physical geographers may also be included in the table. Moreover, researchers with a doctoral degree in human geography but a Master’s degree in another subject field are not included under the heading “Master’s-level degree in human geography” in Column 3, although they are included in the total number of senior research staff in that column. Some of the evaluated units commented that they do not recognise the figures in the table, as these statistical delimitations are not immediately transparent. For example, although it appears in the table that Noragric does not have researchers with degrees in geography, three researchers with relevant backgrounds have been incorporated into the evaluation. For more extensive information about how this table was constructed, see Langfeldt and Klitkou (2009).

Among the institutions that were *not* selected are several applied research units that receive public funding. These are not part of the university and higher education sector, but rather

⁸ Physical geographers at UiB and NTNU were included in the evaluation of physical geography in 2000. They will not be included in the evaluation of physical geography in 2010-2011.

⁹ Two of these units, the University of Agder and Agder Research, were evaluated *as a single unit*. Thus, in all seven units were evaluated.

¹⁰ The selection of units was based on the figures in this table and dialogue with the units. Although there may be some inaccuracies (e.g. regarding the number of personnel with a Master’s-level degree in geography/human geography), the original figures have been presented here.

belong in what is referred to as the 'Institute sector'. A substantial part of research in Norway (22 per cent) is conducted at independent research institutes. For more information about the Norwegian research system, see Appendix 3.

Participation in the evaluation was not mandatory, although the larger units at the universities were expected to participate. A main criterion for selection of the units was the number of professor-level researchers in human geography and the number of researchers in total. However, it was up to the research units themselves to define which members of their staff were geographers; thus, some small units with fewer researchers with a degree in geography were included in the evaluation. The minimum number of researchers accepted for participation in the evaluation was set at three, which is lower than for other recent and ongoing evaluations conducted by the RCN. The final decision regarding which units to incorporate into the evaluation was taken by the RCN after discussion with the units concerned.

Table 2.1 Selected research units (in bold) and those not selected for the evaluation of geography research: research personnel and publications registered as human geography

Institution, department/section	Research personnel with a Master's-level degree in human geography, 2007 ¹	Number of researchers with professor-level competence, 2007 ²		Total of DBH publications ⁴ in human geography, 2005-2007 (weighted)	Total of ISI publications in human geography, 1998-2007 ⁵
		Master's-level degree in human geography	Total number of researchers at the unit		
UiB: Department of Geography	14	6	13	38.9	3
UiO: Department of Sociology and Human Geography	13	5	28	23.3	7
NTNU: Department of Geography	18	8	15	42.2	9
Agder Research	6	4	12	N/A	0
UiT: Department of Community Planning	6	1	7	0.8	0
UMB: Department of International Environment and Development Studies, Noragric	0	0	19	2.9	3
UiA: Faculty of Economics and Social Sciences³	3	1	51	4.8	2
HiNT: Faculty of Agriculture and Information Technology	4	1	9	0	0
UiB: Bjerknes Centre for Climate Research	6	1	24	0	0
Norwegian Institute for Urban and Regional Research (NIBR)	5	2	42	N/A	1
Institute for Research in Economics and Business Administration (SNF)	3	2	17	N/A	5
Peace Research Institute, Oslo (PRIO)	2	1	20	N/A	8
Norwegian Institute for Nature Research (NINA)	1	0	86	N/A	10
Centre for International Climate and Environmental Research (CICERO)	1	0	14	N/A	9
UMB: Department of Landscape Architecture and Spatial Planning	0	0	25	22.9	7
Fridtjof Nansen Institute (FNI)	0	0	13	N/A	6

¹ The term Master's-level degree encompasses Master's degrees, hovedfag and magistergrad registered in the field of human geography. Personnel with a Ph.D. degree in geography, but a Master's-level degree in another field have not been included under this heading.

² Includes the positions of Full Professor, Associate Professor, College Reader and Head of Department, as well as researchers in the Institute sector with professor-level competence.

³ The publication overview encompasses UiA as a whole, not only the Faculty of Economics and Social Sciences.

⁴ DBH = Database for Statistics on Higher Education, <http://dbh.nsd.uib.no/>

⁵ This only covers the publications classified by ISI Thompson under "human geography" in the Journal Performance Indicators (JPI), not the total range of the units' publications in the ISI database.

Sources: NIFU STEP Report 1/2009 (Table 4.3 supplemented with information on all selected units and figures for UiT was updated due to a misclassification); NIFU Register of Research Personnel; ISI Thompson, NCR for Norway.

Limitations of and challenges relating to the evaluation

The evaluation been confronted with certain other challenges and limitations in addition to the complication relating to the division between human geography and physical geography already described:

- ***The number of geographical researchers working in Norway is greater than those working in the selected units.*** A total of 171 researchers with a Master's-level degree in human geography were employed at higher education institutions and independent research institutes in the Institute sector in 2007. Geographers often work in a multidisciplinary research environment, and there are often one or two persons in each research unit. This evaluation only encompasses units with three or more geographical researchers, thereby excluding smaller units.
- ***Research units in the Institute sector are scarcely represented in the evaluation.*** This implies that applied research is covered to a very limited degree. As seen in Table 2.1, these research institutes also produce a substantial proportion of the ISI-registered publications in human geography.
- ***Not all of the researchers included in the evaluation have a Master's-level degree in geography.*** Some of the researchers working in the selected units are anthropologists, historians, etc., or have unregistered education from abroad (see Table 2.2). In this evaluation it was up to the units themselves to define which staff members were geographers and who would submit CVs and publications for review. Consequently there are discrepancies between the statistics presented in this chapter and the evaluation sample (see Fact box 1).
- ***Information on some staff members was lacking.*** Some of the CVs of researchers working in the selected units were not submitted, due to leaves of absence, etc. These researchers were excluded from the evaluation of research quality and the publication analysis, but were included in the general statistics.
- ***Not all of the research output of the selected units is covered in the evaluation.*** The evaluation of research quality is mainly based on the submitted works of professor-level researchers (professors and associate professors). These do not reflect the total academic production of the researchers or the selected units. Researchers were asked to select two publications each, and these do not necessarily cover the range of topics with which the researcher/unit works. Also, publications by junior researchers and grey publications may be important contributions to the field. These types of publications are listed in the CVs and self-evaluations, but the panel has not had the opportunity to evaluate their quality.
- ***The small number of researchers included in the evaluation limits the utility of the background statistics.*** At some units, very few researchers have been incorporated into the evaluation, making statistics quite meaningless. For small units, potential misclassifications regarding personnel or publications may easily result in misrepresentative statistics. The panel has used the background statistics as a tool to gain an overview of the units. The self-evaluations, submitted CVs and

meetings with the research groups were the most important sources of detailed information about the individual units.

- ***The self-evaluations are of varying informational value.*** While some of the self-evaluations contain extensive information about research strategies and activities and funding, others are rather brief. This has made it difficult to compare the units based on the information provided.

Several of these challenges have emerged in other evaluations conducted by the RCN. The fact that many researchers work in applied research units outside universities/university colleges has posed a limitation in the evaluation of fields such as sociology and economics as well. However, because the number of geographers tends to be particularly low at each unit, these units are less likely to fulfil the criteria for selection. Several units in the Institute sector have therefore been left out of the evaluation. Another particular challenge for evaluating geographical research in Norway is the distinction between human geography and physical geography, and whether these branches of geography are integrated in the same research units or not constitute a particular challenge for evaluating geography.

The panel found certain inconsistencies in the selection of research environments it was to evaluate. On the one hand, a substantial amount of geographical research in Norway is carried out at applied research institutes not selected for assessment, and a good amount of qualified Ph.D. work is being published in international journals as well. On the other hand, some small units with low research output were selected for assessment.

The panel acknowledges that its impression of the units evaluated may have been influenced by the representatives that the units chose to send to the panel's meetings. Visiting the units, rather than interviewing two or three representatives in Oslo, would probably have provided a more comprehensive picture. However, site visits are time-consuming and often hard to organise; in all likelihood, not all of the panel members would have had the opportunity to visit all of the units.

2.2 National collaboration

At the national level, there are two key organisations in the field of geography in Norway. *Norsk Geografisk Selskap* (www.geografisk.no) is divided into three regional boards (Oslo, Trondheim and Bergen) and arranges yearly meetings and publishes the English-language journal *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, which has been indexed in the ISI index since 2007.

Nasjonal fagråd for Geografi (the national council for geography) is organised under the Norwegian Association of Higher Education Institutions (*Universitets- og Høgskolerådet*, www.uhr.no). The three large universities dominate the council, but all of the smaller geography units are invited to meetings. The current chair is Bjørnar Sæther of UiO. The

council's tasks include proposals regarding the classification of publications in geography for bibliometric analysis and determining which journals should be considered geography publications in this respect (see Appendix 5). The final decisions regarding the classification of journals according to level are made by the UHR. This institution therefore plays an important role in setting the standards for judging research output in Norwegian geography in quantitative terms.

There is also a national committee for coordination of promotions to professorship in geography, which has members from the three large universities. Other forms of national collaboration include recruitment committees and the exchange of external examiners at the Master's and Ph.D. level.

2.3 Personnel at the selected units

This section is based on a NIFU report analysing personnel and economic resources submitted to the panel. Statistics on the type of position, average age and gender composition at the various units are presented here. The data are drawn from the NIFU Register of Research Personnel (see Fact box 1).

Number of geographers and researchers in total

The units selected for the evaluation employed a total of 327 researchers in 2007, of which 64 had a Master's-level degree in human geography and eight in physical geography. The Register of Research Personnel does not contain any information on educational background for 18 of the researchers at the selected units, and it is likely that geographers are included among these. For example, researchers with a degree earned abroad are often listed under "Unknown" with regard to educational background (see Table 2.2).

The last column of Table 2.2 shows the number of researchers incorporated into the evaluation. Some of the evaluated units have selected most of their senior-level researchers for inclusion in the evaluation. The departments of geography at NTNU and UiB are examples of this. Other units are multidisciplinary, so only a smaller number of the researchers at the unit were evaluated. Examples of the latter are the Department of Sociology and Human Geography at UiO, Noragric at UMB and the Agder units.

As seen in Table 2.2, the departments of geography of UiB and NTNU are the only units where more than 50 per cent of the research personnel have a registered Master's-level degree in geography. The proportion at UiA and UMB is very low, illustrating that these are multidisciplinary units.

Fact box 1: Data sources and samples regarding personnel

The data are drawn from the NIFU Register of Research Personnel (Forskerpersonalregisteret), which is based on regular reports submitted by higher education institutions to NIFU, including information on position, age, gender, educational background, etc. Information about graduates with a degree earned abroad is somewhat incomplete in this register (see Appendix 4 for more information).

Different sets of data are included in the presentation of the data on the evaluated units:

- One set covers *all researchers at the research unit/department* (N= 327).
- Another set only comprises *researchers with a registered Master's-level degree in geography* (human or physical) (N=72).
- A third set comprises only researchers who were incorporated into the evaluation (N=57). This includes professor-level personnel who submitted CVs and publications for review. With the exception of the last column in Table 2.2, this group – the evaluation sample – does not form a separate category in the statistics.
- Researchers from HiNT were not included in the publication analysis. Therefore, only 53 of the 57 researchers incorporated into the evaluation were included in the publication analysis.

Note that whereas the evaluation sample (Set 3) only includes personnel with professor-level competence and post-doctoral affiliates, the statistics (Sets 1 and 2) also encompass research fellows/Ph.D. students, lecturers and other academic personnel.

Moreover, in the statistics, *only personnel with a registered Master's-level degree* (Master's degree, "hovedfag", "magistergrad") in human or physical geography are defined as geographers. Researchers who have a Ph.D. in human or physical geography, but a Master's-level degree in another subject have not been included under the geography heading.

The tables/columns encompassing researchers with a registered Master's-level degree in geography provide the most accurate figures for the multidisciplinary units. For the remaining units (which only include the geography departments at UiB and NTNU), the tables/columns embracing all researchers provide the most relevant sample.

Table 2.2 Research personnel at the units selected for the evaluation of geography research by educational background, 2007¹

Insti-tution	Department	Human geography	Physical geography	Sociology	Social anthropology	Other social sciences	Humanities	Natural sciences	Engineering and technology	Medical and health sciences	Agricultural sciences	Unknown	Total # of scholars in the register	Total # of prof.-level scholars in the register	Scholars included in the evaluation
UiB	Department of Geography	14			2	2		6	1				25	13	12
UiO	Department of Sociology and Human Geography	13	1	31	1	6	1	1				2	56	28	10
NTNU	Department of Geography	18	3			1		1	1			1	25	15	15
UiT	Department of Community Planning	6		2	1	5							14	12	4
UMB	Department of International Environment and Development Studies, Noragric		1	1	3	2		7			11	3	28	7	3
Agder	UiA: Faculty of Economics and Social Sciences	3	2	6	2	64	3	18	3	3	2	7	113	19	6
	Agder Research	6		3	1	6		1	1			5	23	9	3
HiNT	Faculty of Agriculture and Information Technology	4	1	1		3		14	7		13		43	51	4
Total		64	8	44	10	89	4	48	13	3	26	18	327	154	57

¹Field of education is based on information on Master's-level degrees. The table includes all academic personnel at the departments, also in recruitment positions (with the exception of the two last columns).

Source: NIFU Register of Research Personnel.

Type of position and proportion of personnel with doctoral degrees

Table 2.3 shows that NTNU and UiA have the highest proportion of professor-level research personnel, while the three major geography departments at UiB, NTNU and UiO have the highest proportion of recruitment positions. Note that the table includes all academic staff at the departments/institutions, regardless of educational background.

Table 2.3 Personnel at the units selected for the evaluation of geography research by position, 2007

Institution/unit	Professor level	Researchers and post-docs. ²	Recruitment positions ²	Lecturers ³	Total
UiB: Department of Geography	13	2	8	2	25
UiO: Department of Sociology and Human Geography	28	7	18	3	56
NTNU: Department of Geography	15		10		25
UiT: Department of Community Planning	12	10	1		23
UMB: Department of International Environment and Development Studies, Noragric	7	1	4	2	14
UiA: Faculty of Economics and Social Sciences	19	3	5	1	28
Agder Research	9	2	3	29	43
HiNT: Faculty of Agriculture and Information Technology	51	7	19	36	113
All selected units	154	32	68	73	327

¹The category "Professor level" includes: Full Professors, Associate Professors ('førsteamanuensis'), academic administrators (employed Deans and Chairs/Heads of Departments), and University College Docents/Senior Lecturers at university colleges, ('høgskolesenter') and Researcher I/Senior Researcher and Researcher II in the Institute sector. Professor II is not included in the table.

²The category "Recruitment positions" includes: research fellows ('stipendiater') and research assistants, regardless of source of funding.

³The category "Lecturers" includes: Assistant Professors, Senior Lecturers, university lecturers and university college lecturers, as well as researchers without doctoral level competence in the Institute sector.

Source: NIFU Register of Research Personnel

In all, 55 per cent of the staff at the selected departments/institutions, excluding recruitment positions, held a doctoral degree in 2007. Of the personnel with a Master's-level degree in geography, 65 per cent held a doctoral degree. The proportion of personnel with a doctoral degree was highest at the university departments. At Noragric at UMB, all of the staff with the exception of the recruits had a doctoral degree in 2007.

Age and gender

Sixty per cent of the full professors in geography were 55 years or older in 2007, but there appear to be qualified younger researchers available to fill their positions when they retire. Comparing the personnel with a Master's-level degree in geography with the total number of personnel at the departments, the geographers appear to be somewhat younger. The average age for research personnel in tenured positions at the units selected for evaluation was 51.3 years in 2007, whereas the geographers in tenured positions were on average 47.7 years of age. This pattern was also evident among the research recruits: the geographers were somewhat younger than the other recruits at the departments.

Table 2.4 Average age of research personnel at units selected for the evaluation of geography research by department, 2007

Institution/unit	Personnel with a Master's-level degree ¹ in geography		All researchers	
	Mean age	N	Mean age	N
UiB: Department of Geography	40.9	14	45.6	25
UiO: Department of Sociology and Human Geography	41.3	14	45.6	56
NTNU: Department of Geography	40.8	21	42.4	25
UiT: Department of Community Planning	36.5	6	45.3	14
UMB: Department of International Environment and Development Studies, Noragric	47.0	1	48.6	28
UiA: Faculty of Economics and Social Sciences	49.4	5	48.6	113
Agder Research	41.0	6	41.9	23
HiNT: Faculty of Agriculture and Information Technology	44.6	5	47.0	43
All selected units	41.5	72	46.6	327

¹Master's degree or equivalent

Source: NIFU Register of Research Personnel

In 2007 close to one-half of the personnel with a Master's-level degree in geography at the selected units were women. Table 2.5 shows the differences between the units. The highest proportion of women geographers is found at UiB and UiT. As there are several units with a large number of researchers, but few with a registered Master's-level degree in geography, looking at the total proportion of women gives better figures than looking at the proportion of women among the geographers alone.

Table 2.5 Women research personnel at units selected for the evaluation of geography research by department, 2007, in per cent

Institution/unit	Personnel with a Master's-level degree ¹ in geography		All researchers	
	% female	N	% female	N
UiB: Department of Geography	71	14	48	25
UiO: Department of Sociology and Human Geography	50	14	52	56
NTNU: Department of Geography	48	21	40	25
UiT: Department of Community Planning	67	6	64	14
UMB: Department of International Environment and Development Studies, Noragric	0	1	32	28
Agder Research	33	6	48	23
UiA: Faculty of Economics and Social Sciences	0	5	28	113
HiNT: Faculty of Agriculture and Information Technology	20	5	28	43
All selected units	47	72	38	327

¹Master's degree or equivalent

Source: NIFU Register of Research Personnel

Forty per cent of the full professors with a Master's-level degree in geography were women. The proportion of women associate professors, etc was somewhat lower (30 per cent). The one post-doctoral fellow with a degree in geography was a woman, while one-third of the lecturers were women. Women comprised 69 per cent of the recruitment positions, which is somewhat higher than the average for the social sciences (57 per cent). These figures are summed up in Table 2.6.

Table 2.6 Research personnel at units selected for the evaluation of geography research by gender and academic position, 2007, in per cent

Gender	Full professors	Associate professors, etc ¹	Post.docs.	Recruitment positions ²	Lecturers ³	Total
Geographers:						
Females	40	30	100	69	33	47
Males	60	70	0	31	67	53
N	(10)	(23)	(1)	(26)	(12)	(72)
All researchers:						
Females	28	32	48	57	29	38
Males	72	68	52	43	71	62
N	(65)	(77)	(44)	(68)	(73)	(327)

¹The category "Associate professors, etc" includes: Associate Professors ('førsteamanuensis'), academic administrators (employed Deans and Chairs/Heads of Departments), and Researcher I/Senior Researcher and Researcher II in the institute sector. Professor II is not included in the table.

²The category "Recruitment positions" includes: Research Fellows ('stipendiater') and Research Assistants, regardless of source of funding.

³The category "Lecturers" includes: Assistant Professors ('amanuensis'), Senior Lecturers, university lecturers and college lecturers ('førstelektor', 'universitetslektor' and 'høgskolelektor'), as well as researchers without doctoral-level competence in the Institute sector.

Source: NIFU Register of Research Personnel

2.4 Master's candidates, researcher training and recruitment

Between 1995 and 2005, 782 candidates acquired a Master's-level degree (Master's degree or equivalent) in human geography at Norwegian higher education institutions (see Table 2.7). Of these, 58 per cent were women. Another 159 candidates obtained a Master's-level degree in physical geography. Of these, 43 per cent were women.

Where have these graduates found employment? Table 2.7 shows that 12 per cent of the Master's-level degree candidates in human geography in the 1995-2005 period held research/academic positions at higher education institutions and in the Institute sector in 2007. This indicates that only a small proportion of geographers are recruited to research careers.

Table 2.7 Academic employment of Master's-level degree¹ candidates in geography in Norway, 1995-2005. Percentage employed in different sectors by discipline and gender

Employment in 2007	Human geography			Physical geography		
	Women	Men	Total	Women	Men	Total
University	5	6	5	1	2	2
Specialised university institution	0	0	0	1	1	1
University college	2	3	2	1	1	1
Research Institute sector	3	5	4	9	5	7
Total with a scholarly/research position in 2007	10	14	12	13	10	11
Administrative or technical position in higher education(HE)/research sector	6	2	4	1	1	1
Total employed in HE/research sector 2007	16	16	16	15	11	13
Not employed in HE/research sector 2007	84	84	84	85	89	87
Total	100	100	100	100	100	100
N (Master's-level degree candidates 1995-2005)	(450)	(332)	(782)	(68)	(91)	(159)

¹Master's-level degree includes: Master's degree, Cand.philol. and magistergrad.

Source: NIFU Register of Research Personnel.

With regard to Ph.D. programmes, the universities in Oslo, Bergen and Trondheim award Ph.D. degrees in geography. The University of Tromsø awards Ph.D. degrees in community planning and GIS, and Noragric at UMB awards Ph.D. degrees in development studies. According to the self-evaluations, 52 Ph.D. candidates graduated from the evaluated units during the 2004-2008 period. Table 2.8 shows that NTNU awarded the most Ph.D. degrees in recent years, while Noragric has awarded a substantial number of degrees in development studies (included in the table).

Table 2.8. Number of Ph.D. graduates at the selected units, 2004-2008

Institution	Number of graduates
NTNU	18
UiB	5
UiO	9
UiT	8
Noragric, UMB	12

Source: Self-evaluations.

2.5 Major funding sources

This section presents figures for research in human geography based on the official Norwegian Research and Development (R&D) statistics. R&D expenditure is presented over time, by source of funding and by type of institution. The figures show R&D expenditure in human geography at the higher education institutions as well as total R&D expenditure at the selected units. The national R&D statistics have been used for higher

education units. For units in the Institute sector, key figures on institutes under the governmental regulations for funding of research institutes are used.

Funding for human geography research, 1997-2007

Three units were classified as human geography units in the R&D statistics in for 2007: the Department of Geography at UiB, the Department of Geography at NTNU and parts of the Department of Sociology and Human Geography at UiO (the three largest units included in the evaluation).

Table 2.9 shows the R&D expenditure for human geography at Norwegian higher education institutions by source of funding during the 1995-2007 period. General university funds related to research in human geography at the Department of Sociology and Human Geography at UiO is included in the figures, but external funding is not.¹¹ Thus, it appears that a somewhat higher percentage of general university funds within human geography than is actually the case. The total R&D expenditure shown is also a little too low.

There was an overall increase in current expenditure on R&D in human geography from 1997 to 2007, with 2007 as the top year and 2005 as the bottom year.

Table 2.9 Current expenditure on R&D in human geography at Norwegian higher education institutions by source of funding, 1997-2007, in per cent

Source of funding	1997	1999	2001	2003	2005	2007
General university funds (GUF)	82	80	69	74	85	79
Research Council of Norway (RCN)	15	12	24	16	14	14
Other public sources	1	3	3	0	0	5
Industry	0	2	0	0	0	0
Other national sources	1	2	0	4	1	0
Foreign sources	1	2	5	5	0	2
Total, in per cent	100	100	100	100	100	100
Total, in NOK million¹	17.6	20.4	18.6	19.8	16.0	22.4

¹ Constant 2000 prices

Source: NIFU R&D statistics.

General university funds (GUF) comprises the major funding source for human geography research. The percentage of funding received from this source ranged between 69 and 85

¹¹ When it comes to the Department of Sociology and Human Geography, determining the R&D expenditure for the individual disciplines is somewhat complicated. The personnel are divided into sociology and human geography, making it possible to estimate the amount of general university funding allocated to each discipline. (According to the Department of Sociology and Human Geography's response to the R&D survey in 2007, approximately 20 per cent of its R&D activity was related to human geography that year, which is consistent with the number of geographers at the department.) However, with regard to other funding sources, the department responded to the R&D survey as one unit. All funding other than general university funds is therefore classified as funding for sociology.

per cent during the 10-year period in question. Funding from the RCN comprised the largest external funding source – accounting for 12-24 per cent of R&D expenditure. Other funding sources provided only a small proportion of the funding for research in human geography.

Fact box 2: Performance-based funding of higher education institutions

Since 2005, a portion of the basic funding (GUF) allocated to Norwegian higher education institutions is based on performance indicators for education and research activities. The research component accounts for about 15% of the basic funding, and most of this is performance-based. The relative weight of research indicators is as follows:

Indicator	Weight
Doctoral candidates	0.3
EU research funding	0.2
RCN funding	0.2
Scholarly publications	0.3

For more information, see Appendix 6.

Table 2.10 Current expenditure on R&D at units selected for the evaluation of geography research by department and source of funding, 2007, in per cent

Institution/unit	GUF	RCN	Other public sources	Industry	Other national sources	Foreign sources	Total	Constant 2000 prices
UiB: Department of Geography	69	27	0	0	0	4	100	9.7
UiO: Department of Sociology and Human Geography	70	22	4	0	1	3	100	18.5
NTNU: Department of Geography	80	8	12	0	0	0	100	8.9
UiT: Department of Community Planning	60	13	11	0	13	3	100	4.9
UMB: Department of International Environment and Development Studies, Noragric	59	8	9	0	10	14	100	16.3
UiA: Faculty of Economics and Social Sciences	85	4	0	0	11	0	100	29.1
HiNT: Faculty of Agriculture and Information Technology	54	9	24	12	0	0	100	12.0

Institute	GUF	RCN	Other public sources	Industry	Other national sources	Foreign sources	Total	Constant 2000 prices
Agder Research	10	22	30	22	11	5	100	23.6

¹The Faculty of Agriculture and Information Technology did not respond to the R&D survey for 2007 as a separate unit; it was included in the Faculty of Social Sciences, Business and Nature at Campus Steinkjer.

²General university funds.

³R&D expenditure cannot be given in current prices per unit due to statistical rules that apply to R&D statistics.

⁴Statistics on the income of the individual research institutes are available at www.foustatistikkbanken.no. To make comparison more feasible, both values have been converted to constant prices.

Source: NIFU R&D statistics and key figures for institutes that receive basic funding from the governmental regulations for funding of research institutes.

As shown in Table 2.10, general university funds was the most important funding source for all of the units at higher education institutions in 2007, the proportion varying from 54 to 85 per cent. The RCN was the second-largest funding source, varying from 27 per cent of R&D expenditure at the Department of Geography at UiB to 4 per cent at the Faculty of Economics and Social Sciences at UiA. The Faculty of Agriculture and Information Technology at HiNT received more funding from other public sources and industry than from the RCN. Other public funding sources were also important for the Department of Geography at NTNU and the Department of Community Planning at UiT. These sources include direct project funding from the Ministry of Education and Research and other ministries, as well as funding from the relevant counties. The Department of Community Planning received 13 per cent of its funding from other national sources. Agder Research received 62 per cent of its income from public funding sources, of which the RCN alone accounted for 22 per cent. The institute received the same amount from industry.

Funding from the Research Council of Norway for human geography research

Table 2.11 focuses on funding allocated by the RCN, by types of projects and programmes funded during the 2001-2008 period. The table includes all grants categorised as human geography by the RCN.

Table 2.11 Funding from the Research Council of Norway in human geography by type of funding, 2001-2008

Type of funding	Type of funding scheme	Per cent
<i>Independent projects</i>		
	Independent projects (Fri prosjektstøtte) ²	25
	International scholarships (Internasjonale stipend)	3
	Sum independent projects	28
<i>Research programmes</i>		
	Basic research programmes (Grunnforskningsprogrammer)	-
	Action-oriented programmes (Handlingsrettede programmer)	51
	Large-scale Programmes (Store programmer)	21
	Sum research programmes	72
<i>Networking measures</i>		
	National measures/meeting places (Nasj. stimul.tiltak, møteplass)	-
	International networking measures (Internasjonale nettverkstiltak)	-
	Sum networking measures	-
<i>Other R&D-related activities</i>		
	Information/communication/publishing	0
Total, in NOK million, 2001-2008		57.6

¹ Figures in this table are based on the RCN budgets and coding of disciplines and are not comparable with the figures in the remaining tables in this evaluation report, which are based on the national R&D statistics. In the national R&D statistics, expenditure is coded according to the discipline of the research-performing units, whereas the RCN grants are coded according to the discipline of the individual projects. The funding classified as human geography will therefore differ between the two sets of data.

² For types of funding schemes where no English terms are found on the RCN web site, the Norwegian term is given in parenthesis.

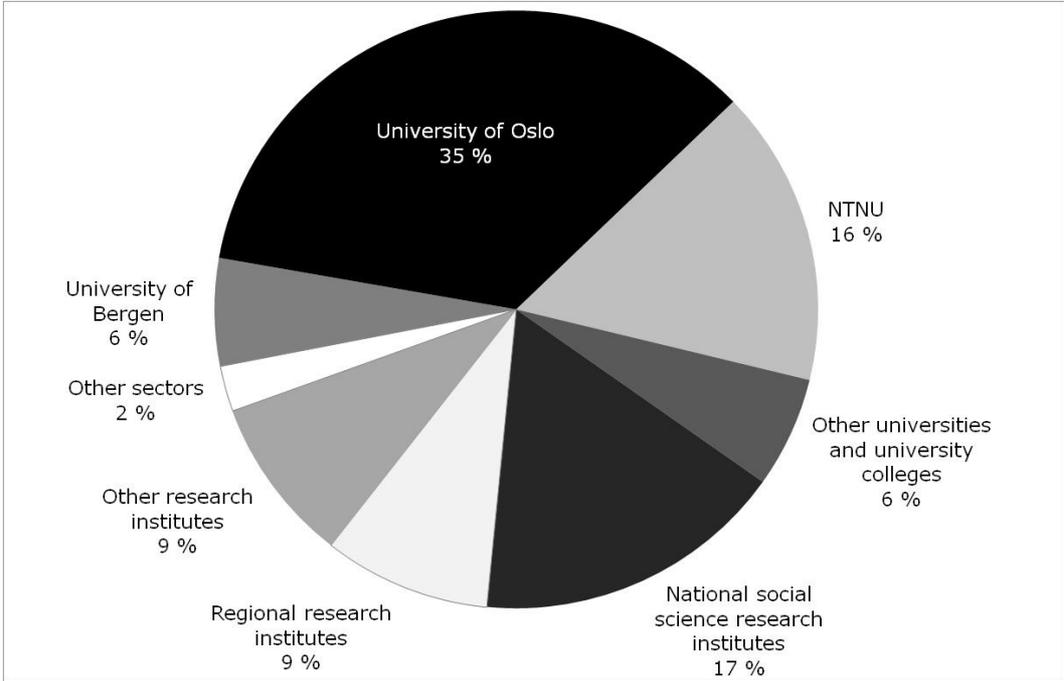
Source: Research Council of Norway, revised budgets, 2001-2008.

More than 70 per cent of the funding from the RCN was channelled through research programmes, of which action-oriented programmes received more than one-half of the total funding for human geography. The main action-oriented programmes during the 2001-2008 period were Development Paths in the South (UTISØR), Urban Development (BYUTV) and Regional Development (REGUT). The Large-scale Programme Climate Change and Impacts in Norway (NORKLIMA) received one-fifth of the total funding.

Independent projects received 25 per cent of the total funding from the RCN, while international projects/scholarships received only 3 per cent. The RCN did not provide any support for networking measures within human geography, and only a very small sum was allocated for other R&D-related activities.

The distribution of funding from the RCN by institution shows that the University of Oslo received the largest proportion of the funding classified as human geography – 35 per cent – allocated during the 2001-2008 period. NTNU and the University of Bergen received 16 and 6 per cent, respectively. Other higher education institutions that received funding from the RCN for human geography research were the University of Tromsø, the University of Agder and the university colleges in Telemark, Hedmark and Lillehammer.

Figure 2.1 Funding from the Research Council of Norway in human geography by receiving institution, 2001-2008, in per cent



Source: Research Council of Norway, revised budgets, 2001-2008.

Units in the Institute sector received 37 per cent of the funding from the RCN for human geography research during the 2001-2008 period. Of these, the Institute for Research in Economics and Business Administration (SNF) was the unit that received the highest proportion of funding from the RCN – 15 per cent – followed by the Norwegian Institute for Urban and Regional Research (NIBR) with 6 per cent. Neither of these research

institutes was included in the evaluation. In contrast, three of the units selected for evaluation are not listed as recipients of funding from the RCN during the 2001-2008 period¹²: the Department of Community Planning at UiT, the Department of International Environment and Development Studies, Noragric at UMB and the Faculty of Agriculture and Information Technology at HiNT.

2.6 Overview of scholarly publications

NIFU has produced a background document for the evaluation panel on scholarly publications in geography in Norway during the 2004-2008 period. This section is mainly based on that document. The entire analysis is found in Appendix 6.

As mentioned above, several researchers at the selected units were excluded from the evaluation due to the fact that they were on a leave of absence or had not submitted publications, etc. A few persons were also miscategorised in the first place and did not actually fulfil the criteria for inclusion in the evaluation. The selected researchers at HiNT had few publications registered in the Frida and ForskDok databases which were used for the publication analyses; therefore HiNT is *not* part of publication analyses presented in this section. Thus, the analyses encompass scholarly publications from *53 of the 57 researchers whose work the panel has reviewed (1-2 publications)*. When limiting the search to publications by these 53 researchers, the sample consists of *313 publications*.

Fact box 3: Data sources for publication analyses

The analyses are mainly based on the Frida and BIBSYS ForskDok publication databases and limited to the 2004-2008 period. These are two different registration systems for scientific publications employed by Norwegian universities and higher education institutions. The units themselves register publications in these databases, which have become vital components of the performance-based funding of Norwegian higher education institutions.

Thus, the analyses are *not* based on the comprehensive publication list compiled for the evaluation. The only exception is Agder Research, which is not included in the Frida and ForskDok databases. Test comparisons with publication lists provided by the departments evaluated indicate small discrepancies between the data for performance-based funding and the geographers' individual publications lists.

Journal profile: A broad range of English-language journals

During the 2004-2008 period, the 53 researchers included in the publication analyses published a total of 184 journal articles in 101 journals. Of these journals, 69 were used for

¹² This does not mean that the units did not apply for funding from the RCN for human geography research.

only one article. The four most frequently used journals are *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, *The Holocene*, *Geografiska Annaler: Series B, Human Geography* and *GeoJournal*. These journals account for 23 per cent of the articles published during the period (43 of 184 articles). Thus, Norwegian geography researchers publish in a wide range of journals that cover a broad range of topics, such as the Third World, landscape, climate, gender and geology issues. Thirty per cent of the journal articles are in highly ranked journals (level 2 in the indicators for performance-based funding for Norwegian higher education institutions).

Differences between departments

Of the total publication output (journal articles, monographs and book chapters), 35 per cent is in level 2 publications, which is considerably higher than the defined 20 per cent threshold for level 2. However, there are large differences in level 2 publishing between the departments. Four of the evaluated departments (UMB, UiB, NTNU and UiO) have a very high percentage of level 2 publications (36-56 per cent), whereas the remaining departments (UiT and UiA/Agder Research) have a low percentage (10-13 per cent).

Fact box 4: Level 1 and level 2 publications

In Norway, publication channels have been divided into two levels – level 1 and level 2 – since 2003-2004. The rationale for introducing this system was to encourage publishing in the most prestigious and demanding publication channels within each field of research. The highest level, level 2, includes only the leading and most selective journals, series and book publishers, and may not account for more than about 20 per cent of global publications in each field of research. For an overview of the rating of geographical publications, see Appendix 5.

Final decisions regarding the rating of publications are made by qualitative judgment and consensus among peers in a process organised at the national level by the universities themselves. The classification of publications as level 2 publications is revised annually, in collaboration with the national councils in each discipline or field of research and the National Publishing Board. Bibliometric statistics (world production vs. national production in channels at both levels and citation statistics for publication channels) are used as an aid in this process, not as standalone criteria. Still, the system is rather controversial. The publication indicator reallocates only two per cent of the total expenses of the higher education sector.

Language: 83 per cent of publications in English

The proportion of the total publication output (journal articles, book articles and monographs) written in English does not vary between the departments in the same way as the proportion of level 2 publications. All institutions except UiT (40 per cent) have a very high percentage of publications in English (between 74 and 100 per cent). In total, 83 per cent of the studied publications are in English, 16 per cent in Scandinavian languages, and

only 0.6 per cent in other languages. The total proportion of publications in English has on average been high during the entire period evaluated, and has not systematically increased over time.

Increased co-authorship

Sixty per cent of book articles, 67 per cent of monographs and 69 per cent of journal articles are co-authored, i.e. they have more than one author. There has been an increase in the proportion of publications that are co-authored from 2004 (61 per cent) to 2008 (71 per cent). The panel finds substantial differences in co-authorship percentages across departments, varying from 44 to 82 per cent.

Differences between researchers

The average annual number of publications per researcher varies during the 2004-2008 period. The peak years for article equivalents are 2004 and 2008, with 1.11 article equivalents¹³ per researcher.

There are large variations in publication activity, both between researchers and between departments. Of the geographers, 5.7 per cent have no article equivalents during the 2004-2008 period and 15.1 per cent have article equivalents below two. Thirty-eight per cent have two to five article equivalents, 38 per cent have five to 10 article equivalents, and 3.8 per cent (two researchers) have more than 10 article equivalents. The average article equivalent per researcher for the 53 evaluated geographers was 4.5 (0.9 per year). Noragric has a very high number of article equivalents per researcher, but as only three of the department's researchers are included in the analysis, a comparison with other units may not be fair.

There are no major differences in article equivalents between academic positions, but full professors have a better article equivalent profile than associate professors. Although there were few researchers in other academic positions incorporated into this evaluation, they have a higher number of article equivalents than both full and associate professors. The highest average publication activity is found in the age group 30-39 years, and productivity decreases with age. Women geographers appear to be somewhat more productive than their male counterparts: 47 per cent of women and 39 per cent of men have more than five article equivalents during the period. The average number of article equivalents is also higher for women geographers than for men (five for women and 4.3 for men).

Physical geographers compared to human geographers

The publication profiles for physical geography and human geography are quite different. Four of the 53 researchers included in the evaluation work in physical geography. These researchers on average have more publications than those in human geography. Moreover,

¹³ See explanation in Appendix 6.

their publications are mostly journal articles with many co-authors, and all of their publications are in English. Due to the many co-authors, they score much lower on article equivalents¹⁴ than on number of publications. Their publications appear to be focused predominantly on climate issues, e.g. ice and glacier research.

Physical geographers do not publish in the same journals as human geographers. Examples of their journals are: *Boreas*, *Climate Dynamics*, *Earth and Planetary Science Letters*, *Geomorphology*, *International Journal of Climatology*, *Quaternary Research*, *Global and Planetary Change* and *The Holocene*. Physical geographers also publish in *Norsk Geologisk Tidsskrift* and *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*.

2.7 Summary of background statistics

The units included in the evaluation had 72 researchers with a Master's-level degree in geography¹⁵ per 2007, and 327 academic personnel in total. There were 46 researchers with professor-level competence in geography. The average age of the geographers was 41.5 years. The geographers were younger than the average research personnel in the selected research units – independent of type of position. There appears to be a sufficient number of younger researchers to fill the positions of the older professors when they retire. Women comprised 47 per cent of the geographers, which is higher than the average for all personnel at the selected units. The panel observes that the proportion of women is quite high compared to other Nordic countries.

The major funding source for geography research is general university funds, – constituting between 69 and 85 per cent of the total funding in human geography during the 10-year period from 1997 to 2007. Funding from the Research Council of Norway was the largest external funding source – constituting between 12 to 24 per cent of the R&D expenditure. Other funding sources accounted for only a small proportion of funding for research in human geography.

Norwegian geography researchers publish in a wide range of journals covering numerous topics. All of the university units with the exception of UiT have a very high proportion of publications in English. Thirty per cent of the journal articles are published in highly ranked journals (level 2 in the indicators for performance-based funding for Norwegian higher education institutions). The proportion of level 2 journals varies substantially between the units. UMB, UiB, NTNU and UiO have a very high percentage of level 2 publications.

The number of co-authored publications has increased from 61 per cent in 2004 to 71 per cent in 2008. The panel finds substantial differences in co-authorship percentages between

¹⁴ See explanation in Chapter 1.

¹⁵ Defined as scholars with a Master's-level degree in human or physical geography.

the departments, ranging from 44 to 82 per cent. With regarding to publication, women geographers appear to be somewhat more productive than their male counterparts.

The panel underscores that limited attention has been given to the statistics and that publications, interviews and information from the units themselves have played a far more important role in the assessments presented in Chapter 3, 4 and 5.

3 Unit profiles

This chapter provides descriptions of each the units included in the evaluation: background, research profile, funding, collaboration, research output, researcher training and recruitment. In addition, some specific reflections and recommendations related to the individual units are provided. The evaluation of the research according to subfield is found in Chapter 4.

3.1 Norwegian University of Science and Technology (NTNU): Department of Geography

Background

The Department of Geography in Trondheim was established in 1975 at the College of Arts and Sciences (den Allmennvitenskapelige høgskolen, AVH), part of the University of Trondheim. In 1996, the University of Trondheim was merged with the Norwegian Institute of Technology (NTH), and the Department of Geography became part of the new Norwegian University of Science and Technology (NTNU).

The Department of Geography at NTNU has 15 permanent staff members (33 per cent women) who are included in the present evaluation. Two of these are physical geographers. The department offers Bachelor's and Master's degrees in human geography, as well as a Master's programme in development studies. The department also has a Ph.D. programme in geography and teacher education in geography. There are 13 Ph.D. students affiliated with the department, as well as 18 external Ph.D. students.

Research profile

In its self-evaluation, the department lists five areas of research in which there are at least two geographers: (1) *Development and social change in the South*, (2) *Urban, rural and regional research*, (3) *Landscape and society*, (4) *Physical geography*, and (5) *Geographical information systems (GIS)*. In addition, specific projects are developed within and across these five research areas. At present, the two dominant projects are "VulClim", which studies physical and social vulnerability of places in light of climate change, and a project studying *forced migration* in connection with war and conflict, environmental problems and catastrophes. Viewed from the outside, the research profile of the department appears to have emerged from three areas of strength: regional development, development studies and landscape studies.

The department has a very broad profile and is probably the most comprehensive geography department in Norway. Such diversity has both advantages and disadvantages.

One disadvantage is that it may lead to fragmentation and to the development of breadth at the expense of depth. Although the department seems to have efficient research teams, a certain portion of the research is rather individualised. Nevertheless, the department demonstrates a willingness to make creative use of the internal diversity. A new strategic project – “Thinking geographically about house and home” – seeks to link a variety of issues. The project addresses a range of topics, such as identity, place, security, the environment, health and risk, and the ambition is to draw upon theories and methodologies from both human and physical geography. The project attempts to overcome the difficulties of making the different aspects ‘talking together’, for example in relation to the concept of scale. While the ultimate results of the project still remain to be seen, the panel came away with the impression of a collaborative department that is working to exploit its academic resources in an innovative way. In the panel’s view, this initiative might lead to greater focus within the thematic diversity.

The research carried out at the department is well-grounded in international theoretical debates; several publications review theories and concepts and translate them into the Norwegian context. Looking at the research profile and the publications, the dominant impression is one of theoretically-informed empirical work that focuses more strongly on theory use than theory production. The exceptions here are the contributions to the development of Nordic landscape geography and emerging contributions within social and cultural geography. Methodologically, much of the department’s research is conducted within a qualitative tradition, including participatory methods in collaboration with local organisations. There are strong, but isolated, methodological contributions in cartography/GIS and modelling of housing markets. A challenge for the department is to incorporate cross-cutting epistemological and methodological discussions into its new initiatives.

Research output

The department has quite a satisfactory publication output. According to the publication analyses, the article equivalent per researcher during the 2004-2008 period was at the upper end of the scale for the Norwegian geography departments. The general publication profile is broad. Publication appears to be targeted more and more towards international refereed journals; this is particularly true for younger members of staff. The major publishing channel is *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*.

Collaboration: local, national and international

The department has taken action to increase internal collaboration, and the project “Thinking geographically about house and home” involves most of the researchers in the unit. The department has documented research collaboration at all levels, from other departments at NTNU to research institutions at the regional and national levels, and from public authorities at the municipal, regional and national levels to development agencies and foreign universities. A substantial amount of research is orientated towards application

in the public sector in Norway or in development policy. However, participation in international research teams contributes to more general knowledge production. In particular, the department's contribution to landscape studies is widely recognised, also outside Norway's boundaries.

Funding

In 2008 the financing of the department was 78 per cent basic funding and 22 per cent external funding – most of which was provided by the RCN.

Researcher training and recruitment

The department has a well-considered Ph.D. programme which includes mid-term and final seminars, and the students participate in seminars in the different research groups. However, the programme is somewhat lacking with regard to thematic courses and ongoing ontological and epistemological discussions.

In terms of recruitment, the department is placing increasing emphasis on selecting Ph.D. students who “fit” with existing research areas and projects. This strategy has advantages and disadvantages. It incorporates the students into existing environments, but it also tends to reproduce existing research at the expense of renewal. A lack of post-doctoral positions is an obstacle to the recruitment of candidates who have completed their doctorates.

Summary statement

The department has achieved considerable growth in the quantity, quality and breadth of research topics, taking into consideration that it is the youngest of the three large university departments of geography. It is the largest in terms of Ph.D. output and academic staff. The diversity of research areas has both advantages and disadvantages, as some of the areas may be too small to support an active research cluster. The department has partly overcome this problem and demonstrates that intellectual challenges may be found in the interface between different research clusters. Younger members of the department have made a remarkable and successful effort to create a department-wide research project – “Thinking geographically about house and home” – in which researchers from a range of fields, from cultural geography to physical geography, engage in theoretical and empirical interaction. The department has good publication performance. The department hosts the ISI-indexed *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, a factor that may contribute to its high publication rate. However, the younger members of staff in particular target a wide selection of international journals.

Recommendations and reflections

- The department should pay attention to that conducting research on a broad range of topics may result in a lack of focus.

- The department could increase the number of publications in journals other than *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*.

3.2 University of Bergen (UiB): Department of Geography

Background

The first scientific position in geography in Bergen was established at the Norwegian School of Economics and Business Administration (NHH) in 1936. Geography was established as a discipline at UiB in 1964. From 1969 to 2004 the two institutions had a joint department of geography. The department has been part of the Faculty of Social Sciences at UiB since 2005 and encompasses both human geography and physical geography. The structure of research (and teaching) activities presented below is fairly new, reflecting the fact that the department has recently been reorganised and a new head of department appointed. The reorganisation of the department is due, in part, to a generational shift among the staff. Twelve researchers are incorporated into the evaluation, two of whom are physical geographers.

The Department of Geography offers Bachelor's and Master's degrees in geography, as well as a Master's programme in Resources and Human Adaptations. The Ph.D. programmes in geography and system dynamics are organised under the Faculty of Social Sciences. As at 2008, there were 14 Ph.D. students in geography.

Research profile

In its self-evaluation the department characterises itself as a traditional department covering a range of topics, from physical geography to human geography. The emphasis is on the following five areas of research or subfields: physical geography, environment and landscape, development geography, economic geography and system dynamics. In addition there are some activities in the fields of GIS and cartography, and geography teaching (didactics).

These research areas are divided into three thematic priority areas: (1) *Climate change, landscape and environmental change*, (2) *Resource management and social change in developing countries*, and (3) *Economic geography, regional development and identity*. The first thematic area brings together researchers from the subfields of physical geography and environment and landscape. The second area involves researchers in development geography and environment and landscape, and the third primarily involves economic geographers.

System dynamics is a research area that was transferred from the Department of Information Sciences and Media Studies a few years ago. The rationale for doing so is not clear to the panel. The system dynamics group is fairly large (not least in terms of Ph.D.

students) and has a strong emphasis on methods of system analysis (applied in areas such as development planning, natural resources management and teaching methods). In terms of methodology, the group makes extensive use of tools such as simulation, laboratory experiments, optimisation, estimation and knowledge elicitation. The head of department expressed the view that system dynamics has the potential to support all three thematic priority areas, but the panel's impression is that this is not at all the case at the moment, and it is likely that certain research areas will benefit more than others from system dynamics in the future as well. System dynamics is not encompassed by this evaluation of Norwegian geography. However, it appears that a major challenge for the future development of the department in Bergen will be to integrate system dynamics into the overall strategy of the department and the various research groups.

Twelve researchers with a permanent position at the department are included in the evaluation. This means that the number of persons in each of the four subfields (excluding system dynamics) is small: two persons in physical geography, three in environment and landscape, four in development geography and three in economic geography (as well as one in the process of being recruited). The thematic priority areas thus encompass five to six researchers each, with some overlap, particularly between the first and second areas listed above.

Research output

Based on the self-evaluation, publication analyses and interview with representatives of the department, the general impression is that research activities hold a fairly high standard in terms of publications, projects and collaboration with external research groups, especially considering the small number of persons involved. Compared to the other large geography departments (in Oslo and Trondheim), the article equivalents per researcher in Bergen between 2004 and 2008 is slightly higher when the scores have been adjusted for research capacity and articles included in dissertations. It is also clear from the individual CVs that certain highly-productive individuals contribute greatly to these figures. The proportion of level 2 publications is also high (50 per cent). In human geography, most of the articles are published in *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography* (six articles during the 2004-2008 period), whereas in physical geography, most of the articles are published in *The Holocene* (nine articles). As in most of the other geography departments, the number of co-authored articles and book chapters is increasing, but the level of co-authorship at the department at UiB does not appear to be very well developed. However, this should not necessarily be perceived as a weakness, as a high degree of specialisation often requires external rather than internal cooperation. Co-authorship with high-profile researchers in other countries is a successful strategy pursued by some of the researchers at the department.

Collaboration: local, national and international

All of the research groups participate in international collaboration, particularly researchers in physical geography and economic geography. This is also reflected in the co-authorship of journal articles and book chapters in international publications. The researchers are also involved in joint projects (and co-authorships) in Norway. There is a substantial amount of cooperation with local and regional organisations in the subfield of economic geography in particular. Geographers also have a long tradition of working at (and working with) the Institute for Research in Economics and Business Administration (SNF) in Bergen. At the regional level, the department also cooperates with the Bjerknes Centre for Climate Research (BCCR) and Chr. Michelsen Institute (CMI).

There appears to be potential for greater internal cooperation between some of the research areas, which the department itself points out in its self-evaluation. For instance, the already existing links between economic geography, development studies and environment and landscape could be further strengthened. The recent reorganisation of the department may perhaps help to increase coherence at the department in terms of joint seminars and joint project proposals. At the moment, cooperation between the various subfields appears to be better developed in teaching activities. One important precondition for increasing interactivity between the researchers in different areas (including the Ph.D. students) in the future is that the department has the capacity to physically house all of its staff members – a problem that is addressed in its self-evaluation.

Funding

Information about research funding is a bit contradictory, but according to one source (see Figure 2.1) it appears that the geographers at UiB lag far behind the geographers at UiO (and the geographers at NTNU) in terms of funding from the RCN during the 2001-2008 period (in human geography). On the basis of the data sources available to the panel, the panel cannot ascertain whether this is due to a low hit rate or to the fact that many fewer grant applications have been submitted to the RCN. However, according to the self-evaluation, the funding situation is described as satisfactory for all three thematic priority areas. Nevertheless, it is clear that human geography in Bergen could work to increase its share of RCN funding.

Researcher training and recruitment

According to the self-evaluation, the Ph.D. programme encompassed some 14 Ph.D. students in geography at the end of 2008 (and an additional 10 Ph.D. students in system dynamics). As in the other departments with a Ph.D. programme in geography, most candidates use more time to finish their dissertation than stipulated. The self-evaluation mentions this as a problem to be addressed in the future. As in other Ph.D. programmes in Norway, the courses are 30 credits. Roughly one-third of the courses in the programme are in the various subfields of geography, one-third are in methodology and one-third are in theory and the philosophy of science. Judging from the interview with the Ph.D. students

there is now a greater focus on how to organize the Ph.D. programme at the department than has previously been the case. This includes an attempt to integrate the Ph.D. students associated with the various research groups into a cohesive group of candidates and to structure coursework more coherently. Placing the group of Ph.D. students under the same roof will be crucial to the success of this endeavour. The majority of Ph.D. candidates are recruited from UiB, although positions are advertised at the national level. At the moment positions are not advertised at the international level.

Summary statement

Although it is difficult to make a conclusive assessment, the general impression is that traditional or “old school” geography has had a stronger foothold at UiB than at the other geography departments in Norway and that new theoretical and methodological approaches have come to the fore more recently in Bergen. Today the department produces high-quality research and has several research groups involved in international cooperation and a large number of research publications, particularly in physical geography and economic geography. The department mentions in its self-evaluation that there is potential for increased internal cooperation; the panel agrees with this assessment. There are few indications of cooperation between the various research clusters, and the recent transfer of the system dynamics research group to the Department of Geography adds to the impression of a rather fragmented department.

Recommendations and reflections

- The department should focus on measures to further integrate the various research groups, the Ph.D. students and the recently added research area of system dynamics.
- There is obvious potential for joint grant applications submitted to the RCN as a means of bringing in more external funding and as a strategy to increase cross-thematic integration in the department.

3.3 University of Oslo (UiO): Department of Sociology and Human Geography

Background

Before 1990 human geography was a section of the Department of Geography, which at that time was shared between two different faculties. In 1990 human geography was moved to the Department of Cultural Studies (*Institutt for kulturstudier*). In 1994 the section of human geography was made a special unit under the Faculty of Social Sciences, and in 1996 human geography and sociology were merged to form the new Department of Sociology and Human Geography (ISS) under the Faculty of Social Sciences.

As of 2008, the section's staff included nine human geographers at professor level and one post-doctoral fellow. The department offers Bachelor's and Master degrees in human geography, as well as a Master's programme in development geography. The department also has a Ph.D. programme in human geography. Nine Ph.D. degrees were awarded during the 2004-2008 period.

Research profile

Human geography at UiO is divided into five subfields: urban geography, development geography, economic geography, political geography and environmental geography. These are further grouped into two areas of core expertise (*kjerneområder*): (1) *Development, politics and the environment* and (2) *Urban and regional studies*. The renewal of human geography at UiO has primarily resulted from advances in development geography (*utviklingsgeografi*). In the 2000s in particular, input from political geography and environmental studies has enriched development geography at UiO. Economic geography has historically been a stronghold of the university, and continues to be so today in certain areas. Research concentrating on the city of Oslo and its surroundings (*Osloforskning*) is also rather well developed.

As mentioned above, development geography has long been a strong, central subfield of human geography at UiO, and significant advances were made in the 2000s. The statistics from the period of evaluation (2004-2008) show that seven of nine doctoral dissertations were empirically linked to developing countries, mostly in Africa. Since the 1990s, political geography of the Global South has also become a key area of renewal. This subfield concentrates on studying local conditions for decision-making in the target countries, particularly signs of and obstacles to democratisation. This orientation, with its explicit normative goals (for democracy and human rights, etc.), has been addressed and debated in forums for Anglophone political geography. It also offers a sharp critique of the current general indifference to theories of democracy in Western orientations (see Stokke 2009; 2010).

Environmental research is a strong subfield today. Although it includes studies in a Norwegian setting, it is globally orientated, examining the impacts of climate change, particularly in the context of developing countries. It is surprising that environmental geography has become a key area of renewal at UiO, given the institutional division of human geography and physical geography in the 1990s (when the latter became part of the Department of Geosciences). However, physical environmental questions are being re-introduced into human geography on a new basis: questions of hybrid character are being studied primarily within a social scientific framework. This has resulted in several noteworthy research projects and publications that are also highly relevant internationally. Here, the researchers utilise and develop broad local-global approaches by linking general issues of climate change and globalisation with local issues of social vulnerability and adaptation. This research area is full of fresh ideas and potential, also in terms of theoretical renewal.

Urban geography also has a sound standing at UiO. This research group actively participates in the debate on urban policy in Norway and the more general discussion about the latest trends in urbanisation. Empirical, and mostly quantitative, urban research on the capital city has been conducted in the early 2000s (2001-2004), detailing, for example, the formation of electronic spaces, income inequality and social segregation. In addition, urban geographers at UiO have more recently become involved in a broad Nordic project on ethnic migration issues (NORFACE: Migration in Europe 2009-2013).

Based on these areas of emphasis, geographers at UiO have in practice followed a dual strategy in which local development questions are researched in detail both in domestic forums, especially in connection to the Oslo region, and in developing countries. Although the localist orientation is clearly a strength of the university's geographers, it has resulted in a slight disregard for the linkages and dependencies between the developed North and the developing South. The decision to bypass multiscalar globalisation is, of course, a strategic choice. Due to its rather small size (nine scholars in permanent positions), the unit has to carefully direct its research resources and cannot cover every topic from the local to the global.

Research output

In general, the human geographers at UiO have participated rather extensively in the international Anglophone debate in their respective fields of expertise. Several noteworthy international books, mostly anthologies, and book chapters have been published during the evaluation period and the level of publishing activity in key journals is very high. The largest number of publications has been published in *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, *Global Environmental Studies* and *Die Erde* (three articles in each). In addition, researchers have published valuable contributions in journals such as *Ambio*, *Antipode*, *Climate Policy*, *Climatic Change*, *Forum for Development Studies*, *Environment and Planning A*, *Geographical Journal*, *Geojournal*, *Global Environmental Change*, *Journal of Economic Geography*, *Tidsskrift for Samfunnsforskning*, *Third World Quarterly* and *Urban Studies*.

In general, the proportion of publications in level 2 journals is fairly high (37.5 per cent). However, the total number of article equivalents per researcher is lower than at the other universities, with the exception of UiT, which is a sign of uneven distribution of individual publishing activity among the UiO geographers.

Collaboration: local, national and international

Active researchers affiliated with the human geography section meet for breakfast seminars three or four times per semester, which is important for internal cohesion. In addition, the open lunch culture and the Midvit-gruppen (a group that promotes social and

free-time collaboration) are not only popular among the younger researchers, they also ensure further continuity and renewal.

Cooperation with the other geography departments and regional research centres in Norway is rather well developed, and the human geographers are slowly increasing contact with the sociologists at UiO within the framework of the Department of Sociology and Human Geography. Internationally, the human geographers have well-established links to selected universities in developing countries. There is extensive contact with geography research environments in Western countries, although not across the board. Some human geographers at UiO systematically favour collaboration with domestic circles, which is, of course, important from the point of view of local society-university relations. A recently launched initiative with China, *Kinasatsning*, is promising.

Researcher training and recruitment

The Department of Sociology and Human Geography regularly organises common courses for Ph.D. students covering both sociology and geography to support the work of the research fellows. The department awards one fellowship in human geography a year for four years of doctoral studies. This includes teaching duties equivalent to approximately one work year. There are approximately 10 applicants for the fellowship each year, most of whom have a degree in human geography. Fellowship positions are advertised nationally, but the department generally favours students at UiO. Applicants from UiB and NTNU only occasionally apply for and win positions.

Funding

Political geography and environmental geography have succeeded well in obtaining external funding and launching projects, clearly reflecting the current renewal trends at UiO in general. Thanks to highly-motivated students, among other factors, urban geography and economic geography have significant potential to obtain more external funding; however, there was only limited success in this respect during the evaluation period.

The future direction of human geography at UiO will depend in great part on success in applying for external funding. In comparison to the other geography departments in Norway, the Oslo geographers have been successful in winning grants, especially from the RCN. It is crucial that the unit expands its project profile in the near future, particularly in urban geography and economic geography.

Summary statement

In general, recent developments in human geography at UiO have been led by a few individual researchers who have gained a distinguished position in international forums. The leading human geographers in Oslo have proven their ability to participate in and influence international geographical renewal.

However, research in urban geography and economic geography appears to have suffered during the evaluation period, with some temporary decline in project promotion which is in striking contrast to the strong interest in urban issues among the students. Only a few internationally significant contributions have been made by researchers in these subfields.

Human geography at UiO has been able to focus on its strengths. However, the division into two core areas seems slightly artificial and does not appear to take into account the actual development of expertise. In addition, this division into two areas may easily become an obstacle to creating constellations of hybrid geographies in the future. Ideas that do not suit the strategy could, in the best case, be substantially modified or, in the worst case, simply discarded.

Recommendations and reflections

- The panel recognises that human geography in Oslo has special potential for further developing the field of urban geography, a field which is on the whole highly underrepresented in Norwegian geography.

3.4 Agder (University of Agder and Agder Research)

Background

The Faculty of Economics and Social Sciences at the University of Agder (UiA) consists of five departments and a research centre. It was formerly the department of economics and social sciences at Agder University College, which obtained university status in October 2007. Before the university college reform in 1994, the faculty was part of Agder Regional College in Kristiansand, which was established in 1969. Agder Research was established in 1985, and is one of Norway's 12 regional research institutes, with offices in Kristiansand and Arendal.

UiA and Agder Research both have a small number of geographers, and the units themselves requested to be evaluated together. The RCN and the evaluation panel have agreed to this. There are nine researchers evaluated in the joint Agder unit: six at UiA and three at Agder Research. There is a history of strong links between UiA and Agder Research, not only between geographers but in the social sciences in general. This means that individuals may be affiliated with or have a history at both institutions. The geographers at UiA are affiliated with three different departments: the Department of Working Life and Innovation, the Department of Political Science and Management, and the Centre for Development Studies. This means that the geographers in Agder do not belong to a common research group; they are located instead in various cross-disciplinary environments.

The Faculty of Economics and Social Sciences at UiA offers a variety of Bachelor's and Master's degrees in the social sciences, including a degree in Development Management, as well as Ph.D. programmes in International Management, Information Systems and Public Administration. There are no "pure" geography programmes at UiA, Ph.D. or otherwise. However, two staff members earned their Ph.D. degrees at NTNU while affiliated with UiA part-time during their Ph.D. training. Agder Research is an applied research institute, and does not have any students.

Research profile

The geographers at the two institutions present very similar research profiles in their respective self-evaluations. UiA emphasises three research areas in its self-evaluation: (1) *Development research*, (2) *Regional production and innovation systems*, and (3) *Culture, governance and political geography*. Development research is strongly linked to economics, political science and information science. Regional production systems and innovation systems is mainly related to fields such as economics, working life research and organisation research, whereas the third area is primarily linked to political science, media and the humanities. Agder Research has nearly identical research areas; the first two have the same names as those at UiA, while the third is entitled Cultural and social geography, with a particular focus on migration.

It is important to emphasise that there are no plans at the moment to establish a common research platform or organisational basis for geography as a discipline in Agder. The emphasis will continue to be on geographers participating in different, and relatively separate, cross-disciplinary research groups.

Development studies in Agder hold a strong national position in the research field. The geographers have been involved in studies on political and economic development (including the impact of ICT) in Third World countries, more recently in Indonesia, but also in Tanzania, Ethiopia and Sri Lanka.

Cultural and political geography in Agder is the smallest research area in terms of active researchers. Regional development, regionalisation and governance comprise one important topic; research in this area has been closely linked to local, regional and national public debate. Another research topic is concerned with migration and ethnic minorities.

The strongest of the three research areas in Agder appears to be regional production systems and innovation. According to the self-evaluations, UiA and Agder Research consider themselves to be the leading research environment in this field in Norway. This position is, among other things, manifested in a recently established joint research centre: Advanced Studies in Regional Innovation Strategies. Although it is cross-disciplinary, this research area and its development rely to a great extent on the work of geographers. The area is primarily linked to the subfield of economic geography, but is also related to organisation theory, network theory, innovation and policy research. At the same time, it

should be noted that this means that the scope of economic geography is more narrow in Agder than at the larger geography departments in Norway.

Research output

The group of geographers at UiA, as an aggregate, scores high in terms of article equivalents per researcher during the 2004-2008 period. UiA is second only to UMB in terms of productivity. It should be noted, however, that the high publication score depends rather heavily on a few individual researchers within the group. Agder Research has a lower score, which probably reflects the fact that the centre primarily conducts contract research and therefore produces reports rather than scientific publications. The proportion of level 2 journals is fairly low at both institutions, at least compared to NTNU and UiB. The level of co-authorship is relatively high in the case of UiA, and a little lower in the case of Agder Research.

Collaboration: local, national and international

Innovation research in Agder has links to many of the other geography departments in Norway, as well as to research institutes such as SINTEF and NIFU. Cultural and development research has historical links to the geography department at NTNU in Trondheim.

With regard to development research, there is cooperation with universities in Indonesia, Tanzania and Sri Lanka, whereas innovation research emphasizes their links with the geography department at Lund University in Sweden, Copenhagen Business School in Denmark and Kingston University in the UK. It is important for UiA and Agder Research to be able to offer Professor II positions and positions for guest professors.

Researcher training and recruitment

As already mentioned, there is no Ph.D. programme in geography at UiA, but a long-term goal is to establish a programme related to, for instance, regional innovation systems. In this case an international Ph.D. programme would be preferable. There is also a possibility for recruiting Ph.D. candidates with a background in geography to a broader social science programme at UiA in the future.

Funding

It is difficult to estimate the proportion of external funding, due to the fact that geographers make up only a small fraction of the staff at several departments at UiA. In general, the relatively weak internal funding at UiA means that researchers rely heavily on external funding. The most important external funding source is the RCN. Researchers in the field of regional innovation systems have been particularly successful in obtaining funding during the evaluation period. The Norwegian Centre for International Cooperation in Higher Education (SIU), through the NUFU programme plays an important role in funding development research, but the Norwegian Agency for Development Cooperation (Norad)

and the Ministry of Foreign Affairs also contribute in this regard. Regional sources have provided a significant amount of funding for research on culture, governance and political geography, and counties and municipalities in the region have made contributions as well. Agder Research depends almost completely on external funding, and has been successful in launching more long-term projects in recent years.

Summary statement

The geographers in Agder are divided among many units: Agder Research and three departments at UiA . It is therefore difficult to evaluate Agder as a unified geographical research environment. Nevertheless, the impression is that the geographers play an important and active role in their respective units or research groups. Although the geographers in the Agder environment cover different research areas, the research team dealing with regional production and innovation systems stands out. The representatives of UiA/Agder Research also expressed the clearest strategies for development in this field. The high publication scores in Agder mainly reflect the work of a few leading researchers within this field and the field of development research.

Recommendations and reflections

- UiA and Agder Research should secure and support the presence of geographers in their research units and work to attract Ph.D. candidates with a background in geography to the Ph.D. programmes at UiA.
- The panel supports the idea of establishing a Ph.D. programme related to regional innovation research.

3.5 University of Tromsø (UiT): Department of Sociology, Political Science and Community Planning

(Researchers from the former Department of Planning and Community Studies (Institutt for planlegging og lokalsamfunnsforskning))

Background

The University of Tromsø was founded in 1972; the establishment of a university in Northern Norway was a result, in part, of regional policy. The university was intended to have a different structure and research focus than the traditional universities in Norway. Although the university has become more like other universities over the years, there is still a strong focus on regional issues.

On 1 August 2009 the Department of Planning and Community Studies became part of the Department of Sociology, Political Science and Community Planning at the Faculty of Humanities, Social Sciences and Teacher Education. This unit was established when the University of Tromsø merged with the University College of Tromsø. (The merger

formally took place on 1 January 2009, but the new organisation was not implemented until August.)

In this report data are presented for the Department of Planning and Community Studies because the data sources used are from 2007 and the panel does not have data for the new department. The panel did, however, meet with representatives of the new department, and thus has a certain amount of information about the new unit.

In the new organisation, the researchers formerly belonging to the Department of Planning and Community Studies now form a research group within the new, larger department. The initial emphasis at UiT was on interdisciplinary studies; only recently have the traditional disciplines started to “come back”. The current research group thus consists both of geographers and of researchers with a Ph.D. degree in other fields who conduct research with a geographical perspective. Six researchers belong to the new group; the work of four of whom is reviewed in this evaluation.

The new department offers Bachelor’s and Master’s degrees in human geography, as well as a Ph.D. programme in culture and social sciences. The department also offers postgraduate studies in geographical information systems (GIS) and community planning (‘stedsutvikling’).

Research profile

In its self-evaluation the research group states that it has strength in the following eight research areas: (1) *Interdisciplinary regional perspectives*, (2) *Connections north-south*, (3) *Gender research*, (4) *Regional processes of change*, (5) *Longitudinal research*, (6) *Mobility*, (7) *Interdisciplinary theoretical discussions*, and (8) *Relations between formal and informal institutions, culture and planning*.

The submitted research publications cover migration, coastal cultures, fisheries and peasant women in Costa Rica. In the view of the panel, the strength of this research group lies in action research with a focus on the interaction between local and regional actors and administrations. Thematically, the interface between gender and cultural theory provides important perspectives.

The research group is small; six researchers are listed in the self-evaluation and the panel has only assessed research publications authored by four of these. As stated in the self-evaluation, the group is aware that the research environment is small and fragmented; there are no strong research clusters. Instead, the researchers work mostly individually or in collaboration on various research projects with other departments at UiT and with other research institutes in Tromsø and the region. In the words of one of the interviewed researchers, the members of the research group serve as a “sourdough starter”, inspiring the incorporation of a geographical perspective into many of the research projects underway rather than forming a clearly-defined geographical research environment. This

has an obvious drawback in that the research group is not visible externally. The documents and interviews did not convey an image of a creative research environment with substantial internal cooperation and a clearly targeted research strategy. However, there are good examples of collaborative work in the publication list. The group seems to be undergoing a period of change. At the time of the self-evaluation the members of the group expressed a vision for the future of strengthening research on regional and global processes of change and international comparisons and integrating new theoretical perspectives into research on culture, gender, resources and planning. There are two emerging research topics – *Place (sted)* and *Local communities and democracy* – at the new department in which the research group, with its above-mentioned strengths, can play an important role. Geographers and planning researchers may offer interesting perspectives for research on these topics, in cooperation with researchers in other fields.

The panel notes with some surprise that research on Sámi issues, which clearly have a strong bearing on some of the theoretical and conceptual approaches of the research group, does not form part of its research.

The group is rather homogenous when it comes to methods. All of the researchers mainly work with qualitative methods and ethnographic approaches. Students wishing to learn quantitative methods are usually advised to take courses in sociology.

Research output

The group has a rather poor publication record if dissertations are excluded: 2.22 article equivalents per researcher during the 2004-2008 period. It is a small group and one of the senior researchers published a dissertation during the period, so these statistics may not be a very accurate measurement of publication activities. Nevertheless, the group has an indisputably low output in international publications during the relevant period. This partly reflects the tradition in the social sciences at UiT in which interaction between the university and the region is considered to be important. Dissemination of research results in Norwegian and via local publications has therefore been an important aspect of the group.

Collaboration: local, national and international

The researchers have, as mentioned above, fruitful cooperation with other departments at UiT, especially the Norwegian College of Fishery Science (which is now part of the university) and the regional research institutes Northern Research Institute (Norut), Nordland Research Institute (Nordlandsforskning) and NIBR-Alta. They also participate in national and Nordic networks. Within the university, the department is involved in important collaboration with the multidisciplinary research school on Citizenship, Encounters and Place Enactment in the North (CEPIN). Internationally the department has links with Uganda, Roskilde (Denmark) and Århus (Denmark).

Researcher training and recruitment

There are 15 registered Ph.D. students, only five of whom are located at the department. The others are external. The five students are well integrated into the department – perhaps too well integrated in the sense that they share many of the teaching and administrative responsibilities with their senior colleagues. However, a group of five students is too small to really form a creative environment. The launching of the new research school, CEPIN, with its focus on globalisation and modernisation processes in the North has provided an important creative environment for Ph.D. students conducting research with a geographical perspective. The new Ph.D. students are generally geographers and sociologists recruited from UiT and UiO. Ph.D. positions are advertised on a Nordic basis.

Funding

According to NIFU's R&D statistics, the Department of Sociology, Political Science and Community Planning received a lower proportion of general university funding than the traditional universities (UiO, UiB, NTNU). According to the self-evaluation, a larger portion of the research conducted is funded via external sources, of which the most important are the RCN and the Nordic Council of Ministers.

Summary statement

The research group on planning and community studies at UiT is in a transformative phase. With its achievements in the areas of gender studies, cultural theory and local community studies, the group has good potential for contributing more to international research. So far it appears that extensive interaction with the local authorities and the well-motivated desire to give something back to the community have been obstacles to gaining international visibility. The recent reorganisation into a new department will hopefully increase both internal cooperation and international publication.

Recommendations and reflections

- The panel recommends that the research group develop a strategy to increase international publication.
- The panel acknowledges the potential for developing research topics with a geographical focus within the new department.

3.6 University of Life Sciences (UMB): Department of International Environment and Development Studies, Noragric

Background

The Department of International Environment and Development Studies, Noragric, developed from a centre with a focus on development cooperation in agriculture into a research centre addressing broader environmental and development-related issues. It has been a separate department at the University of Life Sciences (UMB) since 2005.

The department has a scientific staff of 21 employees and 31 Ph.D. students. It is one of several units at UMB that employs geographers, and it volunteered to take part in this evaluation, although only one of the senior researchers has a formal background in geography. The panel found the participation of the department relevant because the broad-based environment and development research carried out at the department is well-connected internationally to geographical research: Noragric researchers publish in international geography journals as well as international thematic journals in which geographers also publish. Research is also often carried out in cooperation with Norwegian and international geographers. The works of three researchers are assessed as part of this evaluation; one of the researchers has a background in geography while the others research topics of specific relevance for geography. All three researchers also participated in the interview.

The department offers Bachelor's and Master's degrees in development studies, as well as a Master's of Science in international environmental studies. The department also has a Ph.D. programme in development studies related to agriculture and the environment.

Research profile

In its self-evaluation, Noragric shows that it has a very definite idea about its research foci and contribution to relevant policy issues. Compared to the more general geography departments, the department has much more focus on research activities. They also have better financial opportunities for realising these, and a clear vision of its aims. Research activities focus on interlinkages between the environment and development, including climate change, the food crisis, impacts of globalisation on poor people's livelihoods, land tenure and conflicts, environmental governance and health in relation to the environment.

There are currently six research clusters at the department: (1) *Environmental governance and protected areas (ENGOPA)*, (2) *Conflict, human security and development (CHSD)*, (3) *Agricultural development, livelihood and environmental change (ADLEC)*, (4) *Governance and climate change (GovClim)*, (5) *Resources, risk and governance – Net*

(*RRG-Net*), and (6) *Rights, accountability and power in development (RAPID)*.

Researchers may be members of several clusters.

The strength in the research conducted at Noragric lies in perspectives from political economy, political ecology, environmental policy and governance. Methods are both qualitative and quantitative, but participatory approaches play an important role. The department points out in its self-evaluation that it has weaknesses in its approach to the global dimension of environmental development; thus far, case studies of specific countries or smaller geographical units have predominated among the projects.

Research output

The department scores high in the publication statistics and also has a very clear focus on international publication in leading journals. Researchers at Noragric have published articles in a number of leading geography journals in recent years, including *Political Geography*, *Geografiska Annaler: Series B*, *Human Geography*, *Annals of the Association of American Geographers*, *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, *Geojournal* and *Geoforum*, as well as in journals in which geographers often publish, including *Global Environmental Change*, *Human Ecology*, *Land Use Policy*, *Development and Change* and *Mountain Research and Development*. The three researchers incorporated into this evaluation have a pronounced international profile, and the publications from Noragric contribute substantially to the visibility of Norwegian geography internationally.

Collaboration: local, national and international

Internal cooperation is based on the clusters. In addition, the department holds weekly seminars at which internal and guest researchers present their research and an annual seminar at which all scientific staff participates. Noragric has extensive international collaboration with partners in the South, as well as with similar research environments in Europe and the US. Its main European counterparts are Roskilde University in Denmark, and IDS in Sussex and IIED in London, UK. When it comes to cooperation within Norway, the department's main links are to the Norwegian Agency for Development Cooperation (Norad), the Ministry of Foreign Affairs and various NGOs, and only to a lesser extent to other university departments of geography or other disciplines. It should, however, be noted that Noragric researchers co-author with geographers at NTNU (Ragnhild Lund) and UiO (Kristian Stokke). Nevertheless, the department is not well integrated into the Norwegian geography community as a whole. As Noragric is involved in fruitful international collaboration, this has not been detrimental for them, but it appears that the Norwegian geography community in general has not taken advantage of the opportunity to cooperate with Noragric. A few individuals move to or from Norwegian geography departments, but the numbers are small compared to the broad international recruitment at Noragric.

Funding

According to R&D statistics and the self-evaluation, Noragric received close to 60 per cent of its funding in the form of general university funding, and the rest from external sources. Noragric's framework agreement with Norad is the department's single largest external source of funding. According to the self-evaluation and the interviews, the department does not lack funding. Applying for EU funding is considered too time-consuming and complicated, and is therefore not given priority.

Researcher training and recruitment

The department has at present 31 Ph.D. students and has in the past had an output of between two and four Ph.D. graduates a year. The Ph.D. students seem to be very active and well integrated into the research environment. They are required to present their research at seminars three times during course of their Ph.D. studies.

Summary statement

Noragric is a strong, internationally recognised research environment that plays an important role in the broader field of geography research in Norway. Researchers at the department publish in geographical journals as well as in journals in which geographers also publish, and carry out research on questions of central importance to international geography. The department's main networks of contacts are in the international research community and the countries in which the researchers conduct fieldwork, mainly in the Global South. There is great potential for increased contact between Noragric and the Norwegian geography community at large.

Recommendations and reflections

- The department is an important centre for research on key topics in international geography. Greater contact and interaction between the department and the geography environments in Norway would be beneficial for the internationalisation and development of Norwegian geography.

3.7 Nord-Trøndelag University College (HiNT): Faculty of Agriculture and Information Technology

Background

Nord-Trøndelag University College (HiNT) is a multi-campus organisation. Located on Steinkjer Campus, the Faculty of Agriculture and Information Technology was formerly the Faculty of Social Sciences, Business and Nature (Afdeling for samfunn, næring og natur). Until the university college reform in 1994, the faculty was part of Nord-Trøndelag Regional College in Steinkjer, which was established in 1980.

The geography unit at HiNT encompasses five academic positions (as well as four teaching positions). Only one of the academic staff holds the title of associate professor in geography. The faculty offers a Bachelor's degree in human geography, but does not have a Master's or Ph.D. programme.

Research profile

HiNT is a university college, with apparently no ambitions to obtain university status. In its self-evaluation the unit lists three major areas of research: (1) *Culture and experience economy*, (2) *geographical information systems (GIS), in particular applied to analyses of environmental vulnerability*, and (3) *Geographical didactics and e-learning*. The unit also has a general emphasis on *regional development*.

From a research perspective this appears to be a very broad profile for a relatively small group. However, the profile reflects the fact that the unit is part of a university college that is largely orientated towards teaching, and it is also a function of the topics of three Ph.D. projects currently underway at the unit. A regional college of this kind will nearly always focus on applied research and teaching. However, the unit has been able to develop a niche in emerging research on experience economy in collaboration with other research institutions within the region. The cross-institutional research team formed around this subject appears to be at the forefront in Norway. A project funded by the RCN on studies of festivals laid some of the groundwork for the initiative. The empirical work in the project is locally embedded, in keeping with the general strategy of the university colleges of conducting practice-orientated research. The panel appreciates this initiative as well as the unit's effort to support the upgrading of the staff's competence level by offering opportunities for the production of Ph.D. dissertations. The goal is to reach the number of four staff members with the title of associate professor within the next five years.

While the theoretical ambitions expressed in the reviewed publications are isolated attempts within very different fields, there seems to be a more collective effort within the research team in the field of experience economy. The contribution of the geographers deals with the perspective of place in terms of cultural heritage and the way in which tourism, festivals and other cultural events participate in the construction of place – how they are “performing places”. There appears to be a certain ambivalence regarding the theoretical work; on the one hand, there is a wish to develop a specific approach to the issue, and on the other hand, there is a pragmatic recognition that the research framework does not allow room for basic theoretical work. The unit, being small, does not hold formal research seminars, but informal discussion is quite common, in particular around methodological questions.

Research output

The current publication profile reflects the problems of an institution focused on teaching and applied research. Production is low and dominated by locally-orientated reports. None

of the publications submitted for evaluation (from the 2004-2008 period) are in English, few are registered in Frida/ForskDok, and most of the researchers submitted only one publication. This publication profile is not unexpected given that the unit is part of a regional university college where teaching and locally-orientated and applied research comprise the main focus.

Collaboration: local, national and international

Research collaboration within HiNT and with other research institutions in the region is emerging, which may be a way of ensuring the regional orientation of research and fulfilling the need for more viable research teams. Collaboration at the international level includes participation in Interreg projects and contact with Danish research environments within experience economy. A major contribution of the unit is, beyond a doubt, its input to regional development in the local context.

Funding

In 2007, 54 per cent of the funding for the Faculty of Agriculture and Information Technology, of which the geography unit is a part, was provided by basic funding, and the remainder by external funding sources. Given the fact that the unit has a heavy teaching load, research activities at the unit are in essence entirely dependent on external funding. This will obviously influence the research profile.

Researcher training and recruitment

The Ph.D. students are affiliated with the researcher training programme at NTNU. The unit does not experience difficulties with regard to recruitment.

Summary statement

The research environment is small; only one researcher has a doctoral degree and publication output is low. Nevertheless, the unit shows clear ambitions to develop its research activities. According to the self-evaluation, the unit has a rather broad research profile, but there appears to be significant potential in one field – experience economy. There is a certain momentum in this field, and with a well-defined publication strategy it would be possible to develop an internationally connected research cluster.

Recommendations and reflections

- The panel recommends that the unit develop a strategy for improving research results to achieve the level required for international publication.
- The panel recommends that the unit seriously consider and seek support to establish a research centre within experience economy.

3.8 Summary of main observations and overall structural issues

Internal collaboration: shaping a creative and innovative research environment

In their self-evaluations and the interviews, the units reveal that they have different perspectives and different experiences in building creative research environments. The units are all small enough to foster creative interaction between research groups and the boundaries between the various research groups and clusters seem to be rather porous at all of the units. They differ, however, in their ambition to create synergies. Looking at the geography environments at the three large universities, we find in the one end NTNU that has recently launched a joint, large-scale research project to inspire cooperation across research groups. Another approach is taken by the human geographers at the University of Oslo, who although they do not have an explicit strategy for collaboration, have managed to renew research in the interface between different research clusters. The field of environmental geography in particular appears to have benefited from the strong tradition of critical human geography at the university. In the other end we find the University of Bergen, where the signs of integration are less obvious. The department does not yet seem to have fully benefited intellectually from recent amalgamations of research groups and individuals from outside.

The other universities face a different challenge; there geographers have to integrate with other social sciences where they may contribute important perspectives. These environments have highly individual characteristics. Together, the University of Agder and Agder Research have a rather large group of geographical researchers, but they belong to different departments of social science. With the exception of the well-established, visible research group in economic geography, it is difficult to evaluate geography research in Agder as a common research environment. At the University of Tromsø, the geographers are part of a broader research environment in the social sciences and their strength is in cultural approaches and planning. At the University of Life Sciences, the interdisciplinary Department of International Environment and Development Studies, Noragric, carries out research of high quality which is also highly relevant from a geographical perspective. The geography group at Nord-Trøndelag University College is too small and too focused on teaching to be able to really establish itself as a strong research environment. There is significant potential, however, for intellectual development in their specific thematic field, but more financial support for research is needed.

Geography as an interdisciplinary subject

The cooperation between physical geography and human geography presents a challenge at all three large university departments. Different research and publication cultures may hamper cooperation between them. The fact that physical geographers form part of a faculty of social science, as is the case in Bergen and Trondheim, can also cause problems. The department at NTNU is addressing this challenge by fostering theoretical discussion

between physical and human geographers as part of the common departmental research programme and has also launched projects involving physical and human geography. Paradoxically, the most well-defined and comprehensive research programme drawing upon both human and physical geography is found at the University of Oslo, where human geography made a clean break from cooperation with physical geography in the 1980s.

Challenges facing all of the evaluated units

Based on the self-evaluations, the interviews with representatives of the units and the interview with Ph.D. students, the panel identified several themes and challenges common to most of the units.

With a few exceptions, the recruitment of Ph.D. students is largely an in-house affair. The degree to which Ph.D. positions are advertised nationally was not entirely clear to the panel, but it was evident that positions are rarely advertised in the Nordic countries and internationally. Several units expressed that they were somewhat reluctant to advertise Ph.D. positions internationally due to the teaching obligations of the recruits. The panel is of the opinion that publishing more announcements in the Nordic countries could widen the pool of applicants and at the same time ensure teaching in a Scandinavian language. International calls would further improve the quality and renewal of Norwegian geography.

The courses in the Ph.D. training programmes are to large extent organised by the faculties. These courses mainly concentrate on general social science methodology and philosophy. The University of Tromsø is the only university with a thematic Ph.D. programme at the faculty level. Norwegian Ph.D. students often participate in the Oslo Summer School for Comparative Social Science Studies (where one or more courses has geographical content), as well as in the few Nordic research courses that encompass geographical research. National research courses in geography were organised in Norway in the past, but this is no longer the case. For many of the interviewed Ph.D. students, the interview meeting for this evaluation was the first time they met with Ph.D. students in geography from other universities in Norway. They expressed interest in becoming more involved in geography networks at the national level.

The evaluated units have very few post-doctoral positions. The typical career path in Norway is characterised by post-doctoral employment at one of the country's many independent research institutes. On the one hand, the major role of applied research at the research institutes may hamper the development of new, independent research ideas among the post-doctoral fellows; on the other hand, the panel has noted that many of the leading and upcoming researchers at the departments have spent time at a research institute. The mobility from universities to independent research institutes also facilitates mobility between universities.

Questions of renewal and originality are also very closely tied to the problems and possibilities related to external funding. The RCN dominates external funding and it

influences research priorities and thematic areas at the universities through its administration of action-oriented programmes (*handlingsrettede programmer*) based on funding from ministries other than the Ministry of Education and Research. Funding for human geography projects from the RCN is to a large degree connected to such action-oriented programmes. In the future it is possible that external funding for research will increase, and thus a larger proportion of the total funding will be distributed subject to successful navigation in relation to calls from the RCN. It is likely that this funding will be in the form of thematic programmes rather than support to independent projects.

Larger-scale programmes under the RCN will tend to specify thematic areas of research and make it difficult to operate with local research strategies. Given this scenario, the challenge for the units will be to find the balance between adjusting their activities to programme thematic areas, increasing the number of external funding sources aside from the RCN and maintaining their internal priorities and renewal of research. This was a topic of discussion with some of the representatives of the research environments; some took these developments for granted, while others expressed concern.

4 Scope and quality of research: Subfield profiles

4.1 Subfield and major thematic areas in Norwegian geography

The subfields of geography may be defined in many different ways and are constantly in flux. In the panel's review of the submitted literature some subfields were easier to identify than others, such as economic geography and social and cultural geography. Other subfields, such as development geography (in the Global South) and regional development (focusing mainly on Norway) are less visible as clear entities in Norwegian geography today. Global economic changes have made the category development geography less relevant than it was some decades ago. The panel has found that the boundaries between what in the past would have been called development geography and other subfields of geography have to a large extent been dissolved. In many areas of geography we are witnessing a reaction to increasingly globalised conditions.

In some cases the representatives of the departments have directly pointed to this trend, while in other cases the panel has encountered a more traditional view of the divide between problems defined as being part of *economic geography* with regard to the North, but part of *development geography* with regard to the South, even though the problems are similar. There is still a tradition of calling research conducted in the Global South *development geography*, while similar research in Norway or Europe is defined according to its thematic focus. In the following overview the panel discusses research on conditions in poor countries in the South in a variety of subfields: *economic geography*, *social and cultural geography (including urban geography)*, *environment and livelihoods*, and *physical geography and climate*. In addition, although the subfields of environment and livelihoods focuses primarily on conditions in the Global South, there is an emerging trend in which similar perspectives and methods are being applied to studies in Norway. Research directly addressing development theory is treated under *political geography and development studies*. The panel has found it difficult to isolate regional development as a separate field. Questions of regional development are visible and highly profiled in *economic geography* and *social and cultural geography*, as well as in other fields focusing on contemporary Norway and Scandinavia. There are also other types of overlap between different subfields, while some smaller fields of research (e.g. GIS, didactics and others) have not been given a separate heading.

An important criterion applied by the panel when defining the subfields was the thematic scope of the publications the researchers had submitted for evaluation. The panel sought to avoid defining categories that covered a very limited number of submitted publications, and finally decided on six major subfields:

- Economic geography
- Social and cultural geography (including urban geography)

- Political geography and development studies
- Landscape geography
- Environment and livelihoods
- Physical geography and climate

Some of the subfields are found in almost all of the units evaluated, while others are only covered by a few. Table 4.1 gives a rough idea of where research in the six subfields is conducted.

Table 4.1. Profiles of the research units by subfields

Subfield	NTNU	UiB	UiO	UiT	UMB	Agder	HiNT
Economic geography	X	X	X			X	
Social and cultural geography	X		X	X		X	X
Political geography and development studies	X	X	X	X	X		
Landscape geography	X	X					X
Environment and livelihoods	X	X	X	X	X		
Physical geography and climate	X	X	X				

4.2 Economic geography

Defining and delimiting different subfields in geography is never an easy task, and defining what constitutes economic geography is certainly no exception. In the past couple of decades in particular, we have witnessed a rapprochement between the economic, social and cultural aspects of human geography. From the standpoint of economic geography this is sometimes described as a social and relational “turn” or a cultural “turn” placing greater emphasis on the effects of interactions and relationships between economic (and other) actors, as well as between the culturally-based institutions that have an impact on the way production, consumption and working life operate in different places. This development is clearly evident within economic geography in Norway. The panel has tried to bear this in mind when looking more closely at Norwegian economic geography research.

There are a number of obvious areas of overlap between established subfields in geography that may cause confusion, for instance, between development studies and economic geography, and, to some extent, between urban geography and economic geography. In the present evaluation, persons with a stated interest in economic and working life-related issues conducting research in a Third World context have been included under this section, as has urban geography research that is clearly related to the development of the economy.

Nevertheless, judging from the self-evaluations (both of the different units and individual researchers), a number of persons clearly label themselves economic geographers. In this evaluation the panel has included the work of roughly 15 persons, mainly from the universities in Oslo, Bergen and Trondheim and the joint research environment in Agder.

Economic geographers normally make up small research groups (three or four persons) at these institutions, and occasional researchers at other institutions.

It should be mentioned at the outset that a relatively large number of economic geographers are also found at independent research institutes in Norway (such as NIBR and SNF) and that research cooperation and co-authorship is common between university researchers and research institute staff, not least in the field of economic geography. The importance of institute-based research in Norway is evident, not least, in the list of research projects funded by the RCN in recent years.

Traditions in economic geography research in Norway

Early on, economic geography in Norway was concentrated at the Norwegian School of Economics (NHH) in Bergen, which was integrated with the geography department at the University of Bergen until 2004. There is now only one geographer left at NHH, which is why NHH was not chosen for inclusion in this evaluation. Economic geography was less developed in Norway than Sweden, for instance, partly because Norwegian geographers never became as involved in applied regional and urban planning as their Swedish counterparts, and partly because the quantitative revolution and modelling approach in geography (often closely connected to research in economic geography) was introduced much later in Norway (Asheim 1987:333-335). This is also illustrated by the fact that, unlike Sweden, there has never been a dedicated chair in economic geography at geography departments in Norway (apart from NHH).

From its early years, economic geography in Norway has been related to urban and regional development. Radical economic geography also found its way to Norway in the 1980s, inspired, for example, by Doreen Massey's work on spatial divisions of labour and industrial restructuring. In a Norwegian context, this conceptual and theoretical approach was applied to the development of natural resource-based regions and localities. In the latter half of the 1990s, research in economic geography in Norway, as in other countries in Scandinavia, was to an increasing extent inspired by new theoretical thinking on the impact of interaction, knowledge, learning and the systemic nature of industrial development, as exemplified by concepts such as clusters, regional innovation systems, networks, etc.

Themes in contemporary economic geography

An overarching objective of most contemporary economic geography research in Norway is to understand the preconditions for local and regional development and change, often related to the opportunities opened up and the constraints imposed by increased globalisation and international competitiveness. This of course also means that local and regional perspectives predominate, perhaps more in Norway than in the other Scandinavian countries.

In its assessment the panel has identified a number of relatively strong and coherent research areas in Norwegian economic geography. It should be stated at the outset that some of the individual researchers are active in more than one of the research areas discussed below and that there is considerable theoretical and conceptual overlap between the research areas, in particular between the first and the second areas, but also in some cases in relation to the third area.

The first research area deals with regional innovation systems and cluster formations in knowledge-based and knowledge-intensive industry sectors in Norway (e.g. business services, the software industry, industrial design, the consultancy sector). In this line of research there is strong emphasis on the conditions for, and the effects of, the growing knowledge and service economy in a geographical perspective. More specific topics range from innovation systems, head office locations, foreign direct investments, creative industries and the creative class, universities and regional development, software consultancies, assessments of cluster initiatives and high-tech industries, to local and regional economies of professional football clubs in Norway.

The second research area has a relatively long tradition in Norwegian economic geography and is concerned with the development of natural resource-based and mature industries and their effects on local and regional development, such as the aluminium industry, fisheries and fishing industry, petroleum industry and related activities, forestry and forest industry, agriculture, etc. Research in this area often addresses the tensions between the local and the global and the challenges of internationalisation facing Norwegian resource-based industry. In some cases research focuses on the politics of environmental and market regulations. At the theory level, there is overlap between this and the first research area discussed above in the sense that this area often employs concepts such as innovation systems, clusters, the institutional approach, path dependency and different aspects of local embeddedness of natural resource-based industry.

The third research area comprises development studies focusing on economic and working life issues in the South. Research topics in this area include value chain analysis, export processing zones, entrepreneurship and small firm performance, technology transfer from the North to the South, studies of different sectors such as the textile and clothing industry, and labour market relations/regulations and informal labour. Economic geographical studies in Third World countries are perhaps guided to a lesser degree by questions about regional development and international competitiveness and more by problems of social justice, inequality, environmental issues and unfair world market relations. This critical vein is less apparent in economic geography studies situated in the North, not only in Norway but in most Western countries.

Alongside the three research areas described above, there are a number of individual researchers studying economic geography-related topics. Examples include the

development of central place systems, work-related migration, the restructuring of the urban economy, and cultural tourism and the experience economy.

Theory and methodology

Norwegian economic geography relies heavily on theoretical inspiration from the Anglo-American academic world, although to a somewhat lesser extent when it comes to research in developing countries. Theories and concepts that have influenced economic geography in Norway during the past decade include cluster theory and cluster policy, different concepts of knowledge, networks, learning regions, regional innovation systems, triple helix, regional specialisation, agglomerations, institutional perspectives on economic development, evolutionary economic geography and path dependency. Influences from the 1980s, including the British concept of spatial divisions of labour and the restructuring thesis, are in some cases still observable today.

Economic geography research in Norway is characterised by theoretically well-informed empirical analysis, with a strong focus on using, and to some extent testing, theoretical claims put forward in international research. In other words, economic geography in Norway generally applies theory as opposed to producing it. This is also true for Third World studies in economic geography, although these tend to be more orientated towards critical social science studies. There is some conceptual overlap between Third World studies and research conducted in a Norwegian context, such as linkages and network analysis, but in the case of the former the panel finds a stronger focus on concepts related to labour conditions and working life issues.

Methodologically, Norwegian economic geography has a strong focus on thorough, empirically-rich case studies, predominantly based on interviews and field studies, in combination, to a certain extent, with survey data (postal questionnaires or telephone interviews). What appears to be lacking, however – although there are exceptions – is research that makes use of more comprehensive empirical data covering a wider range of regions and localities in Norway, and that may be able to generate input for the more general debate on regional and urban development and policy. The panel also notes that while the use of official registries for quantitative research in economic, social and population geography is now quite widespread, for instance in Sweden, these are generally poorly exploited in Norwegian geography. It should be noted, however, that quantitative research and the use of comprehensive data may be more developed at the independent research institutes, and thus not be visible in this evaluation.

Funding

A fairly good number of economic geography-orientated projects have been externally funded during the evaluation period, in most cases by the RCN. However, as far as the panel can observe, there are no examples of larger-scale research programmes that bring together a larger group of economic geographers. The initiative in Agder to create a joint

research centre, Advanced Studies in Regional Innovation Strategies, may perhaps become a platform for more large-scale applications in the future.

National and international collaboration

The panel has identified close national interaction and co-authorship between a small number of researchers within and between the first and the second research areas. However, there are indications that the Third World-orientated economic geographers collaborate more often with international colleagues. At the moment, the impression is that the North/South divide in economic geography research has produced separate research communities, but there seems to be room for further interaction between the two, not least in the case of research on natural resource-based economic development.

It is also important to acknowledge that a substantial part of the economic geography research activity is conducted by the independent research institutes in Norway and that much of the national collaboration and co-authoring takes place between researchers at the universities and researchers at these institutes. This is a circumstance that distinguishes Norway from the other Nordic countries.

Judging from the list of publications, collaboration and co-authorship with researchers from other related economic disciplines (economics, business administration and management, economic history, etc.) is not strongly developed in Norwegian economic geography. Cross-disciplinary collaboration may also be a way of achieving increased external funding.

Publication profile

The publication profile in Norwegian economic geography is increasingly orientated towards international peer-review journals and books (mostly in English, but occasionally in other languages), especially in comparison to the situation some decades ago. There is no doubt that Norwegian economic geography in general is gaining more of presence in the international literature. At the same time, and judging from the individual publication lists, it is also evident that the bulk of the international publications are generated by a few individuals. The most productive (two or three) researchers list 10 to 15 international refereed publications in their CVs, whereas the majority of researchers list five to 10.

Norwegian economic geographers published by far most frequently in *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography* during the 2004-2008 period. Other journals in which articles were frequently published include *Geografiska Annaler: Series B, Human Geography*, *European Planning Studies*, *Urban Studies*, *The Service Industries Journal*, *Marine Policy* and *Canadian Geography*. The importance of the Nordic arena is further emphasised by a relatively large number of articles published in *Nordisk Samhällsgeografisk Tidsskrift* (a journal mixing articles in English and the Nordic

languages; the journal has been discontinued). Articles are occasionally published in *Entrepreneurship and Regional Development*, *TESG* and *Regional Studies*, among others.

The full list of journals is long, and the Third World-orientated economic geographers in particular are successful in publishing in a wide variety of international journals (primarily in English).

Norwegian economic geographers are invited to publish in international anthologies fairly often, and in some cases also serve as co-editors; see, for example, Rusten, G. & Bryson, J. (eds, 2009) *Industrial design, competition and globalization*, and Lehtinen, A., Donner-Amnell, J. & Sæther, B. (eds, 2004) *Politics of Forests. Northern Forest-Industrial Regimes in the Age of Globalization*.

Furthermore, during the evaluation period a number of domestic anthologies were published, presenting the state-of-the art of economic geography research in Norway; see, for example, Isaksen, A., Karlsen, A., & Sæther, B. (eds, 2008) *Innovasjoner i norske næringer. Et geografisk perspektiv*, Vatne, E. (ed, 2005) *Storbyene i kunnskapsøkonomien. Arena for kunnskapsdeling og nyskaping*, and Lindkvist, K.B. (ed, 2004) *Ressurser og omstilling – et geografisk perspektiv på regional omstilling i Norge*.

Ph.D. students

During the evaluation period roughly 25 per cent of ongoing or recently completed Ph.D. projects were related to economic geography (a total of approximately 15 projects). Judging by the preliminary titles of the Ph.D. projects listed in the self-evaluations, and perhaps not surprisingly, most of the Ph.D. projects fit well with the three research areas described above. There seems to be, however, an increasing interest in the role of tourism, cultural industries and the experience economy in domestic regional development, a research topic that is not particularly well developed in Norwegian economic geography today.

Strengths, weaknesses and challenges

The general impression is that economic geography in Norway is based on sound empirical research, which is well-informed by contemporary international theoretical and conceptual debate. However, the panel finds only a few examples of any ambitions to influence theoretical and conceptual development in the international economic geography arena. The panel recognises that Norwegian economic geography has become more visible on the international stage in the course of the last decade, a development made possible in particular by a much more international publication profile than previously. This observation extends to research conducted both on the North and on the South. Economic geography in Norway is also part of (but perhaps not at the forefront of) a relatively strong and successful Scandinavian vein of conceptual and empirical research on agglomerations, clusters and regional innovation systems.

Methodological approaches in economic geography in Norway are mostly confined to careful case studies. It is the panel's view that there is room for more empirical studies using comprehensive data, and, as a consequence, there is a need to broaden methodological competence when it comes to analysis of larger statistical datasets. Quantitative methods are rarely used in contemporary economic geography research in Norway.

In general, the university-based research within the field of economic geography in Norway, while not exactly classifiable as applied research, is in many cases highly relevant for industrial and regional policy issues, and economic geographers take part in the public debate. It should also be mentioned that Third World studies in economic geography address, in most cases, policy-related issues and other issues that are critical to development strategies in the South.

In an institutional perspective, economic geography in Norway may appear fragmented in the sense that it is comprised of small groups of researchers in a few geography departments and multidisciplinary research environments. However, there is substantial cooperation between the individuals located in the various environments, and there are, as pointed out above, strong links between the university departments and the independent research institutes. Thus, the academically-rooted economic geography community in Norway is substantially larger than the community covered by this evaluation.

4.3 Social and cultural geography

As outlined in Chapter 2, this evaluation is based on material provided by the units, interviews with representatives of the units and publications submitted for evaluation by the individual researchers. In addition, when writing this section, the panel has drawn upon the article "Social and Cultural Geography in Norway: from welfare to difference, identity and power" written by Nina Gunnerud Berg (2007) as part of *Social & Cultural Geography's* series of country reports.

Forerunners

While cultural geography is a relatively new phenomenon in Norway, a version of social geography has had a noticeable presence in the country since the early 1970s. As in the other Nordic countries, the emergence of this was connected to the development of the welfare state and the orientation towards egalitarian values such as social justice, social equality and the politics of redistribution (Öhman and Simonsen 2003). In Norway at that time, this orientation took the form of welfare geography connected to social reporting and research on distributional aspects of human well-being initiated by the Norwegian government. A key component of this effort was level of living studies in which a group of

geographers, mainly from the University of Trondheim, took part. The geographers studied the way in which different forces interact to create a given outcome of well-being in specific regions, studying rural as well as urban regions in various parts of the country. Berg (2007) points out how welfare thinking was eventually integrated into other aspects of the subject: in landscape geography welfare was seen as a landscape determinant and landscape as a welfare component; in development geography local studies of welfare, poverty and gendered levels of living became central perspectives in Norwegian development studies; and in regional development studies local community studies and links to planning and politics became dominant issues. This means that in the 1980s, when a (more or less) neo-Marxist “radical” geography was being developed internationally, Norwegian geography was more occupied with community studies as both an applied and a critical approach to regional development, employing a dichotomous opposition between centre and periphery, the urban and the rural. Studies of regional development and local communities became (and likely continue to be) a strong foothold in Norwegian social geography. The strength of social geography lay in methodology and detailed empirical analyses, but it was somewhat lacking in theoretical sophistication, probably because of its emphasis on applied research to serve as a knowledge base for planning.

Themes, issues and approaches

Since the 1980s, social and cultural geography has been characterised by both continuity and change. The changes mostly concern the inclusion of cultural issues inspired by what is called “new cultural geography” in Anglo-American contexts. This involves works influenced by poststructuralist thought, employed in moderate forms, and the inclusion of issues such as identity, (cultural) difference and power in knowledge production.

The combination of continuity and change is most obvious in the strong focus on *people and place*. This continues the tradition of studies of regional development and local communities, only with new theoretical approaches emphasising identity and the understanding of the conception of place as a social and cultural construction. The edited anthology *Mennesker, steder og regionale endringer* (“People, places and regional changes”) (Berg et al 2004) illustrates this line of research. The book combines chapters providing theoretical reflections on the concepts of space, region, place, and rurality and urbanity with empirical chapters discussing studies of rural-urban and urban-rural migration and the associated processes of identification and place imagination. Places are also analysed with regard to their narrative and mythical construction, their habitability and their meaning in relation to various industries (services, tourism, fisheries and agriculture). An original contribution connecting social and cultural geography with landscape geography explores the relationship between morality, landscape and local environmental practices, taking a practice-orientated approach to the moral geographies of the culture-nature relationship. Connected to this “cultural turn” is increased reflexivity over knowledge production, viewing knowledge production as partial, situated, socially constructed and struggled over. In the material available to the panel, this is expressed in discussions of qualitative methods and ethnographic fieldwork, for example in a book on

production and interpretation of qualitative data (Aase and Fossaskåret 2007). It is also apparent in the search for methodologies that are collaborative, participatory and non-exploitative in terms of the relationship between researchers and the researched, which are questions often put forward by feminist geographers.

In general, studies of *gender issues* have a strong foothold in Norwegian social science – a fact that is also evident within social and cultural geography. This was already the case before the “cultural turn”, but judging from the submitted material, the panel wonders whether interest in gender issues has been waning in recent years. With regard to content and approach, geographies of gender in Norway are following an international trend. Early on, gender studies were nearly always synonymous with studies of women and feminist questions; recently research has turned towards studies of gender relations, gender identities of both women and men, and construction of femininity and masculinity. Research areas include gender and rurality, which explores topics such as femininity and masculinity in rural communities, changing gendered practices in fishing communities, and the significance of place for gendered entrepreneurial practices. Another research area is gender and development, which explores social changes and their affect on women’s identities, values and livelihoods.

Another theme running through much of the research concerns issues of *mobility, migration and minorities*. Research examines many forms of mobility, from everyday mobility and tourism to work migration, forced migration and internal displacement, as well as immigration to Norway and minority identities. Research on this variety of issues draws upon many different theoretical approaches, such as theories of migration and refugees, elements from an emergent “mobility paradigm” and performative theories of tourism. One question, however, comes up in nearly all of the submitted contributions: the relationship between mobility and place. Migrants and internally displaced people are analysed from the perspective of resettlement and local integration, and mobile forms of life are considered in relation to their effect on place and the potential affiliation to place.

In addition to the development of a “new” cultural geography, there is parallel development of what may be described as *classic urban social geography*, which however only involves a few researchers. Major research topics are urban spatial structures, gentrification, socio-spatial inequalities, and segregation and housing markets. This line of research may be seen as a continuation of the above-mentioned welfare perspective. The dominant approach is quantitative and of hypothetic-deductive orientation, and the practitioners within this field are methodologically strong and reflexive with regard to data, results and explanations. Research within this field is being conducted at the universities in Oslo and Trondheim. However, while it at UiO is embedded in a collaborative research programme between geography, sociology and the municipality of Oslo (“Osloforskning”), it in Trondheim appears to be the focus of only one isolated researcher.

Characteristic features

In sum, social and cultural geography in Norway, as in the other Nordic countries, bears the stamp of the connection to the welfare state. Welfare geography, emphasis on social and spatial (in)equality and policy-orientated analyses make this abundantly clear.

Theoretical approaches have varied. The cultural turn brought in influences from post-modern and poststructuralist thinking, but in a moderate way. Norwegian social and cultural geography never followed the “linguistic turn” to its extremes of representation and social constructionism. Nor has the more recent emphasis on “the material” led to a full adoption of new post-humanist material ontologies. In this sense, it may be said that social and cultural geography in Norway has sought to balance or find a middle ground between idealism and materialism, constructionism and realism.

The most significant feature of current social and cultural geography in Norway is the overwhelming emphasis on *place*. It explores how places are imagined and represented, how they are constructed by material, social and political forces, and how they are contested and negotiated over by different social and cultural groups. Other issues of focus, such as work cultures, migration, mobility and tourism, are for the most part related to place. This focus may be viewed as a contextual feature connected to social, ideological and political discourses within Norwegian society. The panel has commented earlier on the close connection between welfare geography and Norwegian regional policy. Berg (2007) describes the objective of regional policy as stabilising the settlement pattern, that is, to restrict rural-urban migration, implying a view of urban growth as the regional problem. This led to a predominance of rural studies and community studies which appears to have continued within the new social and cultural geography.

This nearly anti-urban discourse may also explain the relatively low proportion of urban research. Although towns and cities are touched upon in many regional studies, the only genuine (but small) research environment in urban studies is found at the University of Oslo (Osloforskning). Research on other subjects is also unevenly distributed between the evaluated units. While welfare-orientated social geography research is a relatively widespread component of regional analyses conducted in many places in Norway, culturally-orientated geography research and gender studies are primarily conducted at NTNU in Trondheim and the University of Tromsø; in other places they appear to be the work of isolated researchers.

Publication profile

The publication profile in Norwegian social and cultural geography is very varied. There are quite a few contributions in the form of book chapters in both international and Norwegian anthologies. When it comes to journals, none stands out as the most favoured one. During the evaluation period, articles were published in a wide variety of international journals, including *Critical Asian Studies*, *Cultural Geographies*, *Gender, Development and Technology*, *Environment and Planning A/B*, *Forum for Development Studies*,

Geoforum, International Journal of Heritage Studies, Journal of Housing and the Built Environment, Journal of Rural Studies, Modern Asian Studies, Singapore Journal of Tropical Geography, Social and Cultural Geography and Urban Studies. Nordic and Norwegian journals include *Geografiska Annaler: Series B, Human Geography* (English-language), *Nordisk Samhällsgeografisk Tidskrift, Norsk Geografisk Tidsskrift-Norwegian Journal of Geography* (English-language), *Norsk Antropologisk Tidsskrift, Kvinneforskning* and *Tidsskrift for Samfunnsforskning*. International publication appears to be on the rise.

Strengths, weaknesses and challenges

It became obvious to the panel during its evaluation of the submitted works that the strengths and weaknesses of this subfield go hand in hand. One strength is connected to the focus on place, which gives rise to a range of publications providing a varied understanding of the way in which people construct places and places construct people. However, a strong focus on place means that less attention is directed towards other issues and spatialities, such as bodily spaces, material culture and transnational and cosmopolitan modes of life. Another strength is that the research is firmly rooted in methodology and empirical application and remains relevant to policy-making in Norway. The weakness here is not a lack of theory – current social and cultural geography in Norway generally has a solid theoretical foundation. Rather, it appears that most researchers consider themselves – more or less consciously – to be users rather than producers of theory. Theoretical constructs are adopted, discussed and applied, but very few researchers show the ambition to engage in direct theoretical development. Possible exceptions may be new projects undertaken at the geography department at NTNU, represented by the work of Gunhild Setten and Catherine Brun.

Somewhat paradoxically, another characteristic of Norwegian social and cultural geography is the strong influence of Anglo-American geography on the theoretical discourse. Some publications show an awareness and critical attitude towards this dominant orientation and the way in which it contradicts a parallel awareness of the contextual and situated character of knowledge production. However, the dominance of this orientation is without doubt reinforced by the development of the Frida publication database in which registering publications in “international” (read Anglo-American) journals is a major priority. A researcher’s chances of having his/her work accepted for publication in Anglo-American journals are closely connected to his/her ability to inscribe him/herself into the currently predominant academic discourses. A great challenge to social and cultural geography in Norway (as in many other small-language countries) is, therefore, on the one hand to strengthen international publication, while on the other hand attempting to develop its own lines of thought.

In conclusion, social and cultural geography in Norway is a relatively new field. It started out as empirically-orientated applied research directed towards planning issues, but has now developed into a theoretically-informed subfield in which the level of international

publication is increasing. Despite this, however, it must be said that Norwegian social and cultural geography has yet to make its mark on the international debate within the field.

4.4 Political geography and development studies

Development geography, focusing on developing countries in the Global South, has been one of the key continuity factors in Norwegian geography since the 1970s. Much of the research in this subfield is carried out by geographers at the University of Oslo (UiO), but there are activities at the geography departments at the University of Bergen and NTNU as well. In addition, research conducted at Noragric at the University of Life Sciences (UMB), and to some degree at the University of Agder/Agder Research, can be grouped under the category of development geography. In addition, political geography, which has grown into an important area of inspiration at UiO from the 1990s, has also primarily focused on questions related to the Global South. Moreover, environmental and climate research with a social science perspective represents the latest renewal trend among researchers linked to development geography, particularly at UiO and UMB.

Major emphases: Localist and mobility studies

In general, development geography in Norway has concentrated on local studies in selected countries in the Global South. Africa, Asia and, to a much lesser extent, Latin America have been the targets of research. For decades, local case studies in the Global South have enriched the development of geography in Norway, and this orientation is often accompanied by general critiques of current trends in development and modernisation.

Political geographers in Norway have closely followed, as well as influenced, the Anglophone renewal in political geography, which has resulted in an intriguing combination of Western theory development and Southern case studies. Although the research is empirically strictly localised, it is often motivated by general aspects of social change, such as problems of democratisation and state-civic society relations (see Stokke 2009; Stokke and Sæter 2010).

Researchers at Noragric are developing a specific extension of political geography concentrating on local environmental and development issues and using political ecology perspectives in research on land reform, scarcity of resources, war and conflict, identity and land issues, class and ethnicity questions, indigenous peoples, oral histories, civic activism, etc. in Africa and Asia. Noragric is a strikingly multidisciplinary research environment from which some of the most promising research for the renewal of (political) geography in Norway has recently been launched.

One well-developed line of political geography in Norway focuses on practices of power (*makt og motmakt studier*) and action research. This line is mostly devoted to local development questions in Norway, although there are easily identifiable comparative

research settings connected to the Global South. The studies concentrating on Norway highlight the features of and changes related to regional power regimes and often apply a specific action-research method involving cooperation with local administration or entrepreneurs. These and related approaches have resulted in stimulating theoretical examinations of the practices of power, as well as methodological reflections on aspects of participation and committedness in research.

In general, the localist orientation favoured by many development and political geographers has been a success. However, it appears that globalisation, including its major linkages and divisions, has been left out of the main core of research. The constraints of the localist tradition have been overcome only recently due to new approaches focusing on specific aspects of translocalisation and globalisation, for example in the form of migration studies at multiple scales, research on social spaces of Internet communication (i.e. e-geographies) and orientations in socio-environmental changes and vulnerabilities in the interface between the local and the global. This broadening of the research scope is a key sign of the ongoing renewal of Norwegian geography.

Migration studies have brought up questions of forced migration due to warfare and other social and environmental crises, and, in general, have further developed sensitivity to home and identity questions under pressure by continuous displacement and reterritorialisation. Consequently, interethnic aspects, as well as gender and children's perspectives, have been introduced and developed by migration researchers.

Studies of e-spaces, or e-topographies, have highlighted the question of virtual mobility, Internet-based learning and distance education in developing countries and elsewhere. The pros and cons of increasing technology transfer and dependency on the availability of technical services have become key questions of research. This has resulted in detailed picturing of the changing social spaces of the new media.

Environmental emphasis in Norwegian development geography has contributed to the understanding of the critical interdependencies of society and the non-human sphere, for example, in matters of intensifying international extraction of natural resources, especially in the fisheries industry, and in relation to climate change. Human-induced aspects of environmental transformations have accordingly been treated as integral moments of the progression of human and non-human security vs. vulnerability. These orientations have also introduced the risks related to indirect and unexpected changes created by social-physical interaction. Here the researchers appear to draw upon one of the most recent paradigmatic shifts in (socio)ecological studies, which directs attention towards the non-linear dynamics of complex socioenvironmental processes.

Another highly interesting, if rather separate, aspect of Norwegian development geography is its (self)critical reflection and questioning of the features of elite circulation and national corporatism within Norwegian development aid and research (Tvedt 2009, originally

published 2003). Norwegian policy related to development in poor countries is viewed as a national project that brings together idealistic development aid promoters and actors whose altruistic goals in practice turn into national PR programmes. According to this critique, Norway is nationally construed as one of the leading global humanitarian aid promoters, which in a way legitimises the continuity of insider circulation and corporatism in development aid.

Publication profile

The publication profile of this subfield of Norwegian geography is international and Anglophone, due in great part to the focus on the Global South. Researchers favour publication in both the leading journals of geography as well as thematically or regionally focused journals. In addition, co-edited books and book chapters are well represented in the publication lists. The growth in Master's theses and Ph.D. dissertations by young political geographers is also a phenomenon worth noting. During the evaluation period, Norwegian researchers within this field have published in journals such as *Africa*, *Ambio*, *Annals of the Association of American Geographers*, *Antipode*, *Forum for Development Studies*, *Geografiska Annaler: Series B, Human Geography*, *Geojournal*, *Global Environmental Change*, *Human Ecology*, *International Journal of Political Economy*, *Modern Asian Studies*, *Mountain Research and Development*, *Nations and Nationalism*, *Journal of Peace Research*, *Political Geography* and *Third World Quarterly*. The panel would also like to mention a Norwegian contribution in *The Sage Handbook of Political Geography* (Mohan and Stokke 2008).

Strengths, weaknesses and challenges

The above overview of the current state of development and political geography in Norway underlines the gradual trend of overcoming the limits of localist research. The well-established localist tradition has, however, contributed to a high level of awareness about the social and environmental particularities of the researched communities and regions. Particular aspects of change are highly respected, which serves as an important balancing element with regard to the currently popular postlocal orientations in international Anglophone geography. The Norwegian contributions within this field thus represent an important development in political geography, which has enabled Norwegian political geographers to play a visible role in the international debate.

A clearer theoretical articulation of the relationship between the particular and the general, including their combinations, would definitely promote the further development of political and development geography in Norway. It would also help to identify and underline the concrete linkages that broadly condition our local-global compressions today. In addition, it would help to identify the (ethically) problematic divisions of labour in which geographers of the developed world transform what they find and learn in their target communities in the developing world into a means of competing in academic meritocratic contests. Here the Southern experience is consistently converted into a

competitive element within the circles of Western academia. Both the (self)critical concerns regarding the development aid and research debate, and the enthusiasm in action research in Norwegian settings discussed above could serve as principal inspirations for renewal in this respect.

Another result of the above-mentioned marginalisation of concrete factors and actors in local-global compressions is the fact that little of the political or development geography research in Norway today focuses on the European continent, North Atlantic communities, Nordic neighbours, the Barents Region or Russia. This is striking, particularly in contrast to the lively public debate on globalisation in Norway and in Northern Europe in general that is contextualised with the help of the regional clusters and strategic contests. Of course, relatively small geographical research units scattered throughout the country cannot afford to study everything. However, this trend is clearly visible in almost all of the units encompassed by this research evaluation, not only those that have placed special focus on political and development geography. It may well become a key vulnerability factor for Norwegian geography in the future.

The fact that much of Norwegian geography research has been orientated towards Norway, on the one hand, and selected locations in the Global South, on the other, is undoubtedly due to the preferred localist orientation in Norwegian geography. However, as became clear from the interviews with researchers from UiO and UMB, it also reflects the influence of central funding agencies (see also Tvedt 2009: 104-112). The growing dependence on external funding sources and the fact that external funding is valued highly in contemporary academia may be regarded as a potential threat to Norwegian political and development geography – and Norwegian geography in general – because it may easily lead to a decline in academic independence. Correspondingly, the critical renewal of individual disciplines on the basis of extensive basic research is also at risk of becoming marginalised.

Finally, although the introduction of environmental questions into political and development geography during the 2000s is of great value, it is important to underline the need for ongoing multidisciplinary co-development within these fields. There is a need to emphasise the linkages to (socio)ecological rethinking informed by paradigmatic renewals such as non-linear thinking and social(environmental) rethinking that deepen the social theoretical understanding of contemporary local-global compressions. This double balancing is vital to avoiding the most common traps of hybrid thinking: becoming reductionistic instead of reintroducing social or ecological questions related to contemporary changes and challenges. This will demand a lot of scholarly effort, which in turn will require adequate financial support. However, this holds the potential of becoming a major breakthrough in Norway and internationally.

4.5 Landscape geography

Landscape studies forms an important component of Norwegian geography research. Norwegian landscape researchers are active, visible and recognised internationally. In the self-evaluations, two research environments list landscape studies as a thematic priority area: the University of Bergen (UiB) – *Climate change, landscape and environmental change* – and NTNU in Trondheim – *Landscape and society*. Geographical research on landscapes is primarily carried out at these two departments as well as at three applied research institutes (see below). This section is mainly based on publications submitted by four researchers in Bergen and Trondheim.

The research environment in Trondheim has played a key part in the development of landscape geography during the last 20 to 30 years. During the period of reorientation in Norwegian geography in the 1970s and 1980s and the development of human geography as a social science, landscape studies initially did not play an important role, but were instead viewed as a component of the traditional geography of synthesis (Asheim 1987). However, thanks to the recruitment of a Scandinavia-orientated English historical geographer, Michael Jones, to the newly established Department of Geography at the College of Arts and Sciences in Trondheim (den Allmenvitenskapelige høgskolen, AVH) landscape studies gradually again emerged as an important component of Norwegian geography, with a partly new theoretical framework.

In the 1980s, cultural landscapes, which were then mainly conceived as agricultural landscapes, increasingly became a policy arena in Norway as in other European countries. Botanists and plant geographers highlighted the human-influenced vegetation (grasslands and woodlands) of the pre-industrial agrarian landscapes, and among landscape architects there was a growing understanding of the role of history and humans in shaping the landscape. It was in this context that Michael Jones and his colleagues in Trondheim started a conceptual discussion on the concept of cultural landscape (Jones 1991). Politically the concept of cultural landscape was very much connected to the environmental management of agricultural landscapes and the support system for farmers. It became evident in the debate that followed that such a narrow definition of cultural landscapes posed obvious limitations, and was also in contrast to a broader Anglophone understanding of landscapes as the visible environment. Elaborations on Sámi understandings of landscapes and environments that emerged during the 1980s and 1990s were a vital element of this debate. It became clear that a broader and more elusive (and inclusive – in relation to different groups of people) concept of landscape could be developed. This was one of the intellectual challenges that Norwegian landscape geography brought to the fore during this period. It has come to be an important part of Norwegian and Nordic contributions to intellectual debate on landscapes in Europe and other parts of the world.

Themes and theoretical approaches

Conceptual discussions on what landscapes are, how they are perceived and what they do with humans and societies have been a key component of Norwegian humanistic and social science landscape research since they were introduced by Michael Jones in the cultural landscape debate in the 1980s and further developed on Norwegian ground during the 1990s, when Kenneth Olwig was at the Department of Geography at NTNU in Trondheim. These discussions have given rise to further debate and explorations, particularly in the interface between a Nordic perspective and the Anglo-American landscape concept, where Gunhild Setten has opened up for more general discussion on geographical concepts and discourses in an international context. These conceptual discussions have also helped to situate Norwegian landscape research in a place of overlap and dialogue with recent developments in international, particularly Anglophone, cultural geography.

This conceptual awareness has strongly influenced the more empirical research on landscape change and landscape history. A specific development, which is closely linked to both empirical explorations and the conceptual debate on what landscapes are, is the focus on practice as part of being in, perceiving and changing the landscape. This approach was partly developed as a contrast to the Anglophone understanding of landscapes as scenery and ways of seeing, rather than acting. The study of the interactions between individuals and landscapes, and of perceptions of landscapes, with qualitative methods and based on this practice-orientated approach has set an example in geography. Throughout more than 30 years of landscape research at NTNU, the question of property, law and rights has remained central; it was also the research topic of the Landscape, Law and Justice research group during the 2002-2003 period (see below). This topic continues to uncover new challenges in understanding settlements and landscapes in Norway.

Funding

During the period covered by this evaluation, only two landscape-focused projects at universities were funded by the RCN, both at the geography department at NTNU.

National and international collaboration

At the national level, there is clear evidence of cooperation between UiB and NTNU and also small but significant mobility of post-doctoral fellows. At the Nordic level, Norwegian landscape geographers play an important role in Nordic research courses on landscape and the NorFA-funded Nordic Landscape Research Network. Nordic cooperation has also resulted in the book *Nordic Landscapes*, which was initiated under a previous Nordic network of landscape researchers. One demonstration of the intellectual strength of Norwegian landscape geography was its success in the national competition to establish a one-year international research group at the Centre for Advanced Study in Oslo from 2002 to 2003. The group, led by Michael Jones, addressed the thematic area *Landscape, Law and Justice* and published results in several international publications.

Publication profile

The publication profile of landscape geography is diverse. This branch of geography generally holds a strong national and local interest both for the general public and for the cultural heritage and planning authorities. Researchers have to balance their output between popular science publications, commissioned reports, academic publications in their national language and, as they are part of the international research arena, in internationally published articles and books. Seen as a whole, Norwegian landscape geography balances these factors well. In the list of submitted publications there are empirically-orientated and well-researched academic books in Norwegian and English as well as a growing number of publications in international journals. While the now internationally recognised *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography* is an important publication channel, Norwegian landscape research has become increasingly visible in other international journals including *Landscape Research* as well as in more general journals of human geography such as *Cultural Geographies*, *Erdkunde*, *Ethics, Place and Environment*, *Geografiska Annaler: Series B, Human Geography*, *Geoforum*, *International Journal of Heritage Studies* and *Social and Cultural Geography*. A major work is the book *Nordic Landscapes: Region and Belonging on the Northern Edge of Europe* (University of Minnesota Press) edited by Michael Jones and Kenneth Olwig of the NTNU geography department.

Ph.D. students and recruitment

Three Ph.D. degrees were completed within this field during the 2004-2008 period. One NTNU Ph.D. graduate was recruited to UiB as a post-doctoral fellow and one UiO Ph.D. graduate now works at an independent research institute. A handful of ongoing Ph.D. projects, evenly distributed between NTNU and UiB, are landscape related.

Strengths, weaknesses and challenges

Norwegian landscape geographers have gained international influence and visibility as a result of independent conceptual and theoretical development and a high level of research activity. The group at NTNU has also managed to establish new areas of research in the interface with other thematic areas (see above).

However, until now, the empirical research and conceptual discussion have mostly been developed along an Anglo-Scandinavian axis of discourses, debates and empirical examples. The social and economic context of this discourse is primarily an understanding of European agrarian landscapes as being in the postproductivist phase where the decline in small-scale agriculture has led to growing interest in preserving natural and cultural values in the landscape. Although Norwegian landscape research has positioned itself as independent, critical and original in this discourse, it is still confined within this context to a certain extent. It is still the applied research on landscape preservation and planning that is setting the framework and defining the problems for the underlying critical perspectives.

A challenge facing Norwegian landscape research, and one that it shares with a large portion of European landscape research, is to open up for more global perspectives on land use and landscapes, as well as for post-colonial approaches and research on indigenous perceptions of landscapes. However, Norwegian landscape geographers are few and located in different research environments. It is only at NTNU where one may really speak of a research group (which includes some researchers from the Centre for Rural Research and some Ph.D. students from Nord-Trøndelag University College (HiNT)).

4.6 Environment and livelihoods

Studies of natural resource management with a focus on land and water in tropical areas and with a clear social science perspective are well represented in Norwegian geography. The most important research environment for such studies is the interdisciplinary Department of International Environment and Development Studies, Noragric, at the University of Life Sciences (UMB). However, all three main university departments of geography, as well as some of the smaller universities, have individuals or small groups that publish within this field. There are few researchers at each department, and looking at the publications submitted for review by UiB, NTNU, UiO, UiT and UMB it is clear that these are basically the work of only one researcher at each institution. At some universities the output in this field is more obvious in their production of Ph.D. theses.

Themes and research areas

Important areas of research within this subfield in Norway are:

- Access to land and land conflicts
- Narratives and myths on environmental threats and their significance
- Farming systems seen in their social and political context
- Water management

Norwegian geographers draw on a broad geographical area in this field, which is partly in contrast to many other Northern European research environments, where research in Anglophone sub-Saharan Africa tends to dominate. The publications assessed in this evaluation address issues in Francophone Africa, Nepal and Costa Rica, but a look at the publication lists shows that many other regions in Africa, South America and Asia are also represented. This is a particular strength of Norwegian geography in this subfield. A notable recent trend is also that methods and approaches in this field are increasingly being used to study similar problems and conflicts in Norway. This constitutes a bridge between this subfield and that of landscape geography. This field of research also has open boundaries to the other subfields discussed in this evaluation, particularly social and cultural geography, political and development geography and climate studies.

Theory and methodology

The use of theoretical approaches and methods within this subfield in Norway is rather homogenous, and can broadly be described as critical political ecology. Much of the research utilises either one or both of the following two approaches:

Among popular writers or researchers entrenched in either a social science approach or a natural science (or agrarian sciences), there are a number of *simplistic myths or narratives* on the relation between environmental changes (or degradation) and its social causes or consequences that are held to be common wisdom.

While such statements may claim general validity, they are often not based on careful empirical case studies. In contrast to such statements, many research contributions in this field show the strength of employing an integrated perspective in analysing ecological factors as well as the social, political and cultural connections between societies and the environment. In deconstructing such degradation narratives and criticising established (and seemingly scientifically neutral) concepts such as carrying capacity, researchers such as Benjaminsen et al. (2006) contribute to empirically-based critical geography. Benjaminsen's research also draws upon political geography in analysing the causes of internal conflict. Other researchers in this subfield utilise similar approaches in their work.

A slightly different approach to arriving at a similar analysis takes its starting point in local natural resource use in case study areas. Such research traces, through a thorough and in-depth study of farmers decisions and their social, political and cultural context, the rationale of the farming system and its relation to a wider set of international relations (see.e.g. the studies of Aase and co-authors 2006).

Whether studying water management (Lein 2004), pastoral land use or intensive farming, this type of research goes beyond simplistic assumptions that resource conflicts are driven by population increase or drought by placing them in a wider social and political context. As shown in some of the texts, this has a distinct impact on policy because such misunderstandings may form the basis for policies that actually worsen the situation for the poor rural people they were intended to help (see Eriksen and co-authors 2005).

Ph.D. students and recruitment

A total of 13 Ph.D. dissertations were completed in this subfield during the 2004-2008 period. There were more than 20 ongoing Ph.D. projects in 2009, of which 15 were being conducted at UMB.

National and international collaboration

Researchers within this field are well-connected with universities in their areas of research as well as to a few European research environments.

Publication profile

The publication profile of this subfield is high. Research results are regularly published in international journals and to a minor extent in edited books. Especially Noragric is also visible in terms of popular science articles and public debate.

Strengths, weaknesses and challenges

Seen as a whole, Norwegian research on the environment and livelihoods is innovative, highly productive and of a high scientific standard. It is one of the fields in which Norwegian geographers are visible and cited internationally. It is theoretically informed and produces high-quality empirical research of great relevance and contributes to current policies on the global environment and resource management through detailed and contextualised analyses of driving forces behind local land use changes. In terms of content, most of the research is based on localised case studies. As pointed out by some of the researchers, the scope could be expanded to include more globalised projects. While much of the research conducted thus far has taken as its starting point the analysis of a locality from which global connections are traced, a similar analysis could take a more multiscalar approach and using as its starting point a global perspective focusing on the social and environmental impacts of changes in global markets and policies.

The number of senior researchers (geographers) at each university is low. There appears to be a disparity between funding opportunities (recent funding under action-oriented programmes and cooperation programmes has been comparatively generous) and the number of senior researchers at the geography departments. There is also a stark contrast between the level of the research conducted at Noragric at UMB and the geography departments at the other universities. At Noragric the sole researcher with a background in geography can draw upon the benefits of an interdisciplinary environment in which researchers from many other disciplines come together to focus on the interrelations between the environment and society. It will be a challenge for Norwegian geography to better integrate the work being carried out at UMB into the broader geography research arena.

4.7 Physical geography and climate

Physical geography and climate science may, by themselves be regarded as standalone sub-disciplines. However, for the purpose of this evaluation the panel has chosen to assess the research conducted by “pure” physical geographers and the burgeoning interdisciplinary research on the social aspects of climate change together under the same heading. The field discussed here is not a well-established subfield in scientific terms; hence, none of the researchers included in this evaluation label themselves physical and climate geographers. The delimitation of this subfield for this evaluation is the result of two processes. Firstly, the two full geography departments wanted all of the researchers in

their units to be evaluated together, expressing the ambition of cultivating closer ties within the discipline of geography as a whole (UiB and NTNU, see Chapter 2). The second process is an effect of the development over the past three decades within global society at large in which climate change and its impacts have spurred the development of new fields of knowledge where the interaction between human and physical geography has been shown to have great potential. The emphasis on climate is also evident in some publications submitted by the evaluated institutions, particularly UiB, where climate or climatology as a traditional research field is considered part of the field of physical geography and mainly involves reconstruction of past climates.

The work of seven persons has been reviewed for this evaluation. Five have a strong background in physical geography in the areas of paleoclimatology, geomorphology and hydrology and two are working in the field of climate vulnerability and adaptation. The majority of these researchers are located at UiO, UiB and NTNU. Although there are researchers and publications from Noragric that could be categorised under this subfield, the department itself has not chosen them for inclusion in this evaluation. It should be mentioned that physical geography and climate research is also carried out at the Department of Geosciences at UiO and a number of independent research institutes in Norway.¹⁶ This is apparent in the publications assessed in this evaluation which feature collaboration and co-authorship (Boe et al. 2006; O'Brien et al. 2006; Nesje et al. 2008; Vatne et al. 2008), as well as in the earlier affiliations of the researchers evaluated. Only a small portion of Norwegian physical geography and climate science is assessed in this evaluation.

Traditions in physical geographical and climate related geography in Norway

Traditionally, the fields of physical geography and climate science have been rather separate in Norway, as in many other European countries. In Norway, glacial geomorphological research on landscape evolution had a high international standing until the 1980s; since then its standing has diminished. On the other hand, Norwegian climate modelling has maintained a fairly high international standard. Of the research environments included in this evaluation, geomorphological research is concentrated at NTNU and UiB, although a large amount of this research is conducted at units that are not included here, such as the Department of Geosciences at UiO and the Bjerknes Centre for Climate Research.¹⁷

¹⁶ These research institutes are: the Norwegian Meteorological Institute, the Geological Survey of Norway, the Centre for International Climate and Environmental Research – Oslo (CICERO) and the Bjerknes Centre for Climate Research.

¹⁷ In several instances, these research institutions collaborate closely with the ones assessed in this evaluation; for example, the physical geography group at UiB has close ties to the Bjerknes Centre for Climate Research, which has status as a Norwegian Centre of Excellence. Climate research is also conducted at CICERO, where climate modelling is a stronghold.

As mentioned earlier in the evaluation, there is a long history of human and physical geography becoming increasingly separated. Despite this, the material reviewed in this evaluation indicates a willingness to increase collaboration between the two sub-disciplines. There are groups of researchers who use traditional physical geographical methods and theories and who wish to create structures for more collaboration with human geography, for example researchers in paleoclimatology and geomorphology at UiB and NTNU, where the latter has a promising research project “VulClim”. However, NTNU has defined physical geography as one of its strategic research areas, explicitly separating physical geography from its other four research areas, two of which – Landscape and society and GIS – could well incorporate physical geography.

Themes in contemporary physical geographical and climate related geography

There is no clear difference between the work of the physical geographers included in this evaluation and work done by other Earth Science-based physical geography units. The physical geography research assessed in this evaluation deals with reconstructing past climate through indirect data such as sediments, tree rings, corals, ice cores and historical records and holds a good international standard in terms of publication and citation. Research in this area is mainly conducted at UiB. Another research area, which is found at NTNU, involves understanding periglacial landform development and its processes in time and space through integrating techniques such as remote sensing, fieldwork and ground penetrating radar. Glacial hydrology is also an area of research at NTNU. Most physical geography research has a strong regional focus.

Societal response to risks such as climatological events, landslides and floods has given rise to a new field of research in Norway in which the subfield of physical geography and climate research have merged with more social science-oriented disciplines. This can be seen as a new field of geography that moves beyond traditional physical geography and climate research. This type of research is conducted by the Development, politics and environment group at UiO, which features a few strongly interdisciplinary researchers, and at NTNU as part of projects that span several research areas. Work in this field is also carried out at UiB, at least conceptually. Actual research has not yet been conducted, although the department’s ambition is to integrate different fields in accordance with its organisational structure. In this area of research the Norwegian research groups contribute to the current efforts to integrate and to do multidisciplinary research.

Theory and methodology

The use of theoretical hypotheses in physical geography research is more widespread in the UK than in Norway, Canada and the US. This is evident in the publications submitted for evaluation, which are more descriptive than hypothesis-driven.

Norway has a strong tradition in the use of techniques and development of methods for geomorphological mapping, including aerial photography. However, the development and

assessment of methods in new areas has stagnated in recent years. Nevertheless, these techniques are still used by researchers for landform analysis, for example in publications submitted by NTNU. A major portion of recent work in physical geography in Norway uses technical tools such as radar assessments, GIS applications and dye tracing in geomorphological research, and seek to provide traditional assessments such as the description of patterns at a temporal and spatial scale.

Methodologically, the field of climate impact research in Norway, especially at UiO, is innovative in its application and incorporation of contemporary tools, such as integrating assessment using quantitative data from meteorology, demography and trade flows together with qualitative data from interviews as well as theoretical frameworks. The research also touches upon the role of different actors, power structures and the use of case studies as empirical material. The VulClim project (2007-2011) at NTNU appears promising in terms of integrating the methods needed to assess different aspects of climate change.

Funding

It is difficult to gain an overview of funding from the RCN within this subfield, because categorisation within the RCN is based on different disciplines. Of the three relevant, action-oriented Large-scale Programmes at the RCN, only one – the NORKLIMA programme – has allocated funding for research in this area, while the other two, HAVBRUK and RENERGI, do not have recipients among the evaluated units. A few of the physical geography projects at NTNU are financed under international initiatives, such as the International Polar Year and the TOPO-EUROPE initiative. The VulClim project at NTNU has been awarded five years of funding under the NORKLIMA programme. The unit at UiB has received funding in recent years from the RCN for the NORPEC, PACLIVA and NORPAST-2 projects whose research has focused on Norway, and to a lesser extent on France, Switzerland and Scotland. Time-wise the projects have mainly focused on the more geological aspects of climate change within the Holocene. At UiO, the RCN accounts for a major portion of external funding (approximately 75 per cent in 2008), although the Ministry of the Environment and the Ministry of Foreign Affairs contributed funding as well. The department also receives funding under the UN International Human Dimension Programme. It is not clear how much of this funding has been allocated to physical geography and climate research.

National and international collaboration

There is some collaboration at the national and international levels. At the national level, researchers from NTNU have collaborated with UiO, the Norwegian Meteorological Institute and others on the RCN-funded TSP NORWAY project, and physical geographers at UiB are involved in close collaboration with the Bjerknes Centre at UiB on climate research. At UiO, the leading researcher on climate impacts is heading the international Global Environmental Change and Human Security (GECHS) programme, which will

most likely augment the department's international network and expand its scope of research.

Publication profile

The publication profile in this area is well developed. During the 2004-2008 period, articles within this field were published in: *The Holocene*, *Global and Planetary Change*, *Quaternary Science Reviews*, *Journal of Quaternary Science*, *Earth and Planetary Science Letter*, *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, *Climate Dynamics*, *Boreas*, *Mountain Research and Development Journal*, *Geografiska Annaler: Series A*, *Norwegian Journal of Geology*, *Geophysical Monograph Series*, *Cicerone*, *Geomorphology*, *Quaternary Science Reviews – Quaternary Geochronology*, *Mountain Research and Development*, *ESS Bulletin*, *Die Erde*, *Quaternary Research*, *The Geographical Journal*, *Environmental Management*, *Climate Policy*, *Climate Research*, *Mitigation and Adaptation Strategies for Global Change*, *Ambio*, *Global Environmental Change* and *Climatic Change*. Thus, this is a field in which international publication in refereed journals is well established.

There is an impressive amount of popular science material within physical geography in the publication lists, indicating that dissemination outside strict peer-reviewed circles is much more common than in other Nordic countries, such as Sweden. One explanation may lie in the fact that most of the research conducted within the field of geomorphology in Norway has a national focus; such a strong focus on local relations may make it easier to present research results to the public at large.

Ph.D. students

During the 2004-2008 period, UiO, UiB and NTNU had 0, 1 and 3 Ph.D. dissertations with a physical geographical and climate-oriented focus, respectively. In 2009 there were six ongoing Ph.D. projects that either focused on physical geography or addressed climate and vulnerability issues. In one proactive measure to increase interaction between disciplines at NTNU, Ph.D. students entering the geography programme from a field in the natural sciences must take a crash course in geography. A broad recruitment to an interdisciplinary project, as has been done at NTNU is also a promising way of training future interdisciplinary researchers.

Strengths, weaknesses and challenges

The focus of the research in physical geography in Norway in this evaluation is on areas of paleoclimatology, glacial and periglacial, and hydrological research. This represents the strong contemporary research in physical geography being carried out in the Nordic countries, and is thus in line with mainstream research within its field. Another area of strength is the research integrating climate impacts and social science in which Norway has achieved a high international standard. This is mainly the result of climate vulnerability

research conducted at UiO, which is successful at several levels. Firstly, it holds a high international standard. Secondly, it is an excellent example of the integration of physical and human geography. Thirdly, the research is innovative, assessing methods (use of statistical data, GIS) and scales (global to local) in new ways through the use of GIS and other analytical frameworks.

The processes related to the impacts of climate change are probably the best proof of the scientific need for geography as a discipline. The small but productive group at UiO has been able to achieve a high international standard in areas related to climate change and societal effects, for example, through work on the IPCC evaluation reports. Research on climate change and its impacts may serve as a bridge between physical and human geography, as demonstrated by the research conducted at UiO and NTNU, and, to a lesser extent, at UiB.

There is, however, some room for development in the physical geography and climate research carried out at the evaluated units. The research groups in this field are rather small. While there is collaboration within groups and between groups in the form of joint research projects and papers, collaboration on the latter is largely with researchers from disciplines other than geography. There also appears to be a tendency towards isolation where one or a few researchers work on their own, resulting in lower productivity and less research innovation and development. This isolation is also echoed in the actual field site selection within physical geography, where it is evident both in the low level of collaboration between researchers, and in the location of the research itself. This is illustrated in the publications and the topics of research projects that the units have participated in during the evaluation period (e.g. “Past Climate of the Norwegian Region-2”, “Norwegian Past Environment and Climate”). One explanation may be the vast distances in Norway, as these directly affect accessibility. Another explanation may be that there is extensive research in this field in Norway, which does not give researchers many incentives to explore other geographical areas. Yet another explanation may be the funding structure that prioritises research in geographical areas of Norway over research in other regions, which is not as widespread a practice, for example, in Sweden.

The divide between human and physical geography was expressed in the interviews as a barrier to increased cooperation. At UiO it was described as an institutional barrier where problems arise if students in the social sciences wish to take courses at another faculty, for example in mathematics and the natural sciences. Aside from the need for knowledge in mathematics and natural science relating to issues outside the university system, there are bureaucratic barriers that should be removed to increase the mobility of students between faculties and expand the integration of human and physical geography. Requiring natural scientists entering Ph.D. programmes to read up on Master’s-level geography was mentioned as a way of removing a disciplinary barrier at NTNU.

As is the case internationally, the discipline of geography in Norway struggles somewhat with, yet benefits from, the development and use of GIS. Although there is less evident GIS-focused research in Norway than in many other neighbouring countries, such research is found at many departments. NTNU has defined GIS as one of its five strategic research areas. System dynamics, including information science, modelling and GIS, is one of the main research areas at UiB, although it is fairly new. The system dynamics group could potentially bridge human and natural science, creating a platform for geography, which is the department's clearly expressed intention. This will require integration from the undergraduate level to the doctoral level and full academic positions. Several of the projects at NTNU, such as the 11 projects under the departmental project "Thinking geographically about house and home" have high potential with regard to integrating the various fields within the subfields of physical geography (risk) and climate (environment). There are also some promising attempts to develop GIS and system analysis that can incorporate the strong fields of paleoclimatology, geomorphology and hydrology into a broader understanding of interdisciplinary geography. UiB and NTNU are conducting geomorphological research related to vulnerability. Here, system dynamics and GIS are clearly stated as strategic structures for future integrated research.

Norway has long traditions in the petroleum and fisheries industries, and physical geography and climate research in these areas could serve to strengthen the discipline of geography as a whole. Other research, for example at the University of Tromsø, deals with societal dependence on natural resources, naturally-caused threats and reindeer research, and also holds great potential for the "new" geography which is taking shape thanks to cooperation between researchers in areas such as biogeography, climatic assessments, remote sensing, geomorphology and landscape assessments.

The bulk of the physical geography research assessed in this evaluation has used new technical tools, for example radar assessments in geomorphological research. The objectives of the research are traditional and include the description of patterns on a temporal and spatial scale. Here the panel finds that Norwegian researchers are *users of methods* rather than *producers of methods*. Collaboration with human geography researchers would likely give rise to a whole new range of applications that could strengthen the research field.

4.8 Summary of main observations: Subfields in an international perspective

The subfield themes analysed above may be roughly divided into two groups when it comes to their position on the international research front and their standing in comparison to Nordic geography in general.

Research themes with a significant role in international research and debate

Three research themes and their related clusters of researchers stand out in terms of international visibility, influence and close contact with the international research frontier in their respective fields. However, the panel wishes to point out that in some of them the international standing relies heavily on the work of single individuals, which makes these themes vulnerable.

In recent years, *political geography* related to *development studies* has emerged as a key area of renewal at the University of Oslo, focusing on local conditions of decision-making and obstacles to democratisation. Political geography in Norway has a clear international orientation, maintains a high standard and stands out as the most visible, cited and influential subfield of Norwegian human geography in the broader international debate.

In Norway, the field of socially relevant climate studies has shown strength in recent years, particularly as a result of the *climate vulnerability research* conducted by a small, but productive group at UiO. This research holds a high international standard and is a good example of innovative integration of methods in physical and human geography.

Norwegian geographical research on *environment and livelihoods* is also of high quality. It has a clear theoretical foundation in social science, and most of the research may be categorised as *critical political ecology*, looking at local land use in a social, economic and cultural perspective. This is also a field in which a few individuals have put Norwegian geography on the map internationally. The leading environment is the creative and productive interdisciplinary Department of International Environment and Development Studies, at UMB, but researchers at UiB and NTNU are also contributing to making this a strong research field.

Research themes influential at the Nordic level

The following research themes do all display research of good quality, but their impact on Nordic and European research varies.

Norwegian *landscape geographers* at the universities are few in number, but due to their international orientation, key role in the conceptual debate and practice-orientated approach to qualitative empirical analyses of landscapes as a human-environment relation, they have come to play an important role outside Norway. In a Nordic perspective the geography department at NTNU has played a leading role in the conceptual debate during the last decade, and in a broader perspective the department has made a clear mark on the map of European landscape research.

Economic geography in Norway is perhaps the largest subfield of Norwegian geography, at least in terms of the number of researchers, and is in that sense a research area of overall importance. In general, the research conducted by economic geographers is based on sound

empirical research and is well-informed by contemporary international theoretical and conceptual debate. In this respect, economic geographers in Norway are part of a relatively strong and successful Nordic vein of research on agglomerations, clusters and regional innovation systems. Methodologically, economic geography is mostly confined to careful case studies, and there is room for more empirical studies using comprehensive types of data. Quantitative methods are rarely used in contemporary economic geography in Norway.

Norwegian *social and cultural geography* is a relatively new field. It started out as empirically-orientated applied research directed towards planning issues, but has now developed into a field with a solid theoretical foundation and an increasing level of international publication. Although there are promising exceptions among younger researchers, it appears that researchers in this field consider themselves users of theoretical and conceptual developments, rather than as theory producers or initiators in conceptual debates. Norwegian research within this field has not yet made a mark on the international debate within the subject.

The focus of the research within “pure” *physical geography* assessed in this evaluation is on areas of paleoclimatology, glacial, periglacial, and hydrological research and represents a solid and strong contemporary physical geography being carried out in the Nordic countries. Thus the evaluated research is in line with mainstream research in its field.

5 Conclusions

5.1 The evaluation – scope and limitations

This evaluation of Norwegian geographical research encompassed the main university departments of geography and a selection of other units at which research in geography takes place. A first observation is that in Norway, in contrast to the other Nordic countries, a substantial portion of research in geography is conducted outside the universities. Thus, this evaluation does not give a full picture of geographical research being carried out in Norway. Of the 171 researchers with a higher degree in human geography (Master's degree or equivalent) employed at institutions of higher education and independent research institutes, only 72 worked at the units selected for evaluation and even fewer were incorporated into the evaluation. A large number of ISI publications classified as human geography come from the independent research institutes (see Section 2.1). Furthermore, of the total funding allocated by the Research Council of Norway (RCN) for projects classified as human geography, 37 per cent went to independent research institutes where more than one-half of the projects were conducted (see Section 2.5). The conclusions below should be read with this in mind. It is the panel's impression that the research carried out at the institutes and the research carried out at the universities share substantial thematic similarities, but the panel has not been able to verify this.

It should also be taken into consideration that the panel has not had access to material that would enable it to make a thorough qualitative judgment of the role of the RCN in geographical research in Norway. Likewise, the panel has not been able to fully assess the relevance of geographical research and evaluate the role of geographers in the public debate in Norway. The panel has only formed some rather general impressions. The following conclusions are mainly based on the self-evaluations of the units, the interviews with representatives of the units and the publications submitted to the panel.

5.2 Norwegian geography in perspective

Physical and human geography

The relationship between human geography and physical geography in Norway has a long and complicated history. This is also reflected in the somewhat ambiguous scope of this evaluation. It was planned to be an evaluation of human geography, but following the recommendations of the national council of geography it was broadened to include the discipline of geography as a whole. However, the main physical geography research unit at the University of Oslo (UiO) has not been included in this evaluation but is evaluated as part of the evaluation of research in the geosciences. This evaluation encompasses physical geography at the Norwegian University of Science and Technology (NTNU) and the University of Bergen (UiB). The ambiguity is also reflected in the background chapter of

this evaluation, Chapter 2, which is partly based on reports that were completed at the stage when the evaluation was only supposed to encompass human geography. It has been difficult to find statistics describing the discipline of geography as a whole. The ambiguity of this evaluation can also be seen as reflecting a certain ambiguity among the different research environments as to their own understanding of their main identities as *geographers* or *human geographers* (*samfunnsgeografer*).

Thus, this is an evaluation of geography, with a clear emphasis on human geography, in terms of the number of researchers. When it comes to physical geography, the panel has especially focused on the efforts to integrate human and physical geography.

In the summary in Chapter 3, the panel highlighted the paradoxical situation in which the human geographers at UiO have been the most successful in conducting research building on both physical and human geography, while at the same time claiming a clear identity as human geographers.

The development of human geography at UiO was based to a great degree on a distancing from the view of geography as a discipline of synthesis of nature and culture at a time when the epistemologies and ontologies of such a synthesis were connected to either an old-fashioned, environmentally-deterministic regional geography or a science-based, system-oriented approach. The latter was seen as reductionist from the point of view of a radical social science.

In relation to such theoretical issues relating to the problem of integrating human and physical geography, the three main university departments revealed three different standpoints in the self-evaluations and interviews. In the interviews with the management of the geography department at UiB, the interviewees mentioned that the recently incorporated research group of system dynamics could potentially promote the integration of physical and human geography; the same message is conveyed in a figure provided in the self-evaluation where system dynamics and GIS are placed at the centre. The department of geography at NTNU has, on the other hand, identified the problem of integration of physical and human geography as an issue relating to differences in philosophies of science, and has therefore launched departmental discussion and debate on the issue. The Oslo human geographers represent a third approach. They seem not to have had any such intellectual challenges to overcome, but have nevertheless been able to successfully launch research on the social aspects of climate change. This research in the interface between human and physical geography is based on an anthropocentric and social theory-based approach, but where an understanding of science-based climate research is also essential. The key here seems to lie in the well-defined formulation of the research problem rather than in debating the integration of geography. To solve this research problem interdisciplinarity is not only desired, it is required. In this case the Oslo unit appears to follow the old saying that geography is what geographers do.

Over- and underrepresented themes

From an overall view, the most significant theme in human geography in Norway is probably economic geography or rather, in its broader form, *regional development*. Cutting across the various units and subfields the panel finds the regional/local perspective in explorations of regional growth, regional landscapes, regional environmental vulnerabilities, local living conditions and politics, the social and cultural construction of regions and places, place identities, local community studies, local masculinities and femininities, emphasis on local case studies, etc. This emphasis is often connected to dichotomous oppositions between centre and periphery or the urban and the rural, in this way implicitly expressing a normative stand. The panel has suggested earlier that this emphasis is a contextual feature connected to social, political and cultural discourses within Norwegian society, where regional perspectives and spatially balanced settlement patterns are important priorities. To confirm this hypothesis it may be worth looking at the development of research funding priorities. The dominance of a single perspective could potentially lead to the underrepresentation of other perspectives.

The most evident example of this is the status of *urban geography* in Norway. In comparison with the other Nordic countries, urban geography is a rather small theme in Norway. There is a small research environment at UiO and an individual researcher at NTNU focusing on urban geography. Looking at research on developing countries in the South, the focus on urban issues is almost non-existent. Although studies on urban and regional issues (*By- og regionforskning*) are visible in various contexts, the focus is more on urban systems and regional development than on urban geography per se. In the panel's assessment of social and cultural geography this situation has been placed within the context of a nearly anti-urban discourse as a corollary to the focus on rural and community studies. However, the little research conducted in urban geography thus far has been of good quality, and there is obvious potential for development.

It is also interesting to note that studies in *tourism geography* are weakly represented in the publications submitted for assessment. This may reflect the fact that this type of research is mainly carried out at the (more applied) research institutes or at interdisciplinary departments at regional university colleges which have been not included in this evaluation.

Another observation that is also related to the history of geography in Norway is the weak development of *quantitative methods* and the handling of *large datasets*. Quantitative geography was less developed in Norway in the 1960s and early 1970s, when it was flourishing in Swedish and Anglo-American geography. The 1980s and 1990s brought a trend towards qualitative methods and a critique of positivism and quantitative methods, which appears, from the outside, to have had the final word in this debate in Norwegian geography, from which the quantitative strand of research has never recovered. As pointed out in the assessment of economic geography at the university departments, quantitative

geography is rarely a component of contemporary economic geography research in Norway, which instead focuses on careful case studies. It is, however, important to point out that the panel has found noteworthy exceptions to this in urban geography. Similarly, *population geography*, a field where quantitative methods and large datasets are normally widely used, also has a weak position in geography in Norway, unlike in Sweden. There is certainly room for more empirical studies using comprehensive types of data and hence in order to increase methodological competence when it comes to analyses of large statistical datasets.

The broader issues of Norwegian geography in a comparative perspective may also be viewed from another angle: to what degree do geographers in Norway contribute to research in areas that are more relevant for Norwegian politics, trade and industry and working life than for other Nordic countries? Although issues relating to the *petroleum* or *fisheries industries* are not absent in the publications assessed by the panel, they are not particularly visible in Norwegian geography research at the universities. Moreover, there is room for much more development of a specific geographical angle, including an interdisciplinary approach based on physical and human geography. Another related observation is that there is a relatively meagre presence of questions relating to *circumpolar areas* in the assessed publications, contrary to the panel's expectations. In the section on *political and development geography* the panel noted that not much research focuses on the European continent, North Atlantic communities, Nordic neighbours, the Barents Region or Russia. The same is true for the subfield of *environment and livelihoods*, which is poorly developed when it comes to natural resource management in the North, from reindeer husbandry to fisheries and mineral extraction. The recent development in Norwegian geography within studies of political ecology and climate vulnerability, with its interdisciplinary perspective and insights from human and physical geography, offers important critical analytical perspectives that could be incorporated here.

5.3 Summary of main observations

Quality and relevance

In Section 4.8 the panel attempted to assess the quality and relevance of the subfields that stand out as the most visible in this evaluation. Research in all of these subfields is of good international standard. The panel pointed out some of the fields in which the work of Norwegian geographers plays a significant role in international research: political geography, climate and vulnerability, and political ecology (environment and livelihoods). The panel also pointed out certain fields that do not have strong research traditions in Norwegian geography, but that play a key role in international geography and are clearly relevant to Norwegian society. Urban geography must be mentioned here in particular, as it is a subfield in which the few researchers who have been incorporated into this evaluation have managed to show the potential of the field. Among the research areas that are

underrepresented in the departments of geography at Norwegian universities, but which are of great relevance for Norwegian society, are studies of petroleum, fisheries and natural resource management in the circumpolar North.

Organisation, cooperation and doctoral-level education

The units included in this evaluation differ in their ambitions when it comes to common research strategies and efforts to develop internal collaboration and creative research environments. They also face different challenges, depending on whether they are large geography departments or whether the geographers form part of an interdisciplinary environment (see Section 3.8).

There is a fairly low level of national cooperation between the university departments in Norway. Promotions to professorships and proposals for the ranking of journals in bibliometric analyses are the main tasks performed at the national level through cooperation between the geography departments. The departments at the three well-established universities play a major role here and there is certainly room for more national collaboration with geographers at interdisciplinary departments and independent research institutes. This would strengthen geographical research. This is especially true in the case of Ph.D. programmes, where national cooperation on Ph.D. courses would help to create networks among younger researchers. There is also a clear tendency towards in-house recruitment to Ph.D. programmes.

Publication and dissemination

A large amount of Norwegian geographical research is today published in international refereed journals. Articles are most frequently published in *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, *The Holocene*, *Geografiska Annaler: Series B, Human Geography*, and *GeoJournal*. In the bibliometric system used for performance-based funding in Norway, only 28 international journals are classified as level 2. Thirty per cent of the journal articles published by Norwegian geographers are found in these top-ranked journals. There are, however, large variations both between and within the units, and some research environments have clear potential for increasing international publication. The main national channel for international publication is *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*. During the last decade, the journal has taken active steps to increase its quality and international visibility and is now indexed in the Web of Science.

Capacity and funding

All of the assessed university units received more than one-half of their research funding from internal sources (general university funds – see Table 2.11). At least on paper, this appears to guarantee a certain level of independence in terms of choosing research topics, methods and approaches. External funding varies greatly between the departments. The panel has not had access to sufficient material to fully evaluate the role of the RCN in the

renewal of Norwegian geography. In Section 3.8 the panel expressed concerns about the degree to which funding channelled under the large-scale or action-oriented programmes at the RCN will render it difficult maintain local research strategies. The panel has not been able to assess the quality of the research in relation to funding from the RCN.

5.4 Recommendations

The panel has offered some recommendations and reflections for the individual research environments (Chapter 3) and some views relating to the various subfields of geographical research (Chapter 4). The following recommendations are more general in nature and apply to all of the subfields and to the organisation, collaboration and identity of Norwegian geographical research at the national level.

Contribute more visibly to the international debate

Norwegian research in geography, especially human geography, has, in many of the subfields reviewed above, shown its strength in theoretically-informed research, which is carried out in continuous communication and debate with international research. This provides a sound basis for further development. Certain subfields and research groups are highly visible internationally due to their theoretical, conceptual and methodological contributions. These examples show that Norwegian geography is in a position to make original and creative contributions to the international debate. The panel is of the opinion that Norwegian geography researchers also in other subfields have the potential to play a more important role internationally and to take the decisive step from being theory users to becoming theory producers. In the international arena, which is dominated by Anglo-American geography, Norwegian geographers are in a strong position to influence the international research agenda.

Support for post-doctoral fellowships and researcher-initiated independent projects

A large share of research in geography is carried out at independent research institutes and these are also the recipients of a large portion of the research funding in human geography allocated by the RCN. It is evident that this plays an important role in the career paths of younger post-doctoral fellows. However, this is not followed up in terms of funding for post-doctoral fellowships and researcher-initiated independent projects (fri prosjektstøtte) at the universities. Few university departments have even one post-doctoral position. At the same time, it is clear that some of the more important sources of renewal in Norwegian geography in the period have been the research by younger researchers, for whom financing has been available at the universities in the form of funding for independent projects. An increase of such support would be a source for the intellectual renewal and internationalisation of Norwegian geography, and should not be seen in contrast to the demands for relevant research. The RCN has a central role to play in promoting this renewal.

A broader recruitment of Ph.D. students

Recruitment of Ph.D. students to the three main university departments appears, to a certain extent, to be an in-house affair and is often restricted to Norwegian speakers. Advertisement of Ph.D. positions at the Nordic or international level does not seem to be common. The panel is of the opinion that a more open recruitment process (in the Nordic countries and/or internationally) would be beneficial for the quality and renewal of Norwegian research.

National collaboration: common Ph.D. courses

National collaboration is important for the development and identity of geography in relation to other disciplines. Formal cooperation between geographers in Norway mainly involves senior researchers at the three main universities. Norwegian geographical research would benefit from drawing on the entire geographical research community in collaborative networks including geographers at the independent research institutes and, not least, younger researchers. National Ph.D. courses were organised in the past but today geography Ph.D. students have to rely on the Oslo Summer School and a few Nordic research courses. National Ph.D. courses would strengthen geographical research, promote mobility between departments and create networks among younger researchers.

References

- Aase, T.H. & E. Fossåskaret (2007), *Skapte virkeligheter. Om produksjon og tolkning av kvalitative data*. Oslo: Universitetsforlaget.
- Asheim, V. (1978), *Kulturlandskapets historie: jord- og skogbruksområdene slik det var og slik det er i flatbygdene på Østlandet*. [Ny, omarb. utg.] Oslo: Universitetsforlaget.
- Asheim, B.T. (1987), A critical evaluation of postwar developments in human geography in Scandinavia. *Progress in Human Geography*, vol. 11:3, 333-353.
- Benjaminsen, T.A., Rohde, R., Sjaastad, E., Wisborg, P. & T. Lebert (2006), Land Reform, Range Ecology, and Carrying Capacities in Namaqualand, South Africa, *Annals of the Association of American Geographers* 96, 3, 524-540.
- Berg, N.G. (2007), Social and cultural geography in Norway: from welfare to difference, identity and power. *Social & Cultural Geography*, 8: 2, 303-331.
- Berg, N.G., Dale, B., Lysgård, H.K. & A. Löfgren (eds) (2004), *Mennesker, steder og regionale endringer*. Trondheim: Tapir akademisk forlag.
- Eriksen, S., Brown, K. & M. Kelly (2005), The dynamics of vulnerability: locating and coping strategies in Kenya and Tanzania. *The Geographical Journal*, 171 (4): pp. 287-305.
- Goudie A.S. (1986), The integration of human and physical geography. *Transaction of the Institute of British Geographers* 2:454-458.
- Isaksen, A., Karlsen A. & B. Sæther 2008 (eds), *Innovasjoner i norske næringer. Et geografisk perspektiv*. Bergen: Fagbokforlaget.
- Jones, M. (1991), The elusive reality of landscape: Concepts and approaches in landscape research. *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, 45:4, 229-244.
- Jones, M. (2001), Norsk geografi - sett utenfra og innenfra. *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*, 1502-5292 55: 176-181.
- Langfelt, L. & A. Klitkou (2009), *Faglige og institusjonelle avgrensninger. Bakgrunnsdata til Norges forskningsråd for evaluering av fagene filosofi, rettsvitenskap, sosiologi, sosialantropologi og samfunnsgeografi*. Report 1/2009. Oslo: Norwegian Institute for Studies in Innovation, Research and Education.
- Kyvik, S. & T.B. Olsen (2009), *Gjennomstrømning i doktorgradsutdanningen*. Report 40/2009. Oslo: Norwegian Institute for Studies in Innovation, Research and Education.
- Lehtinen, A., Donner-Annell, J. & B. Sæther. (eds, 2004), *Politics of Forests. Northern Forest-Industrial Regimes in the Age of Globalization*. The Dynamics of Economic Space Series. Ashgate.
- Lein, H. (2004), Managing the water of Kilimanjaro. Water, peasants and hydropower development. *Geojournal* 61: 155-62.

- Lindkvist, K. B. (ed) (2004), *Ressurser og omstilling – et geografisk perspektiv på regional omstilling i Norge*. Bergen: Fagbokforlaget.
- Mohan, G. & K. Stokke (2008), The politics of localization: From depoliticizing development to politicizing democracy. In Cox, Kevin R. & Murray Low & Jennifer Robinson (eds.): *The Sage Handbook of Political Geography*, pp. 545-561. Sage: London.
- Sivertsen, G. (2010), A performance indicator based on complete data for the scientific publication output at research institutions. *ISSI Newsletter* 6: 22-28.
- Öhman, J. & K. Simonsen, K. (2003), *Voices from the North. New Trends in Nordic Human Geography*. Aldershot: Ashgate.
- Rusten, G. & J. Bryson (eds) (2009), *Industrial design, competition and globalization*. Basingstoke: Palgrave MacMillan.
- Stokke, K. (2009), Human geography and the contextual politics of substantive democratization. *Progress in Human Geography* 33(6), pp. 739-742.
- Stokke, K. & E. Sæter (2010), Political geography in Norway: Current state and future prospects. *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography* (forthcoming).
- Tvedt, T. (2009), *Utviklingshjelp, utenrikspolitikk og makt. Den norske modellen*. Gyldendal: Oslo.
- Vatne, E. (ed) (2005), *Storbyene i kunnskapsøkonomien. Arena for kunnskapsdeling og nyskaping*. Oslo: Spartacus forlag.

Appendix 1: Evaluation documents and evaluation panel

1.1 Terms of reference.....	105
1.2 Brev til de fagmiljøer som evalueringen omfatter.....	109
1.3 Bestilling 1.....	111
1.4 Bestilling 2.....	113
1.5 Korte CVer for evalueringspanelets medlemmer.....	115

Evaluation of Geographical research in Norway

I Introduction

The Research Council of Norway has decided to conduct an evaluation of selected research groups carrying out geographical research in Norway. The Research Board of the Division for Science will appoint a special panel to perform the evaluation. The results of the evaluation will be publicly accessible. The evaluation will form the basis for the further development of geographical research in Norway.

II The objective of the evaluation

The objective of the evaluation is to:

- Provide an overall assessment of the quality of the geographical research being conducted by the selected groups in an international perspective.
- Facilitate learning and development within the research groups and offer insight into the strengths and weaknesses of and challenges facing the research.
- Help to identify measures to increase quality.
- Enhance the knowledge base of the research groups, the Research Council and the ministries to further develop geographical research.

The evaluation report is to be made available in the public domain. Users of the report will be the management and employees of the individual research groups and the top administration of the institutions, as well as the Research Council, research-policy authorities, other research groups and procurers of research.

The Research Council will use the evaluation as the basis for its activities to promote scientific development and quality in research. The research groups themselves will have the primary responsibility for following up the results of the evaluation in activities relating to scientific development, recruitment, researcher training, research management and research organisation.

III Organisation

The Research Board of the Division for Science will appoint an independent panel of international experts to carry out the evaluation. The tasks of the panel will be set out in a mandate issued by the Research Board. The Research Council will provide administrative support, and a designated secretariat will be established to assist the panel in its efforts. The panel is expected to submit its report by the stipulated deadline.

The evaluation will encompass a selection of research groups over a certain size and will extend to all researchers associated with these groups who are formally qualified for employment at associate professor level. Both research at centres and institutes at the universities, and at university colleges and independent research institutes can be part of the

evaluation. The research groups and researchers will be selected on the basis of criteria approved by the Research Board of the Division for Science.

Prior to its finalisation, the evaluation report will be submitted to the research groups for quality assurance of the *factual information*. The panel will then submit the final report to the Research Board.

Evaluation activities are commenced in 2009 and will be concluded by the end of 2010. The panel will prepare a progress plan early on in the evaluation process and will be allowed to propose adjustments to the mandate.

IV Mandate for the evaluation panel

The evaluation panel shall provide an overall assessment of the quality of the geographical research being conducted in selected research groups.

Quality is to be assessed in an international perspective, with due consideration given to national conditions and needs, as well as the scientific objectives of the research groups and their access to resources, including funding and funding sources.

The panel is free to address questions other than those set out in the mandate, should the need arise during the evaluation process.

The conclusions of the evaluation panel are to be accompanied by recommendations for follow-up measures for the research groups, as well as by national-level recommendations targeted toward the Research Council and the ministries.

The evaluation of geographical research shall encompass the following five dimensions:

1. Quality and relevance

- Scientific merit and quality of the research community as a whole and the individual researcher groups
- International standing of the research
- Strong and weak research areas
- Influence of the research activities and their relevance relative to:
 - the international researcher community
 - Norwegian society, trade and industry, and working life

2. Organisation, cooperation and doctoral-level education

- Researcher groups and research institutes
 - Research management and research strategy
 - Balance between junior and senior-level researchers and between women and men
- National and international research cooperation
 - Cooperation and distribution of research tasks at the national level
 - Contact and cooperation at the international level
- Recruitment and renewal
 - Researcher mobility nationally and internationally
 - Capacity and quality of doctoral-level education

- Recruitment to doctoral degree programmes, post-doctoral fellowship positions and permanent positions

3. Publication and dissemination

- National and international publication channels
- Dissemination to students, users and the public at large

4. Capacity and funding

- Overall volume of geographical research in Norway
- Distribution and utilisation of research resources
- Funding structure

5. Recommendations and follow-up

- Recommendations targeted toward the research groups under evaluation and the top administration of the institutions
- National-level recommendations targeted toward the Research Council and the ministries

V Basis for assessment

The evaluation panel is requested to provide an overall assessment of the geographical research being conducted in Norway and by the individual research groups on the basis of the following material:

- 1. Scientific production*
 - a) CVs and publication lists from all researchers encompassed by the evaluation
 - b) Bibliometric analyses of publication data
 - c) Selected scientific works from all researchers encompassed by the evaluation
- 2. The research groups under evaluation*
 - d) Annual reports and other documentation of the activities of the institutions under evaluation
 - e) Self-evaluations by the research groups under evaluation
 - f) Meetings between the evaluation panel and the research groups
- 3. Reference material*
 - g) Presentations and descriptions of the Norwegian R&D system in general and of Norwegian geographical research in particular, including institutional and financial framework conditions and the recruitment situation.

The material will be obtained and prepared by the Research Council administration. The evaluation panel may request supplementary information, should the need arise during the evaluation process.

1. Assessment of scientific production

To gain an overview of the entire scope of scientific activities, the evaluation panel must assess the overall scientific production of the research groups. Complete publication lists from the past five years for all researchers encompassed by the evaluation will provide a basis for the analysis of publication patterns and research production in the field. Bibliometric analyses of publication data will also be performed.

The evaluation panel must review the material with a view to assessing scientific breadth and renewal. This review should enable the panel to identify for example the sub-disciplines, theories, methods and thematic areas where Norwegian geographical research is well developed in an international context, as well as ascertain whether there are deficiencies in important areas of the field. The panel is also requested to assess the quality of the publication channels used by Norwegian geographers.

Researchers encompassed by the evaluation must also submit *two scientific works* of outstanding quality (in their opinion). The term scientific works refers to articles and other contributions to scientific journals, anthologies, doctoral theses and monographs. Together with the complete publication lists, the selected scientific works will form the basis for assessment of scientific merit and production, also in an international perspective.

2. Assessment of the research groups

The selected research groups are to prepare a *self-evaluation* using the template designed by the Research Council administration. The objective of the self-evaluation is to highlight the strengths as well as the weaknesses of the research activities carried out by the research groups. The research activities must therefore be reviewed critically in the self-evaluation. The evaluation panel will also be furnished with available *annual reports* and other documentation describing the strategies, plans and activities of the research groups being evaluated, including statistics on students and doctorates and descriptions of doctoral programmes.

In addition, *meetings between the evaluation panel and the research groups* will be arranged. The purpose of the meetings is to give the evaluation panel an opportunity to obtain more detailed information about the objectives, framework conditions and tasks of the research groups. The meetings may be used to gain greater insight into research and publication activities, research management and research strategies, working conditions and the recruitment situation. Special attention should be given to the relationship between research and teaching; that is, to the significance of the teaching and supervisory activities for research-related development. The meetings will provide the opportunity to explore issues raised in the self-evaluation more closely. The evaluation panel itself is to draw up a plan for how it intends to carry out these meetings, as well as their form and content.

3. Reference material

The reference material will provide an overall description of the R&D system in Norway in general and of Norwegian geographical research in particular, including institutional and financial framework conditions, the recruitment situation and information about other relevant processes etc. A memo describing how the Research Council's funding instruments are utilised to fund geographical research will also be prepared. This will provide the evaluation panel with the background information it needs to evaluate geographical research in Norway and the individual research groups in an overall context.

Fagmiljøene som skal omfattes av evalueringen av
geografisk forskning

Vår saksbehandler/tlf.
Björg Ofstad, +4722037374

Vår ref.
2008/05329
Deres ref.

Oslo,
19.5.2009

Evaluering av geografi: Bestilling av underlagsmateriale og egenvurdering

Vi viser til tidligere kontakt og takker for at dere vil delta i evalueringen. Det har tatt noe tid å få sammensatt et evalueringspanel. Vi er midlertid nå i slutfasen og vil orientere dere så snart panelet er oppnevnt. Liste over fagmiljøer som deltar og mandat for evalueringen vedlegges.

Vi har nå to bestillinger til fagmiljøene: én bestilling av navn og CVer for forskere som skal inngå i evalueringen og underlagsmateriale for vurdering av den faglige produksjonen og én bestilling av fagmiljøenes egenvurdering og dokumentasjon av fagmiljøenes virksomhet. I det følgende gis det nærmere informasjon om disse to bestillingene. Vedlagt følger også krav til utformingen av underlagsmaterialet (vedlegg 1), mal for egenvurderingen (vedlegg 2). **Merk at bestillingene har ulike frister: 30. juni og 30. september 2009.**

Bestilling 1: Navn, CVer og underlagsmateriale for vurderingen av forskernes faglige produksjon

Første fase i arbeidet med evalueringen er å samle inn navn, CVer og underlagsmaterialet for vurderingen av forskernes faglige produksjon. Det er utarbeidet anvisninger for hva slags materiale vi ønsker innsendt fra fagmiljøene, og disse framgår av vedlegg 1.

Vi ber om at underlagsmaterialet sendes innen **30. juni 2009** til Forskningsrådet ved Hanne Husaas, e-post: hhu@forskningsradet.no.

Forskningsrådet har i tillegg bestilt kvantitative analyser av forskernes vitenskapelige publisering fra NIFU STEP. Disse analysene vil omfatte perioden fom. 1.1.2004 tom. 31.12.2008, og er basert på de vitenskapelige publikasjonene som er innrapportert til Database for høgre utdanning (DBH) gjennom FRIDA og Forskdok, og som er publisert i kanaler som er klassifisert som vitenskapelige.

Bestilling 2: Fagmiljøenes egenvurdering og dokumentasjon av fagmiljøenes virksomhet

Som miljøene er kjent med, er et annet viktig element i evalueringen fagmiljøenes egenvurdering. Vedlagt følger et skjema med en rekke momenter som fagmiljøene bes om å besvare, kommentere og vurdere (vedlegg 2). Egenvurderingen skal i tillegg suppleres med skriftlig dokumentasjon av virksomheten, jf vedleggets del B om dokumentasjon av fagmiljøets virksomhet.

Egenvurderingen må representere en kritisk reflekterende og problematiserende gjennomgang av virksomheten, og peke på de utfordringer fagmiljøene står overfor. Forskningsrådet understreker at egenvurderingen skal være resultat av en kollektiv prosess i fagmiljøet, og speile bredden av virksomheten som evalueres. Fagmiljøene må sikre at det blir gjort tilstrekkelig rede for forhold som har betydning for forskningsaktiviteten. Momenter fra egenvurderingen kan utdypes i samtaler mellom evalueringsutvalgets medlemmer og representanter fra fagmiljøene.

Egenvurderingen skal være på *maksimalt 10 sider pluss vedlegg*. Frist for innlevering er **30. september 2009**. Forskningsrådet gjør for ordens skyld oppmerksom på at det innsendte materialet kun vil bli benyttet i denne evalueringen, og vil bli behandlet som fortrolig materiale hos oss.

Hvis det er spørsmål knyttet til bestillingen, vennligst ta kontakt med spsialrådgiver Bjørg Ofstad, tel 22 03 73 74, e-post: bo@forskningsradet.no

Møte med evalueringspanelet

Evalueringspanelet vil ha første møte i oktober/november 2009 der de vil legge opp plan for evalueringensarbeidet, bl.a. for møter mellom forskningsmiljøene og evalueringspanelet. Møtene vil trolig finne sted 1. halvår 2010. Forskningsrådet vil komme tilbake med en tidsplan, som blant annet gir nærmere informasjon om disse møtene, etter at panelet har hatt sitt første møte.

Med vennlig hilsen
Norges forskningsråd

Hege Torp
avdelingsdirektør

Bjørg Ofstad
spesialrådgiver
Divisjon for vitenskap

Kopi: De samfunnsvitenskapelige fakultetene ved UiO, UiB, NTNU og UiT
Universitets- og høgskolerådet

Bestilling 1: Underlagsmateriale for vurderingen av forskernes faglige produksjon (sendes Forskningsrådet elektronisk – i Word- format)

1. CV for ansettelsesforhold de siste 10 år
2. Publikasjonslister for årene fra og med 1999 til og med 2008
3. To faglige arbeider fra årene 2004 til og med 2008

1. Navn og kort CV som viser utdanning og ansettelsesforhold fra 1.1.1999 - 31.12.2008

Liste over personer som inngår i evalueringen. Listen må inneholde

- navn
- tittel
- vedkommendes ansettelsestid ved institusjonen
- kort CV som viser utdanning og ansettelsesforhold fra 1.1.1999-31.12.2008

2. Publikasjonsliste fra 1.1.1999 – 31.12.2008

For at evalueringspanelet skal få oversikt over fagmiljøenes profil, ber vi om å få tilsendt publikasjonslistene til alle forskerne som omfattes av evalueringen. De publikasjonslistene vi ber om her skal inngå i det kvalitative materialet som evalueringspanelet trenger, og skal ikke brukes i statistikk.

Publikasjonslistene bør omfatte følgende kategorier:

- a. Doktoravhandling
- b. Bøker, monografier, utgitt på forlag (egne kapitler i redigerte bøker føres under c)
- c. Artikler i antologier på forlag (bok- kapitler)
- d. Artikler i vitenskapelige tidsskrift (ikke redaksjonelt stoff, debattinnlegg og lignende)
- e. Review-artikler i vitenskapelige tidsskrifter eller bøker (dvs. lengre sammenfatninger av forskningsstatus på et felt)
- f. Bokanmeldelser, debattinnlegg og redaksjonelt stoff i vitenskapelige tidsskrifter
- g. Skrifter/rapporter/arbeidspapirer utgitt av egen eller andre institusjoner
- h. Redigerte bøker

I den grad publisering som faller utenfor disse kategoriene tas med i listene (for eksempel konferansepaper, populærvitenskapelige artikler, kronikker og bokanmeldelser i dagspresse, TV- og radioinnslag), ber vi om at det *ikke* sendes fulle lister. Korte redegjørelser for hvilke andre publiseringskanaler som benyttes, målgruppene for publiseringen og omfanget av den, samt noen illustrerende eksempler, er derimot velkomne.

3. Faglige arbeider de siste fem år, fra 1.1.2004-31.12.2008

- a. To arbeider som er sentrale i forskerens vitenskapelige produksjon
- b. En begrunnelse for hvorfor disse arbeidene er sentrale (til sammen maksimum 1 side)

Vi gjør oppmerksom på at det innsendte materialet er viktig for panelet i arbeidet med å vurdere miljøene og helheten i faget. Dette betyr imidlertid ikke at panelet vil foreta en ny fagfelle vurdering av det enkelte vitenskapelige arbeid.

Format:

- Av bearbeidingshensyn ber vi om at materialet ordnes per forsker i alfabetisk rekkefølge etter forskerens etternavn. D.v.s. at først følger CV, publikasjonsliste, utvalgte arbeider og begrunnelse for forsker Abrahamsen, deretter det samme for forsker Bjørnsen osv.
- Vennligst legg ved en oversiktsliste over inkluderte forskere og deres innsendte arbeider, i riktig rekkefølge.
- Så langt det er mulig ber vi om at materialet sendes elektronisk, og i Word-format.

Frist for innlevering: 30. juni 2009

Materialet sendes inn samlet fra hver institusjon sendes til Forskningsrådet, ved: Hanne Husaas, e-post: hhu@forskningsradet.no.

Bestilling 2: Fagmiljøenes egenvurdering og dokumentasjon av fagmiljøenes virksomhet (sendes Forskningsrådet elektronisk i Word-format)

Egenvurderingen skal være på *maksimalt 10 sider pluss vedlegg*. Frist for innlevering er **30. september 2009**.

A. Mal for fagmiljøenes egenvurdering

Følgende spørsmål bør berøres:

1. Forskningskvalitet og -aktivitet

- a. I hvilke deler av fagmiljøet er det særlig høy aktivitet?
- b. Hvor ligger fagmiljøets forskningsmessige styrke og svakhet?
- c. Hvordan definerer fagmiljøet sin egen rolle i en nasjonal kontekst?
- d. Hvordan bidrar fagmiljøet til allmennformidling? Gi gjerne eksempler.
- e. Hvilke framtidsvisjoner har fagmiljøet for den samlede forskningsaktiviteten? Vær gjerne konkrete.

2. Nasjonalt og internasjonalt forskningssamarbeid

- a. Vurder omfanget og betydningen av prosjektsamarbeid med fag og emner på egen institusjon og andre norske institusjoner.
- b. Vurder omfanget og betydningen av prosjektsamarbeid med internasjonale fagmiljøer.
- c. Vurder erfaringene med andre typer nasjonalt og internasjonalt samarbeid (f.eks. konferanser, gjesteforskere).
- d. Vurder fagmiljøets kontakt med og betydning for norsk samfunns-, nærings- og arbeidsliv.

3. Fagmiljøets (enhetens) strategi for forskning

- a. Kommenter styrkeforholdet mellom arbeid og initiativer hos enkeltforskere og fagmiljøets eventuelle felles satsingsområder.
- b. Hva er styrkeforholdet mellom individuell versus gruppe/prosjektbasert forskningsorganisering?
- c. Hvordan ivaretas forskningsledelse og kvalitetssikring?
- d. Hvordan vil dere karakterisere initiativ til og grad av forskningssamarbeid mellom seniorer og forskerrekrutter, og mellom eldre og yngre forskere? Nevn eksempler på slike samarbeidsprosjekter.
- e. Hvilke felles fora, seminar og lignende for stimulering av forskning, kvalitet, diskusjon og samarbeid internt finnes i miljøet? Hvordan arbeides det konkret i slike felles fora?
- f. Hva er forholdet mellom fagmiljøets (enhetens) og fakultetets strategi for forskning?

4. Rekrutteringssituasjonen i faget i perioden fra 1.1.2004 -31.12.2008

- a. Hvor mange har disputert for doktorgraden i perioden?
- b. Hvor lang tid brukte den enkelte kandidat på arbeidet med doktorgraden?
- c. Hvor mange av enhetens doktorgradskandidater har fått tilsetning i stilling internt?
- d. Hvor mange er rekruttert til stillinger fra andre institusjoner?

- e. Hvordan er forholdet mellom doktorstudentenes faglige profil og innretningen på forskningen i fagmiljøet (doktorstudentenes faglige rolle i miljøet)?
- f. Hvordan er fagmiljøets strategi for rekruttering tilpasset videre fagutvikling og -dimensjonering?

5. Hvordan vil dere karakterisere

- a. forholdet mellom undervisning/veiledning/administrasjon og den tiden som er satt av til forskning?
- b. graden av forskningsfrihet?

6. Betydningen av ressurser fra Forskningsrådet og andre eksterne finansieringskilder

- a. Hvor stor andel av den samlede forskningsaktiviteten er finansiert over grunnbudsjettet og hvor stor andel er eksternt finansiert?
- b. Hvilke eksterne kilder har størst betydning?
- c. Hvorfra og på hvilke områder er finansieringen tilfredsstillende og hvor er den mindre eller lite tilfredsstillende?
- c. På hvilken måte preger eksternt finansiering forskningsprofilen?
- d. Gjør rede for eventuelle strategier for å skaffe forskere, forskergrupper og enheten eksternt finansiering

7. Er det andre forhold som fremmer eller hemmer forskningen i fagmiljøet?

B. Dokumentasjon av fagmiljøets virksomhet

Egenvurderingen skal suppleres med følgende skriftlige dokumentasjon av fagmiljøets virksomhet fra og med 2006 til og med 2008:

1. Årsplaner og årsrapporter fra treårsperioden
2. Eventuelle strategiske planer/handlingsplaner for samme periode
3. Andre opplysninger, hvis dette ikke dekkes på en oversiktlig måte gjennom årsplanene og rapportene:
 - Oversikt over enhetens eksterne og interne inntekter i perioden
 - Oversikt over alle ansatte i vitenskapelige stillinger fordelt etter stillingskategori, alder, kjønn, fagfelt og ansettelsesperiode
 - Oversikt over antall studenter ved enheten, fordelt etter studietrinn og kjønn
 - Oversikt over alle nåværende og uteksaminerte doktorgradsstipendiater i perioden. Listen skal inneholde navnet på hver enkelt stipendiat og tittel på avhandlingen. For doktorgradsprosjekter som er under arbeid angis tidspunktet for når stipendiaten ble tatt opp på doktorgradsutdanningen, samt antatt tidspunkt for disputas.
 - Oversikt over antall postdoktorstipendiater i perioden fordelt på faglig temaområde og kjønn
 - Faglig ansattes gjesteforskeropphold i utlandet i perioden
 - Faglig ansattes deltakelse i større prosjekter nasjonalt / internasjonalt
 - Faglig ansattes deltakelse på nasjonale og internasjonale konferanser i perioden

Korte CV'er for kandidater evalueringspanelet for geografi

Mats Widgren

Mats Widgren, is professor in Geography, esp. Human Geography at Stockholm University, member of the Royal Swedish Academy of Letters, History and Antiquities and Chairman of the IGU National committee for Geography 2003-2008. His research has dealt with the historical geography of agrarian landscapes in a long term perspective in Scandinavia and in southern and eastern Africa. At present he holds a long term support for leading researchers from the Swedish Research Council for the project Landscape History in a Global Context. With support from Swedish International Development Agency he will in 2009 lead a team of researchers in the project Mapping Global Agricultural History.

Recent publications

- Håkansson, T., Widgren, M. Börjeson. L. (2008) Regional interaction and land use change in northeastern Tanzania 1850-2000. *International Journal of African Historical Studies* 41:3
- Håkansson, T. & Widgren, M. (2007) Labour and landscapes: The political economy of landesque capital in 19th century Tanganyika. *Geografiska Annaler* 89B (3) 233-248.
- Widgren, M (2007) Pre-colonial landesque capital: a global perspective. In Hornborg, A., Martinez-Alier, J. and McNeill, J.R. (eds), *Rethinking Environmental History: World-System History and Global Environmental Change*. AltaMira Press, Walnut Creek. Manuscript
- Widgren, M. & Sutton, J. (eds) (2004) *Islands of intensive agriculture in Eastern Africa*. Oxford: James Currey publishers.

More information: people.su.se/~widgren

Kirsten Simonsen

Professor of Social and Cultural Geography, Department of Environmental, Social and Spatial Change, Roskilde University, Denmark

Academic degrees: Cand.scient (1972), PhD (1976), University of Copenhagen.
Dr. Phil.(1993), Roskilde University.

Appointments: 1973-1978, University of Copenhagen, 1979 Nordplan, Stockholm, 1980-1983 University of Aarhus, 1983-1986 Danish Ministry of Environment, 1986 - Roskilde University, Professor since 1996. 1995-1998 Professor II, University of Oslo, 2006-(2011) Professor II, University of Tromsø.

Main Research areas: Everyday life, culture and identity. Spatial dimension of social theory. Urban development and urban life. Philosophy and history of Geography.

More information: [http://forskning.ruc.dk/site/research/simonsen_kirsten\(2660\)/](http://forskning.ruc.dk/site/research/simonsen_kirsten(2660)/)

Ari Aukusti Lehtinen

Born in Helsinki, 12th of October in 1957

PhD. in Geography at the University of Helsinki in 1991

Ari Lehtinen received the chair in geography at the University of Joensuu in 1997, after acting as a senior lecturer in the Department of Geography at Joensuu since 1993. Before

that, from the early 1980s, Lehtinen worked as a researcher/lecturer of geography at the Helsinki University, where he also received his doctoral degree in 1991, followed by a docentship (in applied geography and regional planning) in 1994. The topic of the doctoral thesis was: Northern Natures. A study of the forest question emerging within the timber-line conflict in Finland (Fennia 196:1). Lehtinen's special interests are focused on socio-environmental issues, forest politics and, broadly, the practical links between academic life and civic society. 1998-2000 he served as the head of the Geography Department in Joensuu. In the 2000s, Lehtinen has worked in such research projects as 'Nature and Humanity in the Margins', 'The Politics of Finnish-Russian Greenbelt', 'Landscape, Law and Justice', 'Politics of Forests', 'Provinces, Communities, Biopolitics' and 'Developing Forest Services'.

More information: http://www.joensuu.fi/geo/lehtinen/ari_lehtinen.html

Mats Gunnar Lundmark

Mats Lundmark är sedan 2003 verksam som professor i kulturgeografi vid nuvarande Akademin för historia, utbildning och samhällsvetenskap (HumUS), Örebro universitet. Hans forskning har framför allt kretsat kring studier av företagslokalisering, näringslivsutveckling och strukturomvandling såväl på övergripande nationell nivå som i specifika lokala och regionala miljöer. Under senare år har forskningen fokuserat de regionala effekterna av nya och expansiva företagstjänster, särskilt mer avancerade och kunskapsintensiva tjänsteföretag som dataföretag och IT-specialister. Lundmark har också i ett flertal studier undersökt företags- och entreprenörsklimatet bland annat i Uppsala kommun. Genom många och omfattande empiriska studier är Lundmark är väl förtrogen med olika former av kvantitativ analys. Ett annat specialområde är studier av kluster som Lundmark genomfört, bland annat av IKT-klustret i Stockholm och senast i en undersökning av maskinindustri och logistiksektorn i Örebro län. Lundmark bedriver för närvarande också forskning med inriktning mot regional utveckling och strukturell förändring i Bergslagsregionen, bland annat genom att följa och analysera satsningar inom turism och kulturarv i regionen.

Mer informasjon: http://www.oru.se/templates/oruExtNormal_49174.aspx

Madelene Ostwald

Madelene Ostwald, Linköpings universitet, er knyttet til Centrum for klimapolitisk forskning, CSPR, som er et senter for samarbeid mellom Linköpings universitet og Sveriges meteorologiska och hydrologiska institut (SMHI). Ostwald er leder for forskernettverket Focali - Forest, Climate and Livelihoods, som holder til ved Chalmers Tekniska Högskola. Madelene Ostwald er naturgeograf og har PhD ved Göteborgs universitet med temaet skog og lokalt beskyttede skoger, bl.a. i India. Hennes forskningsområde i dag er arealbruk og endringer i arealbruk og forholdet mellom skog og drivhusgasser, klima og klimaforhandlinger med vekt på utviklingsland.

Publikasjoner bl.a.:

- Rootzén J M, Berndes G, Ravindranath N H, Somashekar H I, Murthy I K, Sudha P, Ostwald M. Carbon sequestration versus bioenergy: A case study from south India exploring the relative land use efficiency of two options for climate change mitigation. *Biomass and Bioenergy* 34:116-123
- Ostwald M, Wibeck V and Stridbeck P. 2009. Proximate causes and underlying driving forces of small-scale farmers' land-use change – illustrations from the Loess Plateau, China. *Journal of Land Use Science* 4:157-171

- Mattsson E, Ostwald M, Nissanka S.P., Holmer B, and Palm M. 2009. Recovery and protection of coastal ecosystems after tsunami event and potential for participatory forestry CDM – examples from Sri Lanka. *Ocean and Coastal Management* 52:1-9
- Ravindranath N.H. and Ostwald M. 2009. Carbon inventory methods. Chinese translation of the English language edition, *Carbon inventory methods - handbook for greenhouse gas inventory, carbon mitigation and roundwood production projects*. Springer Verlag, *Advances in Global Change Research*. China Forestry Publishing House, pp 330, ISBN 978-7-5038-5432-3

Mer informasjon: <http://www.focali.se/en/researchers/forskararkiv/madelene-ostwald>

Appendix 2. Publications reviewed

NTNU – DEPARTMENT OF GEOGRAPHY		
Name	Publications reviewed	Published in
Baudouin, Axel	1) Questioning the integration of the informal sector- The case of solid waste management	2007: med Camilla Bjerkli, Frank Mugagga, Yirgalem Mahiteme and Zelalem Fanta Chekole.
	2) Welenkomi 35 years later	2007: Acta Geographica serie B nr.13 Working papers on population and land use in Central Ethiopia, nr.14
Berg, Nina Gunnerud	1) Mennesker, steder og regionale endringer	2004: med Berg, N.G., Dale, B., Lysgård, H.K. og Løfgren, A. red. Tapir Akademisk Forlag, Trondheim.
	2) Social and cultural geography in Norway: from welfare to difference, identity and power.	2007: Social & Cultural Geography, Vol.8, No. 2, 303-330.
Berthling, Ivar	1) Holocene rockwall retreat and the estimation of rock glacier age	2007: (med Etzelmüller) Prins Karls Forland, Svalbard. Geogr. Ann., 89 A, 83–93
	2) Ground penetrating radar	2008 (med Melvold, K.). In Hauck, C. and Kneisel C. (ed). Applied Geophysics in Periglacial Environments. Cambridge University Press.
Brun, Catherine	1) Finding a place. Local integration and protracted displacement in Sri Lanka.	2008: Social Scientists' Association, Colombo.
	2) Making a home during crisis: Post-tsunami recovery in the context of war, Sri Lanka	2008 (med Lund): Singapore Journal of Tropical Geography 29(3): 274–288.
Dale, Britt	1) Restruktureringstesen (Doreen Massey)	2006: Kap. 9 i Ugelvik Larsen, S. (red.): Teori og metode i geografi. Fagbokforlaget, Bergen: 152-166.
	2) The Changing Structure of the Central Place System in Trøndelag, Norway over the Past 40 Years – viewed in the light of old and recent theories and trends	2007: (med Sjøholt) Geografiska Annaler 89B (S1): 13-30.
Fjær, Olav	1) Ekskursjoner i skolen - en spennende læringsarena	2005: I: Mikkelsen R.& P. J. Sætre (red.) Geografididaktikk for klasserommet. En innføringsbok i geografiundervisning for studenter og lærere. Høyskoleforlaget, 127-148.
	2) Fiskevær i fortid og framtid.	2004: I: Setten, G. (red.) Det Levende Landskapet. Tapir Akademisk Forlag, Trondheim, 67-88.
Jones, Michael	1) The European Landscape Convention and the question of public participation	2007: Landscape Research 32, Special Issue: Justice, Power and the Political Landscape (eds. Kenneth R. Olwig & Don Mitchell), 613-633. Abingdon.
	2) Nordic Landscapes: Region and Belonging on the Northern Edge of Europe.	2008: (med Olwig) Minneapolis (University of Minnesota Press), 628 pp.

Jørgensen, Stig Halvard	1) Har helse en geografisk forankring? Om sted og helse	2004: I: Berg, N. G. et. al. (2004) Mennesker, steder og regionale endringer. Kap.13, s. 200-216. Tapir akademisk forlag & Norges Forskningsråd. Trondheim.
	2) Some perspectives on the geographies of poverty and health: A Ghanaian context.	2008: Norsk Geografisk Tidsskrift–Norwegian Journal of Geography 62, 3, pp 241-250.
Karlsen, Asbjørn	1) . The dynamics of regional specialization and cluster formation: Dividing trajectories of maritime industries in two Norwegian regions	2005: Entrepreneurship and Regional Development vol. 17(5)
	2) Generasjoner av metaller produsert på norske industristeder	2008: i A. Isaksen, A. Karlsen og B. Sæther (red.) Innovasjoner i norske næringer: et geografisk perspektiv. Fagbokforlaget, Bergen.
Kauko, Tom	1) Sign value, topophilia and house prices	2004: Environment and Planning A, vol. 36, no. 5, pp. 859-878.
	2) A comparative perspective on urban spatial housing market structure – some more evidence of local submarkets based on a neural network classification of Amsterdam	2004: Urban Studies, vol. 41, no. 13, pp. 2555-2579.
Lein, Haakon	1) Managing the water of Kilimanjaro. Water, peasants and hydropower development	2004: GeoJournal 61:155-162
	2) Water and Poverty	2008: with Kulindwa, K, D Hemson, & A Mascharenas (eds), Zed Press.
Lund, Ragnhild	1) Childhoods: Globalization, Development and Young People	2008: Routledge, with Aitken, S., and A. T. Kjørholt
	2) Making it in China	2008: with Lie, M., and G. Hopsdal Hansen (eds.) Norwegian Academic Press
Rød, Jan Ketil	1) Local Determinants of African Civil Wars, 1970–2001.	2006: with Buhaug, Political Geography Internasjonalt. 25 (3): 315-335
	2) Cartographic Signs and Arbitrariness	2004: Cartographica. 39 (4): 27-36
Setten, Gunnhild	1) The habitus, the rule and the moral landscape.	2004: Cultural Geographies 11, 4, 389-415.
	2) Encyclopaedic Vision. Speculating on the Dictionary of Human Geography	2008: Geoforum 39, 3, 1097-1104.
Vatne, Geir	1) Bed load transport in a steep snowmelt-dominated mountain stream as inferred from impact sensors.	2008: (med Naas, Ø.T., Skårholen, T., Beylich, A.A. & Berthling) Norsk Geografisk Tidsskrift–Norwegian Journal of Geography Vol. 62:2, 66–74. Oslo.
	2) Dye tracing experiments at Midre Lovenbreen, Svalbard: preliminary results and interpretations. In Glacier Caves and Glacial Karst in High Mountains and Polar Regions.	2008: (med Irvine-Fynn T.D.L., Hodson A.J., Kohler J., Porter P.R), Ed. B.R. Mavlyudov, p.36-43. Proceedings 7th GLACKIPR Conference, Sept 2005, Azau. Institute of Geography, Russian Academy of Sciences, Moscow.

UiB – DEPARTMENT OF GEOGRAPHY

Name	Publications reviewed	Published in
Andersen, Hans Peter	1) A review of micronutrient problems in the cultivated soil of Nepal - An issue with implications for agriculture and human health.	2007: Mountain Research and Development Journal 27. s.
	2) Building contextual knowledge: the interface between local and scientific knowledge. pp. 87- 95	2005: in: Andersen, P., Tuladhar, J., Karki, K. & Maskey, S.L. (eds.): Micronutrients in South and South East Asia. Proceedings of the international workshop Micronutrients in South and South East Asia, September 6.-8. 2004, Kathmandu. ICIMOD, Kathmandu
Bakke, Jostein	1) Strength and spatial patterns of the Holocene wintertime westerlies in the NE Atlantic region	2007: (med 18. Bakke, J; Lie, Ø; Dahl, SO; Nesje, A; Bjune, AE) Global and Planetary Change XY0189; EGU2007-A-01508; CL6-1TH5P-0189
	2) Utilizing physical sediment variability in glacier-fed lakes for continuous glacier reconstructions during the Holocene, Folgefonna, western Norway.	2005: (with Lie, Ø., Nesje, A., Dahl, S. O. and Paasche, Ø) The Holocene, 15, 2, 161-176.
Dahl, Svein Olaf	1) Holocene river floods in the upper Glomma catchment, east-central southern Norway: a high-resolution multiproxy record from lacustrine sediments	2006: (with Anne-Grete Bøe, Øyvind Lie and Atle Nesje) The Holocene 16, 445-455.
	2) The 'Little Ice Age' glacial expansion in western Scandinavia: summer temperature or winter precipitation?	2008:(with Nesje, A., Dahl, S. O., Thun, T. et al.) Climate Dynamics 30, 789-801.
Fløysand, Arnt	1) Globalization and the power of rescaled narratives: a case of opposition to mining in Tambogrande, Peru	2007: Political Geography Vol. 26, 289-308
	2) 'Commodification of rural places: A narrative of social fields, rural development and football	2007: (med Jakobsen S-E) Journal of Rural Studies Vol. 23, 206-221.
Lindkvist, Knut Bjørn	1) Conventions and Innovation: A Comparison of Two Localized Natural Resource-based Industries	2008: (with Sánchez, J.L) Regional studies; 42(3):343-354
	2) The restructuring of the Spanish salted fish market	2008: (with Gallart-Jornet, L. & Stabell, M.) The Canadian Geographer / Le Géographe canadien; 52(1):105-120
Lundberg, Anders	1) Landskap, vegetasjon og menneske gjennom 400 år. Naturgrunnlag, arealbruk, slitasje og skog i Hystadmarkjo, Stord.	2005: Fagbokforlaget, Bergen. 251 s.
	2) Changes in the land and the regional identity of western Norway. The case of Sandhåland, Karmøy.	2008: in: Jones, M. & Olwig, K. (eds.), Nordic Landscapes. Landscape, Region and Belonging on the Northern Edge of Europe. Univ. Minnesota Press

Overå, Ragnhild	1) Networks, Distance and Trust: Telecommunications Development and Changing Trading Practices in Ghana	2006: World Development, 34, 7: 1301-1315
	2) When men do women's work: structural adjustment, unemployment and changing gender relations in the informal economy of Accra, Ghana.	2007: Journal of Modern African Studies, 45, 4:539-563
Pothoff, Kerstin	1) Landscape change as an interface for different approaches in landscape research.	2007: Erdkunde 61, 54-71
	2) Improving the factual knowledge of landscapes: Following up the European Landscape Convention with a comparative historical analysis of forces of landscape change in the Sjødalen and Stølsheimen mountain areas, Norway.	2007: (with Eiter, S.) Norsk Geografisk Tidsskrift-Norwegian Journal of Geography 61(4), 145-156
Rusten, Grete	1) Dislocated versus local business service expertise and knowledge: the acquisition of external management consultancy expertise by small and medium sized enterprises in Norway	2005: (with G. Bryson, J.R and Gammelsæter, H.) GEOFORUM 36. 525-539
	2) The production and consumption of industrial design expertise by small and medium sized firms: some evidence from Norway	2007: (with G.Bryson) Geografiska Annaler, Geografiska Annaler 89 B (S1): 75-87
Sten, Odd Inge	1) Challenges in the new geography programme introduced in Norwegian secondary schools after Reform 2006	2008: Donert, K & G. Wall (2008): Future Prospects in Geography. Liverpool Hope University Press
	2) Field studies in higher education - some implications for teacher training courses	2007: International Geographical Union and Herodot Conference Report, ISBN: 978-0-9539850-7-5, London 2007
Tvedt, Terje	1) The River Nile in the Age of the British. Political Ecology and the Quest for Economic Power	2004: IB Tauris 2004, 2. opplag 2006, også utgitt American University Press, 2005 (paperback), og oversettes til arabisk i 2009
	2) Utviklingshjelp, utenrikspolitikk og makt. Den norske modellen	2003/2009
Aase, Tor Halfdan	1) Skapte Virkeligheter. Om produksjon og tolkning av kvalitative data.	2007: (with E. Fossåskaret) Universitetsforlaget, Oslo
	2) Risk Management by Communal Decision in Trans-Himalayan Farming: Manang Valley in Central Nepal	2007: (with Vetaas, O.R.) Human Ecology vol 35 no 4 (pp 453-460) Springer

UiO – DEPARTMENT OF SOCIOLOGY AND HUMAN GEOGRAPHY

Name	Publications reviewed	Published in
Eriksen, Siri E. H.	1) The dynamics of vulnerability: locating coping strategies in Kenya and Tanzania	2005: (with Brown, K. and Kelly, P.M.) The Geographical Journal, 171(4), 287-305.
	2) Why different interpretations of vulnerability matter in climate change discourses	2007: (with O'Brien, K., Schjolden, A., Nygaard. L.P) Climate Policy 7, 73-88.
Endresen, Sylvi B	1) Labour Standards and the Question of Industrialisation Strategy. An African Example.	2007: In H. Jauch and R. Traub-Mertz. (Eds.) The Future of the Textile and Clothing Industry in Sub-Saharan Africa. Proceedings from International Conference, Friedrich Ebert Stiftung, - ITGLWF – SACTWU – LaRRI.
Hesselberg, Jan	1) An assessment of the extent and causes of food insecurity in northern Ghana using a livelihood vulnerability framework.	2006: (with Yaro, J. A) GeoJournal Vol. 67, No. 1. 41-55
	2) The urban and the rural in the development debate	2005: Forum for Development Studies, Vol. 32, No. 2. 493-507.
Jakobsen, Stig-Erik	1) Head office location – Agglomeration, clusters or flow nodes?	2005 (with Onsanger) Urban Studies, vol. 42, no.9, 1517-1535.
	2) How green is the valley? Foreign direct investment in two Norwegian industrial towns	2005: (with Rusten, G. and Fløysand) The Canadian Geographer, vol. 49, 244-259
Knutsen, Hege	1) Industrial development in buyer-driven networks: the garment industry in Vietnam and Sri Lanka	2004: Journal of Economic Geography, Vol. 4, No.5. 545-564.
	2) Geographies of informalization: conceptual dilemmas over social standards and informalization of labor.	2006: In Gatrell, J.D.& Reid, N. Enterprising worlds. A geographic perspective on economics, environments and ethics. Springer, Dordrecht. 221-230.
O'Brien, Karen	1) Questioning Complacency: Climate Change Impacts, Vulnerability and Adaptation in Norway	2006 (with , K.L., Eriksen, S., Sygna, L. and L.O. Næss) Ambio 35 (2): 50-56.
	2) Environmental Change and Globalization: Double Exposures	2008: (with Leichenko, R.M) New York: Oxford University Press.
Røe, Per Gunnar	1) Utviklingen av 'levelige' steder – på hvilken måte kan sosiokulturelle stedsanalyser bidra?(Developing livable places – how may socio-cultural analyses of places contribute)	2006: Michael, vol. 3, nr. 4; pp.193-205.
	2) Virtuell kommunikasjon og mobilitet i storbyen (Virtual communication and mobility in the city)	2005: In R. Barlindhaug (ed.) Storbyens boligmarked - Drivkrefter, rammebetingelser og handlingsvalg (The Urban Housing Market – Driving Forces. Conditions and Alternatives) Spartacus, Oslo.
Stokke, Kristian	1) Politicising Democracy: The New Local Politics of	2004: (Harriss, J., Stokke, K. and Törnquist, O. (Eds.)) Houndmills: Palgrave.

	Democratisation	
	2) The Politics of Localization: From Depoliticizing Development to Politicizing Democracy	2008: (with Mohan, G) In: K.R. Cox, M. Low and J. Robinson (Eds.). The Sage Handbook of Political Geography. London: Sage.
Sæther, Bjørnar	1) From National to Global Agenda. The Expansion of Norske Skog 1962-2003	2004: I In Lehtinen, A, Donner-Amnell, J and Sæther, B. (ed): Politics of Forests. Northern Forest-Industrial Regimes in the Age of Globalization. The Dynamics of Economic Space Series, Ashgate 2004.
	2) From Researching Regions at a Distance to Participatory Network Building: Integrating Action Research and Economic Geography	2007: Systemic Practice and Action Research. 20,1, 15-25.
Wessel, Terje	1) Industrial Shift, Skill Mismatch and Income Inequality: A Decomposition Analysis of Changing Distributions in the Oslo Region	2005: Urban Studies, 2005, 42: 1549-1568.
	2) Inntektsulikhet i Osloregionen: Langs gamle spor i den nye økonomien	2005: Tidsskrift for samfunnsforskning, 2006, 47: 3-32
AGDER		
Name	Publications reviewed	Published in
Baker, Jonathan	1) Changing life worlds and contested space: A discussion of seclusion practices among the Iraqw of Northern Tanzania	2007: (with Wallevik) APAD Bulletin no. 27-28. Special issue on Social Violence and Exclusion: Questioning Africa's Social Development, Edited by Jacky Bouju and Mirjam de Bruijn (published by Lit Verlag, Berlin).
	2) Survival and Accumulation Strategies at the Rural-Urban Interface in North-west Tanzania	2006: in Cecilia Tacoli (ed.), The Earthscan Reader in Rural-Urban Linkages. Earthscan: London & Sterling, VA.
Isaksen, Arne	1) Knowledge-intensive industries and regional development. The case of the software industry in Norway	2006: In Cooke, P. and Picculauga, A. red.), Regional Development in the Knowledge Economy, Routledge., London 2006 (pp. 43-62).
	2) Innovation Dynamics of Global Competitive Regional Clusters: The Case of the Norwegian Centres of Expertise	2008: Electronic version published 27. Sept. 2008. Forthcoming in Regional Studies.
Knudsen, Jon P.	1) Fylkeskommunenes rolle som regional utviklingsaktør og partnerskapenes funksjon i den sammenheng	2005: (med Bjørn Moen, Lars Olof Persson, Sigrid Skålnes og Jon Moxnes Steineke) Stockholm: Nordregio WP 2005:1
	2) Sterke regioner forskning og reform	2005: (red) Bergen. Fagbokforlaget. I samme: Et bredt partipolitisk forlik er nødvendig og mulig, s.239-257.
Kristiansen, Stein	1) Transaction costs and linkage creation: Experiences from Indonesia	2006: European Journal of Development Research, 18, 4, 662-687.

	2) Information flows and adaptation in Tanzanian cottage industries,	2005: (with Kimeme, J., Mbwambo, A., Wahid, F) Entrepreneurship and Regional Development, 17, 5: 365-388.
Lysgård, Hans Kjetil	1) Betydningen av det levde liv – makt og mot-makt i konstruksjonen av samfunnets romlige orden.	2008: In Johnsen, H.C.G., Dragseth T., Johannessen, O. & Lysgård, H.K. (eds.) Kritikkens forgreninger. Om samfunnskritikk i litteratur og samfunnsvitenskap. Kristiansand: Høyskoleforlaget, pp. 159-184.
	2) The Development of City-Regions in Norway: The Importance of Everyday Regional Interaction and Economic Development Policy.	2008: (with Farsund, A., Hidle, K) in Bukve, O., Halkier, H. & de Souza, P. (eds.) Towards New Nordic Regions. Politics, Administration and Regional Development. Aalborg Universitetsforlag, pp. 137-159.
Rye, Ståle Angen	1) Exploring the Gap of the Digital Divide - Conditions of Connectivity and Distance Education Participation.	2008: Geojournal (71), 171–184.
	2) Flexibility, Technology, and Daily-life Practices of Distance Students Living Beyond the Digital Main Stream	2007: GEOFORUM (38) 1028-1039.
Ellingsen, Winfried	1) Entreprenørskap blant etniske minoriteter på Agder	2007 I Hidle, K, Ellingsen, W., Nesje, L.M., Vangstad, A.:FoU-report 1/2007, Agder Research.
	2) Lost in cyberspace? Website performance among firms located in rural areas of Norway: the niche food sector	2008: In Rusten, G., Skeratt, S. (eds.): Information and communication technologies in rural society. London: Routledge
Hidle, Knut	1) Migrasjon og stedsmyte. Sted, migrasjonserfaringer og romlige forståelser i Kristiansand	2004: PhD thesis, University of Bergen
	2) Place, Geography and the Concept of Diaspora – A Methodological Approach	2007: In: Ajaya Kumar Sahoo and Brij Maharaj (eds.), Sociology of Diaspora: A reader, pp 94-112. New Delhi: Rawat Publications
Karlsen, James	1) The Regional Role of the University - A Study of Knowledge Creation in the Agora between Agder University College and Regional Actors in Agder, Norway.	2007: PhD thesis, Norwegian University of Science and Technology, Trondheim, Norway.
	2) Innovasjoner i Norske næringer – et geografisk perspektiv	2008: i Læring, kunnskap og innovasjon fra et organisatorisk ståsted. Isaksen, A., Karlsen, A., Sæther, B. (red.) Fagbokforlaget.

UiT - DEPARTMENT OF COMMUNITY PLANNING

Name	Publications reviewed	Published in
Aure, Marit	1) Arbeidsmigrasjon fra Teriberka til Båtsfjord 1999-2002	2008: Avhandling for Doctor Rerum Politicarum, SV-fak, UITØ
	2) Migrasjonskanaler og rekrutteringsprosesser: Å bli arbeidsmigrant	2007: Sosiologi i Dag 3-4/2007
Førde, Anniken	1) Studie av kvardagsliv og politikk - praksisorientert analyse og tverrfaglig tilnærming	2007 : Nyseth, T., Jentoft, S., Førde, A og Bærenholdt J.O 2007: I disiplinens grenseland. Tverrfaglighet i teori og praksis. Fagbokforlaget. s 45-58.
	2) Creating the Land of the Big Fish: A Study of Rural Tourism Innovation	2009: Published in Nyseth, T. and Viken, A. Place reinvention. Northern perspectives. Ashgate.
Gerrard, Siri	1) Quota Policy and Local Fishing: Gendered Practices and Perplexities	2008: MAST Marine Studies, Nederland, 6(2): 53-75
	2) A Travelling Fishing Village. The Specific Conjunctions of Place	2007: in Bærenholdt, Jørgen Ole and Brynhild Granås (eds.) Mobility and Place: Enacting European Peripheries Aldershot: Ashgate (ISBN number 0-7546-7141-0)
Valestrand, Halldis	1) Peasant Women between Oilpalms and Bananas: Coto Sur, Costa Rica	2007: dr. philos. thesis, 503 pages. University of Tromsø.

UMB – NORAGRIC

Name	Publications reviewed	Published in
Benjaminsen, Tor A.	1) Does supply-induced scarcity drive violent conflicts in the African Sahel? The case of the Tuareg rebellion in northern Mali	2008: Journal of Peace Research 45 (6): 831-848.
	2) Land reform, range ecology, and carrying capacities in Namaqualand, South Africa	2004: (med R.F. Rohde, E. Sjaastad, P. Wisborg and T. Leber) Annals of the Association of American Geographers 96 (3): 524-540.
Kjosavik, Darley Jose	1) Integration or Exclusion? Locating Indigenous Peoples in the Development Process of Kerala, South India'	2004: (med Shanmugaratnam) Forum for Development Studies, 31 (2): 232-273.
	2) Property Rights Dynamics and Indigenous Communities in Highland Kerala, South India: An Institutional-Historical Perspective	2007: (med Shanmuguratnam) Modern Asian Studies 40 (5): 1183-1260.
Shanmugaratnam, Nadarajah	1) Between War & Peace in Sudan & Sri Lanka – Deprivation & Livelihood Revival	2008: (ed) James Currey, Oxford and African Academic Press, Hollywood
	2) Between Decentralized Planning and Neoliberalism: Challenges for the Survival of the Indigenous People of Kerala, India	2006: (med Kjosavik) Social Policy and Administration, Vol. 40, No. 6: 632-651

HiNT - FACULTY OF AGRICULTURE AND INFORMATION TECHNOLOGY

Name	Publicaitons reviewed	Published in
Andersen, Hans Petter	1) En ulik verden – sammenligninger i geografiundervisningen	2005: . Artikkel i læreboka Geografididaktikk for klasserommet (redigert av Rolf Mikkelsen og Per Jarle Sætre). Høyskoleforlaget
Bjørkeng, Stein Otto	1) Naturverndiskursen – konsekvenser for en planprosess	2007: nr1. UTMARK - tidsskrift for utmarksforskning
Knappe, Geir Olav	1) Kunnskap er infrastruktur. Høgskolens rolle i regionalt utviklingsarbeid i et distriktpolitisk perspektiv.	2008: (med T.Brenne): HiNT-rapport nr. 52. Høgskolen i Nord-Trøndelag.
Wollan, Gjermund	1) Kapittel 10: Kvinnelige og mannlige bedriftslederes forhold til sted	2004: i N.G.Berg: Mennesker, steder og regionale endringer. Trondheim: Tapir akademisk forlag
	2) Håndverk som gestaltforståelse og skaperglede. En fenomenologisk studie	2006: Norsk Antropologisk Tidsskrift, VOL 17 NR.I, s. 63-76. Oslo: Universitetsforlaget.

Appendix 3 General Information about the Norwegian research system

Norwegian research and development (R&D) activities are classified in three sectors of performance: the industrial sector (trade and industry), the institute sector (independent research institutes) and the higher education sector (higher education institutions).¹⁸ R&D statistics for the industrial sector do not classify R&D activity by field of science. Moreover, individual statistics on R&D personnel are not available for the industrial sector.¹⁹ The analyses NIFU has provided therefore focus on the higher education institutions and the independent research institutes.

Overall, the industrial sector accounted for about half of the R&D expenditures in 2007, whereas the higher education sector and the institute sector comprised 31 per cent and 22 per cent, respectively. Norway differs from many countries in that much of its research activity takes place at independent research institutes (institute sector). Analyses show that Norway is one of the countries with a higher than average proportion of its R&D activity at research institutes.²⁰ However, the relative size of the higher education sector and the institute sector varies considerably between the different research fields and disciplines. The institute sector dominates in engineering and technology and agricultural sciences, and also plays a large role in the natural and social sciences, whereas the higher education sector clearly dominates the humanities and medical and health sciences.

For research in social sciences, R&D expenditures amounted to NOK 2.3 billion within the higher education sector in 2007, and the institute sector accounted for NOK 1.4 billion. Half of the R&D activity within social sciences is conducted at a university or specialised university institution, while the research institutes in the government sector²¹ accounted for 35 per cent. State university colleges, where approximately half of the total R&D activity within the social sciences is performed, accounted for 15 per cent of the total R&D activity on a national basis in this field of science in 2007.

¹⁸ In Norwegian R&D statistics, resources are classified in three performing sectors: *the industrial sector*, *the higher education sector* and *the institute sector*. OECD's *higher education sector* corresponds to the Norwegian definition. For international comparisons *business enterprise sector* includes the industrial sector as well as non-profit research institutes serving enterprises. In national statistics, these business-oriented research institutes are included in the institute sector, which also covers *government sector* and *private non-profit sector (PNP)*. The PNP sector is rather small in Norway, and is therefore merged into the Government sector in the international statistics presentations.

¹⁹ For general information on Norwegian R&D statistics for the industrial sector see www.ssb.no. Overall statistics on the national R&D statistics are presented on <http://english.nifustep.no/> → Statistics → R&D statistics or <http://www.foustatistikkbanken.no/nifu/?language=en>.

²⁰ Denmark and Finland, too, have/have had many institutes outside the universities, whereas the Swedish institute sector comprises a substantially smaller proportion of the country's R&D (Slipersæter et al., 2003).

²¹ Which is the largest part of the Norwegian institute sector, see section on the research institutes below.

The higher education institutions

The higher education sector encompasses the universities, the specialised university institutions and the state university colleges, as well as university hospitals. All types of higher education institutions are regulated under the same legislation,²² but the differing formal status of the institutions entails different degrees of independence. For example, only the universities have full autonomy to establish Ph.D. programmes.²³ In 2010 there were 7 universities in Norway: four broad-spectrum universities in Oslo (UiO established in 1811), Bergen (UiB 1946), Trondheim (NTNU 1910/1968)²⁴ and Tromsø (UiT 1968),²⁵ and three universities that have recently acquired status as full universities (University of Life Sciences/UMB 2005; and University of Stavanger/UiS 2005; University of Agder/UiA 2007). Moreover, there were 8 accredited specialised university institutions and 36 accredited university colleges, of which 24 are state university colleges.

The size of a university department will partly depend on its ability to attract students (and open-admission study programmes). Part of the general university fund²⁶ (state funding) to the higher education institutions is based on performance indicators, comprising both education and research activities. Education is measured by study credits, completed degrees and international student exchange; research is measured by doctoral candidates, EU research funding, research funding from the Research Council of Norway (RCN) and scholarly publications.²⁷ In this system the education activities yield a higher return than the research activities for two reasons. First, the research component is a zero-sum reallocation between the institutions, whereas the education component is not, giving a return proportional to the education activities of the individual institution. Second, the research component accounts for about 15 per cent of the general university funds (most of this, but not all, is performance-based), and the performance-based education indicators account for about 25 per cent of the general university funds.

²² LOV 2005–04–01 nr 15: Lov om universiteter og høyskoler (Act relating to universities and university colleges).

²³ Universities are authorised to establish study programmes at all levels, including doctoral degrees programmes, whereas specialised university institutions have such authorisation only within their specific fields. State university colleges are authorised to establish bachelor degrees, but need a special accreditation before offering a Master’s or Ph.D. programme. The accreditation is the task of an independent government body The Norwegian Agency for Quality Assurance in Education (NOKUT), established in 2003.

²⁴ Norwegian University of Science and Technology (NTNU), formerly University of Trondheim established 1968 and NTH (Norwegian Institute of Technology) established in 1910.

²⁵ Merged with Tromsø University College in 2009.

²⁶ Of the general university funds, 25 per cent is based on the number of students, while 15 per cent is related to scientific production. (2009 figures)

²⁷ The performance budgeting is part of the most encompassing reform in Norwegian higher education the later years; the Quality Reform (“Kvalitetsreformen”), see Michelsen and Aamodt 2007.

In total, the general university funds within social sciences in the higher education sector accounted for 68 per cent of the R&D expenditures in 2007, a decline from 85 per cent in 1995. The Research Council of Norway (RCN) was the second largest funding source, and accounted for 13 per cent of the R&D expenditures in 2007, whereas other public sources accounted for 11 per cent, industry for 3 per cent, other national sources for 3 per cent and international sources for 2 per cent.

We find a *dual set of positions* in the higher education sector. The first set comprises positions combining research and teaching, including full professors (the only positions called professors in Norwegian), associate professors (*førsteamanuensis*) and assistant professors (*amanuensis*). The second set comprises lecturers, or positions where the main task is teaching, with only a small extent of participation in research. These are college readers (*høgskoledosent*), senior lecturers (*førstelektor*), university and college lecturers (*universitets- og høskolelektor*) and special positions allocated at the professional educations in psychology, nursing or dentistry (*profesjonsutdanninger*), with titles as special dentist and special psychologist. None of the latter positions are included in the analysis for geography.

Up to 1960 there were only a few full professors at each department, but this has gradually changed. Since 1993 the scheme for qualification for individual professor promotion (*personlig opprykk til professor etter kompetanse*) has helped to increase the formal competence of the academic staff, and in 2007 there were more full professors than associate professors at the universities. There are very few assistant professors.

In addition to these positions there are temporary recruitment positions: 3-4 year fellowships for Ph.D. students and post-doctoral fellowships of various length, as well as research assistants. There are also some research positions outside this structure, particularly at research centres and other units without regular teaching responsibilities.

The research institutes

The Norwegian institute sector consists of a wide array of different units that overall can be divided into research institutes serving enterprises and the government sector. The research institutes subject to government regulations for funding represent the largest group measured in R&D activity. These research institutes are divided into agricultural and fishery research institutes, technological and industrial research institutes, environment and development research institutes, national social science research institutes and regional research institutes. Other institutions carrying out R&D activities, such as the Research Department at Statistics Norway, the Norwegian Institute of Public Health, museums and health trusts that are not university hospitals, are also included in this sector.

The research institutes receive some basic funding from the government, often allocated by the Research Council of Norway, but for most of them the major part of their activity is based on competitive funding for specific research projects, such as projects grants from

the Research Council and the European Framework Programmes, as well as commissioned research projects from government agencies and private enterprises. The size of a research institute, in terms of research positions, will thus depend on its ability to attract research funding. The institute sector is heterogeneous with regard to the size, objective and research profile of the units, as well as in terms of the societal sectors these serve.

Starting in 2009, the funding scheme for research institutes receiving government basic funding has been changed in accordance with principles for basic funding of the higher education institutions. The basic funding of the research institutes is allocated according to a formula based on scientific results (number of publications, competitive funding obtained etc), as well as strategic institute initiatives. Some institutes directly under the government administration will not be encompassed by the new regulations.

In 2007, 80 per cent of the R&D activity within social sciences in the institute sector was funded by public sources, and 32 per cent of the total R&D expenditure in the sector came from the Research Council of Norway this year. Nine per cent was funded by industry, international sources accounted for 8 per cent and other national sources funded to 3 per cent.

Unlike the higher education institutions, the independent research institutes have no teaching obligations. Whereas the higher education institutions have a mix of research and teaching positions, the research institutes only offer research positions. Some researchers in the institute sector still undertake teaching obligations at higher education institutions, and they may hold secondary positions (*bistillinger/II-stillinger*) at higher education institutions. Furthermore, the research institutes host many Ph.D. students (Ph.D. students may be employed at universities or research institutes), but the Ph.D. programmes, education and degrees are the responsibility of the higher education institutions. In addition, some of the research institutes, and certain other institutions that conduct R&D but are not encompassed under the government regulations for funding of research institutes, have special management tasks such as monitoring water quality. These institutions have a variety of positions that are not researchers. Many of the research institutes within the social sciences use a tri-level classification of their researchers – Researcher I (with full professor-level competence), Researcher II (doctoral degree or doctoral-level competence) and Researcher III (without a doctoral degree).

Appendix 4 Notes on data sources

NIFU manages and operates several databases and registers which provide the basis for the official Norwegian R&D statistics on higher education institutions and independent research institutes. Below are some notes on the framework and limitations of the databases used to provide the evaluation panel with background statistics.²⁸

The Register of Research Personnel (NIFU)

This register covers researcher personnel at Norwegian higher education institutions, as well as independent research institutes and health trusts.²⁹ The register is compiled from regular reports submitted by the institutions to NIFU and includes information on position, age, gender, educational background, etc. The register does not cover research personnel in private enterprises, e.g. persons with a degree in social sciences employed at consultancy firms. The register does not cover special part-time affiliations (*bistillinger*), with the exception of Professor II. Only personnel with a position of 40 per cent or more are included in the register.

For personnel with a higher degree from a Norwegian institution, the information builds on NIFUs Doctoral Degree Register (*Akademikerregisteret*), which provides full information about graduates from Norwegian higher education institutions. For persons with a foreign degree, however, this information is only available if the institutions (the employer) have included it in their reports to NIFU. As a result, the register lacks information about the formal education of 10 per cent of the research personnel employed in the social sciences at higher education institutions, and 2 per cent of those at independent research institutes.

Comparison between the research personnel at higher education institutions and independent research institutes by position is somewhat complicated due to the differences in tasks and structure. As mentioned in Appendix 3, several research institutes within social sciences use a three-level position structure for the researchers. Based on information on formal competence, NIFU has adjusted all positions at the independent research institutes to this three-level structure, in order to make comparison between institutes and sectors possible.

²⁸ Text from background report to the panel: Gunnes, H. and S. Slipersæter (2009) Research within geography, social anthropology and sociology in Norway: Institutions, personnel and economic resources. Oslo: NIFU STEP.

²⁹ The exceptions are positions without any R&D components: university college teachers (*høgskolelærere*) and teaching staff paid on an hourly basis (*timelærere*).

Data on R&D expenditure and funding sources

Like the Register of Research Personnel, the national statistics on R&D expenditure are compiled from regular reports from the institutions to NIFU. For the present analysis, two limitations to the data – both related to the disciplinary coding – should be noted.

First, as the research institutes are mainly interdisciplinary, the statistics for this sector do not divide expenditures by discipline, only in relation to the overall field of science, such as humanities and social sciences. This inhibits the calculation of figures for R&D expenditure within disciplines in this sector. The figures presented for the independent research institutes are therefore for the social sciences in total, or for the units included in the evaluation.

Second, all R&D activity at units at higher education institutions defining more than half of their R&D under a specific discipline are classified under this discipline in the statistics. This mode of coding entails that reorganisations affect the statistics; merging or splitting departments changes the number and size of units that are included under each discipline, as well as the units that are not included. It also means that multidisciplinary units are not classified in one particular discipline, but as “other social sciences”, since they do not have 50 per cent of their R&D activity within a particular discipline.

Statistical data for research institutes

Statistical data for independent research institutes encompasses research institutes that are subject to government procedures for basic funding, and are updated annually. This report uses funding data from these statistics: basic funding and other sources of funds relating to current income at the research institutes. This data deviates somewhat from the R&D statistics used elsewhere, since it is based on income rather than expenditure. The current incomes do not include financial incomes and other extraordinary incomes.

Appendix 5 Journals/series at Level 1 and Level 2 per 2010

The list includes journals/series classified under geography by the UHR. Note that the publications of the evaluated researchers also include journals in other research fields, and that all scholarly journals regardless of field are included in the publication analysis in Appendix 6.

Source: Database of Statistics on Higher Education (DBH)

Level	Title	
2	Annals of the Association of American Geographers	
2	Antipode	
2	Climate Policy	
2	Cultural Geographies	
2	Demography	
2	Economic Geography	
2	Environment & Planning. D, Society and Space	
2	Environment and planning A	
2	Environment and Planning. C, Government and Policy	
2	European Planning Studies	
2	European Urban and Regional Studies	
2	Geoforum	
2	Geografiska Annaler. Series B. Human Geography	
2	GeoJournal	
2	Geomorphology	
2	International Journal of Geographical Information Science	
2	International Journal of Urban and Regional Research	
2	Journal of Economic Geography	
2	Journal of Regional Science	
2	Journal of Rural Studies	
2	Landscape Research	
2	Political Geography	
2	Progress in Human Geography	
2	Social & Cultural Geography (Print)	
2	The Canadian Geographer / Le Géographe canadien	
2	Transactions of the Institute of British Geographers	
2	Urban geography	
2	Urban Studies	
1	ACME: An International E-Journal for Critical Geographies	
1	Acta Geographica Slovenica	
1	African Geographical Review	
1	African Journal of Environmental Assessment and Management	
1	African Population Studies	
1	African Rural and Urban Studies	Nedlagt 1997
1	Amerasia Journal	
1	Annales de Géographie	
1	Applied Geography	
1	Applied GIS	
1	Archiv für Naturschutz und Landschaftsforschung	Nedlagt 1991
1	Area (London 1969)	
1	Asia Europe Journal : Intercultural Studies in the Social Sciences and Humanities	
1	Asian and Pacific Migration Journal	
1	Asian Development Review	
1	Asian Journal of Environment and Disaster Management	
1	Asian Survey	
1	Asia-Pacific review	

1	Asien, Afrika, Latinamerika	
1	Australian Geographer	
1	Australian Geographical Studies	Nedlagt 2004
1	Azania	
1	Belgeo	
1	Boletín de la AGE	
1	Boletín de la Asociación de Geógrafos Españoles	
1	Bulletin of Concerned Asian Scholars	Nedlagt 2000
1	Cahiers de Géographie du Québec	
1	Cartographic Journal	
1	Cartographic Perspectives	
1	Cartographica	
1	Cartography and Geographic Information Science	
1	Central Asian Survey	
1	Check List	
1	Children's Geographies	
1	Cities	
1	Community Development Journal	
1	Coordinates : Online Journal of the Map and Geography Round Table of the American Library Association. Series A	
1	Coordinates : Online Journal of the Map and Geography Round Table of the American Library Association. Series B	
1	Cuadernos Geográficos	
1	Current Issues in Tourism	
1	CyberGeo: European Journal of Geography	
1	Dela	
1	Demographic Research	
1	Disaster Prevention and Management	
1	Dve Domovini / Two Homelands	
1	East and West	
1	East Asia	
1	East European Jewish Affairs	
1	East European Quarterly	
1	Ecumene (Sevenoaks)	Nedlagt 2001
1	Education and Urban Society	
1	Energy Policy	
1	Environment	
1	Environment & Urbanization	
1	Environment, Development and Sustainability	
1	Environmental Geosciences	
1	Environmental Hazards	
1	Environmental History	
1	Environmental Impact Assessment Review	
1	Environmental Policy and Law	
1	Environmental Politics	
1	Environmental Research Forum	
1	Environmental Reviews	
1	Environmental Science and Policy	
1	Environmental Values	
1	E-Perimetron	
1	Erdkunde	
1	Espace Géographique	
1	Eurasian Geography and Economics	
1	European Bulletin of Himalayan Research	
1	European Environment	
1	European Foreign Affairs Review	
1	European Journal of Housing Policy	
1	European Journal of Population	
1	European Journal of Spatial Development	
1	Fennia	
1	Geodesy, Mapping and Photogrammetry	Nedlagt 1980

1	GeoFocus	
1	Geografisk tidsskrift	
1	Geografiska Annaler	
1	Geografiska Notiser	
1	Geographical & Environmental Modelling	Nedlagt 2002
1	Geographical Analysis	
1	Geographical Journal	
1	Geographical Phorum	
1	Geographical Research	
1	Geographical Review	
1	Geographie, Economie, Societe	
1	Geographische Zeitschrift	
1	Geography	
1	Geography Compass	
Ny	1 Geography, Environment, Sustainability	
1	Geojournal Library	
1	GeoTropico	
1	Global Built Environment Review	
1	Global Environmental Politics	
1	Global Society	
1	Great Plains Quarterly	
1	Growth and Change	
1	Guerres Mondiales et Conflits Contemporains	
1	Habitat International	
1	Housing Policy Debate	
1	Housing Studies	
1	Hungarian Studies	
1	India Review	
1	Indonesia and the Malay World	
1	Informationen zur Raumentwicklung	
1	International Journal of Environmental Studies	
1	International Journal of Hospitality & Tourism Administration	
1	International Journal of Population Geography	
1	International Journal of Technology and Globalisation	
1	International Journal of Tourism Policy	
1	International Regional Science Review	
1	Investigaciones Geográficas	
1	Investigaciones Geográficas	
1	Irish Geography	
1	Island Studies Journal	
1	Japan Quarterly	
1	Journal for Nature Conservation	
1	Journal of Architectural and Planning Research	
1	Journal of Australian Studies	Nedlagt 1998
1	Journal of Borderlands Studies	
1	Journal of Caribbean Studies	
1	Journal of Contemporary China	
1	Journal of Contemporary European Studies	
1	Journal of Developing Societies	
1	Journal of Eastern Caribbean Studies	
1	Journal of Ecotourism	
1	Journal of Energy and Development	
1	Journal of Environmental Assessment Policy and Management	
1	Journal of Environmental Planning and Management	
1	Journal of Environmental Policy and Planning	
1	Journal of Environmental Systems	
1	Journal of Eurasian Research	
1	Journal of European Area Studies	Nedlagt 2002
1	Journal of Flood Risk Management	
1	Journal of Geographic Information and Decision Analysis	Nedlagt 2003
1	Journal of Geographical Science	

	1	Journal of Geographical Systems	
	1	Journal of geography (Houston)	
Ny	1	Journal of Geography and Regional Planning	
	1	Journal of Geography in Higher Education (Print)	
	1	Journal of Historical Geography	
	1	Journal of Housing and the Built Environment	
	1	Journal of International Relations and Development	
	1	Journal of Latin American Geography	
	1	Journal of Maps	
	1	Journal of Mediterranean Studies	
	1	Journal of Northern Studies	
	1	Journal of Occupational Science	
	1	Journal of Palestine Studies	
	1	Journal of Population Economics	
	1	Journal of Population Research	
	1	Journal of South Asian and Middle Eastern studies	
	1	Journal of Southeast Asian Studies	
	1	Journal of Southeast European and Black Sea Studies	
	1	Journal of Sustainable Tourism	
	1	Journal of the American Oriental Society	
	1	Journal of the American Planning Association	
	1	Journal of the Korean Regional Development Association	
	1	Journal of the Royal Asiatic Society of Great Britain & Ireland	Nedlagt 1990
	1	Journal of Tourism and Cultural Change	
	1	Journal of Transdisciplinary Environmental Studies	
	1	Journal of Transport Geography	
	1	Journal of Transportation and Statistics	Nedlagt 2005
	1	Journal of Urban Affairs	
	1	Journal of Urban Planning and Development	
Ny	1	Journal of Urban Regeneration and Renewal	
	1	Kart og Plan	
	1	Kartografija i Geoinformacije	
	1	Korea Journal	
	1	Landscape and Planning	Nedlagt 1986
	1	Landscape Journal	
	1	Landscape Review	
Ny	1	Landscape Series	
	1	Le marin du nord	
	1	Local Environment : the International Journal of Justice and Sustainability	
	1	Local Government Studies	
	1	Managing Leisure	
	1	Maritime Policy & Management	
	1	Mediterranean Quarterly	
	1	Mediterranean Studies	
	1	Middle East Quarterly	
	1	Middle Eastern Studies	
	1	Mitigation and Adaptation Strategies for Global Change	
	1	Mitteilungen der österreichischen Geographischen Gesellschaft	
	1	Modern & Contemporary France	
	1	Modern Italy	
	1	Mondes en Développement	
	1	Mountain Research and Development Journal	
	1	New Zealand Population Review	
	1	Newfoundland Studies	Nedlagt 2003
	1	NORDEUROPAforum	
	1	Nordisk Samhällsgeografisk Tidsskrift	Nedlagt 2007
	1	Norsk Geografisk Tidsskrift	
	1	Norsk tidsskrift for migrasjonsforskning	
	1	Northern Studies : The Journal of the Scottish Society for Northern Studies	
	1	Organization & Environment	

1	Pacific Affairs	
1	Pacific Science	
1	Papers in Regional Science (Print)	
1	Papers of the Regional Science Association	Nedlagt 1990
1	Physical geography	
1	Planning Practice & Research	
1	Planning Theory	
1	Polar Geography	
1	Polar Record	
1	Polar Research	
1	Policy Sciences	
1	Population	
1	Population and Environment	
1	Population Bulletin	
1	Population Studies	
1	Population, Space and Place	
1	Population: Research and Policy Review	
1	Post-Soviet Geography and Economics	Nedlagt 2002
1	Proceedings : European Transport Conference	
1	Professional Geographer	
1	Progress in Physical Geography	
1	Progress in Planning	
1	Refugee Survey Quarterly	
1	Regional & Federal Studies	
1	Regional Environmental Change	
1	Resources Policy	
1	Review of Urban & Regional Development Studies	
1	Revista Latinoamericana de Estudios Urbano Regionales	
1	Rivista di topografia antica	
1	Scandinavian Journal of Hospitality and Tourism	
1	Scandinavian Population Studies	
1	Scottish Geographical Journal	
1	Scottish Geographical Magazine	Nedlagt 1998
1	Scripta Mediterranea	
Ny	Scripta Nova: revista electrónica de geografía y ciencias sociales	
1	Sibirica (keele) : Interdisciplinary Journal of Siberian Studies	
1	Singapore Journal of Tropical Geography	
1	Social Dynamics	
1	Social Policy & Administration	
1	Standort (Bochum)	
1	Sustainability: Science, Practice, & Policy	
1	Temas Americanistas	
1	TFMS : Tidskrift för Mellanösternstudier	
1	The Annals of Regional Science	
1	The Contemporary Pacific	
1	The Industrial Geographer	
1	The Journal of Urban Technology	
1	The Middle East Journal	
1	The Pacific Review	
1	The South African Geographical Journal	
1	The Urban Review	
1	Third World Planning Review	Nedlagt 2002
1	Tijdschrift voor economische en sociale geografie	
1	Tourism	
1	Tourism Analysis	
1	Tourism and Hospitality Planning & Development	
1	Tourism and Hospitality Research	Nedlagt 1999
1	Tourism Geographies	
1	Tourism Review International	
1	Tourism, Culture & Communication	

	1	Tourist Studies	
	1	Town Planning Review	
	1	Transactions on GIS	
	1	Transformation (Durban)	
	1	Transport Policy	
	1	Transport reviews	
	1	Transportation Human Factors	
	1	Transportation Journal	
	1	Transportation Quarterly	Nedlagt 2003
	1	Urban Affairs Review	
	1	Urban Ecosystems	
	1	Urban Education (Beverly Hills, Calif.)	
	1	Urban Forum	
	1	Urban Policy and Research	
	1	Urbanistica	
	1	West Africa Review	
	1	Wiley Interdisciplinary Reviews: Climate Change	
	-	Doktoravhandling, Universitetet i Oslo	
Ny	-	Nordic Research Programme 2005-2008. Report	
	-	Population Trends	
	-	Probleme der Küstenforschung im Südlichen Nordseegebiet	
	-		

Appendix 6 NIFU STEP report on Scholarly publications

NIFU STEP, November 2009/November 2010

Fredrik Niclas Piro

Norwegian geography: Scholarly publications 2004-2008

Paper to the panel evaluating Norwegian geography



The background and purpose of the paper

The Research Council of Norway regularly conducts evaluations of research disciplines. This working paper was commissioned by the Research Council of Norway and has been prepared as a background document for an expert committee evaluating geographical research in Norway 2009–2010.

Acronyms: Norwegian and English names

Institutions

NTNU: Norges teknisk-naturvitenskapelige universitet/Norwegian University of Science and Technology
UiB: Universitetet i Bergen/University of Bergen
UiO: Universitetet i Oslo/University of Oslo
UiT: Universitetet i Tromsø/University of Tromsø
UiA: Universitetet i Agder/University of Agder
AF: Agderforskning/Agder Research
UMB: Universitet for Miljø- og biovitenskap/Norwegian University Of Life Sciences

Departments/research units included in the analysis

NTNU: Geografisk institutt/Department of Geography
UiB: Institutt for geografi/Department of Geography
UiO: Institutt for sosiologi og samfunnsgeografi/Department of Sociology and Human Geography
UiT: Institutt for planlegging og lokalsamfunnsforskning/Department of Community Planning (Department of Sociology, Political Science and Community Planning from 2009)
UMB: Institutt for internasjonale miljø- og utviklingsstudier, NORAGRIC/Department of International Environment and Development Studies, NORAGRIC
UiA/AF: For UiA and AF selected persons from various departments/units are included.

Databases

Frida/ForskDok: Forskningsresultater, informasjon og dokumentasjon av vitenskapelige aktiviteter/ Research results, information and documentation of scientific activities
DBH: Database for statistikk om høgre utdanning/Information on Research and Higher Education
RRP: Forskerpersonalregisteret/ Register of Research Personnel, NIFU STEP

Contents

Executive summary	4
1 Data sources and included publications	7
2 Overall figures and trends	11
3 Publication profiles: Frequently used journals, language and co-authorship.....	15
4 Number of publications per researcher.....	21
Appendix 1 Journals.....	29
Appendix 2 Performance-based budgeting of Norwegian higher education institutions	31

Executive summary

The present study encompasses scholarly publications of 53 researchers¹ included in the evaluation of Norwegian geography in 2009 (Chapter 3 and 4), as well as some overall analysis of all registered publications of the four major university departments selected for the evaluation (Chapter 2). If we include *all* publications registered at the four major university departments, a total of 417 *publications* is found in the 5-year period studied (2004 to 2008). The annual number of publications has increased over time. If we limit the search to publications by the selected 53 geographers alone, our sample consists of 313 *publications*.

The analyses are mainly based on data registered for the performance-based budgeting of the Norwegian higher education institutions (Frida and Forskdok). Test comparisons with publication lists provided by the departments to be evaluated indicate small discrepancies between the data for performance-based budgeting and the geographers' individual publications lists.

Journal profile: A broad range of journals, written in English

In the period from 2004 to 2008, the 53 geographers included have published a total of 184 journal articles in 101 different journals. Of these journals, 69 are only used once. The four most frequently used journals are *Norsk Geografisk Tidsskrift - Norwegian Journal of Geography*; *The Holocene*; *Geografiska Annaler. Series B. Human Geography*; and *GeoJournal*, but these journals only account for 23 per cent of the 184 articles in the period (43 of 184 articles). Thus Norwegian geography researchers use a wide array of journals, covering a broad range of fields, e.g. third world, landscape, climate, gender and geology issues, for publishing their work. Thirty per cent of the journal articles are in highly classified journals (level 2 in the performance-based budgeting for Norwegian higher education institutions), and 97 per cent are written in English.

Differences between departments

Of the total publication output (journal articles, monographs and book chapters), 35 per cent is at level 2, which is considerably higher than the defined 20 per cent threshold for level 2. However, the departments exhibit large differences in their level 2 publishing. Four of the analysed departments (UMB, UiB, NTNU and UiO) have a very high percentage of level 2 publications (range: 36-56 per cent), whereas the remaining departments (UiT and UiA/Agder Research) have a low level 2 percentage (10-13 per cent).

¹ This includes all researchers included in the evaluation, except those at HiNT (Høgskolen i Nord-Trøndelag) which did not have enough registered scholarly publications to be included in the publication analysis.

Language: 83 per cent English

There is less variation between the departments in the proportion of the total publication output (journal articles, book articles and monographs) written in English than in the percentage of level 2 publications. All institutions except UiT (40 per cent) have a very high percentage of publications in English (between 74 and 100 per cent). In total, 83 per cent of the studied publications are in English, 16 per cent in Scandinavian languages, and only 0.6 per cent in other languages. The total proportion of publications in English on average has remained at a high level for all the years studied, and has not shown any systematic increase over time.

Increased co-authorship

Sixty per cent of book articles, 67 per cent of monographs and 69 per cent of journal articles are co-authored, i.e. they have more than one author. There has been an *increase* in the proportion of publications that are co-authored from 2004 (61 per cent) to 2008 (71 per cent). We find substantial differences in co-authorship percentages across departments, varying from 44 to 83 per cent.

Physical versus human geography

Physical and human geography have very different publication profiles. Four of the 53 researchers included represent the field of physical geography. These researchers have more publications than those in human geography. Moreover, their publications are mostly journal articles with many co-authors, and all are in English. Due to the many co-authors, they score much lower on article equivalents² than on number of publications.

Differences between researchers

The average annual number of publications per researcher varies during the period. The peak years for article equivalents are 2004 and 2008, with 1.11 article equivalents per researcher.

There are large variations in publication activity, both between researchers and between departments. The percentage of geographers that have no article equivalents during the period is 5.7. Some 15.1 per cent have article equivalents below 2. A total of 38 per cent have 2-5 article equivalents, 38 per cent have 5-10 article equivalents, and 3.8 per cent (two researchers) have more than 10 article equivalents.

The small group of researchers from UMB has the highest level of article equivalents per researcher during the period (7.1). UiT, which also encompasses a small group, was second with 5.6 article equivalents per researcher. When we excluded doctoral dissertations in the period, UMB retained its score as the top institution, but the percentage for UiT dropped to

² See explanation in Chapter 1.

the lowest level of article equivalents per researcher. This is because close to all of the article equivalents at UiT are due to three doctoral dissertations. The total average article equivalents per researcher for our 53 geographers was 4.5 (0.9 per year), and 4.1 (0.8 per year) when doctoral dissertations and unproductive researchers were removed.

There are no strong differences in article equivalents between academic positions, but full professors have a better article equivalent profile than associate professors. There were only a few researchers in other academic positions in this analysis, but these had a higher number of article equivalents than both full and associate professors. The highest average publication activity is found in the age group 30-39 years, and productivity decreases with age. Female geographers seem somewhat more productive than their male colleagues; 47 per cent of the women and 39 per cent of the men have more than 5 article equivalents during the 5-year period. The average number of article equivalents is also higher for women geographers (5 for women and 4.3 for men).

1 Data sources and included publications

Data sources

The analyses in this paper are primarily based on the publications registered in the publicly accessible database Frida³ and ForskDok⁴, and *not* on the comprehensive publication lists compiled for the evaluation. Frida and ForskDok are two different registration systems for scientific publications employed by Norwegian universities and other higher education institutions, and include the scholarly publications for all higher education institutions to be encompassed by the geography evaluation. The Frida/ForskDok publication data are summarised in the Norwegian DBH database (see explanation of acronyms on page 2) and are used for the calculation of the performance-based budgeting of Norwegian higher education institutions (see Appendix 2). Publication data for NTNU, UiB, UiO and UiT are registered in the Frida system, while the other higher education institutions use the ForskDok system. Institutes outside the higher education sector do not register their publications in these databases. In our study, for Agder Research, we therefore relied on publication lists that were submitted by the researchers.

Information on doctoral dissertations by the 53 selected researchers was taken from the Register of Research Personnel at NIFU STEP (RRP). We have compared information from ForskDok and RRP in cases of uncertainty.

Departments and researchers included

The analysis encompasses scholarly publications of 53 researchers⁵ at six departments⁶ (Table 1.1), as well as some overall analysis of the publication output of the four major university departments selected for the evaluation, i.e. UiO, UiB, UiT and NTNU. That is, in addition to the publications of the 53 selected researchers, all the Frida-registered scholarly publications from the geography-related departments at these four universities are included in the overall analysis in Chapter 2. The rationale for this is that these four universities, unlike the other three, have specific units for geography, while such research at other departments is conducted either as a smaller part of a large unit, or as a collaboration among several institutes/departments at the institutions⁷. Further explanation is given in the introduction in Chapter 2.

³ At <http://wo.uio.no/as/WebObjects/frida.woa/5/wa/fres?la=en>. We received all data directly from Frida, and did not search the publications through this public site.

⁴ At <http://www.bibsys.no/norsk/produkter/forskDok/index.php>.

⁵ This includes all researchers included in the evaluation, except those at HiNT which did not have enough registered scholarly publications to be included in the publication analysis.

⁶ For simplicity's sake we use the term 'department' in this report. The group of researchers from Agder – UiA and Agder Research – is included as one unit, but the researchers are affiliated with different institutions and subunits within these institutions.

⁷ UMB also belongs in this category, but is not included in the initial analyses in Chapter 2. This is because only three researchers from a large department at UMB have been selected for the evaluation,

The analyses in Chapter 3 and 4 are based on the publications from the 53 researchers alone, not the other researchers at the departments.

Table 1.1 gives an overview of the academic positions of the 53 selected researchers. It should be noted that many researchers change both position and workplace over a 5-year period, which makes it difficult to categorise them to a unique academic position. In later analyses (Chapter 4) this will be specifically addressed. Here, we classify the researchers according to their position in RRP from 2007. There were many discrepancies between the information in this register and the CVs that we received from the researchers in 2009. The CVs are more up-to-date, but for our purposes (and time-span) their academic position in 2007 is of more relevance than the one in 2009.

Table 1.1 *Publication analysis of Norwegian geography: Number of included researchers by department and position*

Department	Full professor	Associate professor	Post doc	*Other	Total
NTNU: Department of Geography	5	10	0	0	15
UiB: Department of Geography	5	6	1	0	12
UiO: Department of Sociology and Human Geography	6	3	1	0	10
UiT: Department of Community Planning	0	4	0	0	4
UiA: Faculty of Economics and Social Sciences & Agder Research	3	1	0	5	9
UMB: Department of International Environment and Development Studies, NORAGRIC	1	1	0	1	3
Total	20	25	2	6	53

Source: RRP, NIFU STEP. *Other includes in total four different categories.

Full professors and associate professors constitute 85 per cent of our sample. The remaining 15 per cent are divided into 4 different categories. At UMB there is one college lecturer. The group of researchers from Agder – UiA and Agder Research – is treated in the analysis as a single unit with a total of 9 scholars. These include one senior lecturer⁸ and a head of the department at UiA. Agder Research is not part of the higher education sector and all three persons selected for the evaluation are senior researchers.

Human and physical geography

The majority of the researchers are working within human geography, but four from physical geography are included in the analysis as well (two at UiB and two at NTNU). Due to the low number of researchers included within physical geography there are no separate analyses for the different fields presented. It should be noted, however, that physical and human geography have substantially different publication profiles. The

and total numbers from this department would be very misleading compared to the total numbers from the geography departments at UiO, UiB, UiT and NTNU, where the selected researchers account for a significant part of these departments' total publication activities.

⁸ Senior lecturers (*førstelektorer*) and college lecturers (*høgskolelektorer*) are positions mainly oriented towards teaching.

researchers included within physical geography have more publications than those within human geography. Moreover, their publications are mostly journal articles (all in English), with many co-authors. Due to the many co-authors, they score much lower on article equivalents (see below) than on number of publications.

Categories of scholarly publications included

The analysis is limited to the publication categories included in the Norwegian performance-based budgeting of higher education institutions: monographs and contributions to anthologies (book articles) published at publishing houses classified as scientific/scholarly by the Norwegian Association of Higher Education Institutions (UHR), and articles⁹ in series and journals classified as scientific/scholarly by the UHR. The UHR classifies all relevant journals/series and publishers at two levels: the normal level (level 1) and a higher level (level 2) which is given extra weight in the performance-based funding model and only includes the leading and most selective journals and publishers. The UHR annually revises the classification list. Several journals and publishers are not classified as scientific/scholarly and are listed as such in the register.¹⁰ The annual revisions entail that the level of a journal or publisher may change from one year to the next. When “quality level” is included in the analysis, the level at the year of publication applies.

In sum, the analysis covers all articles in journals/series classified as scientific/scholarly, and monographs as well as articles in anthologies published by publishers classified as scientific/scholarly. All analyses are limited to the period 2004 to 2008. In addition, doctoral dissertations from the period (by the 53 researchers during the period 2004 to 2008) are identified and included in the analyses in Chapter 4.

Article equivalents and co-author weights

In some parts of the analyses the publications are counted as “article equivalents”. One article equivalent equals one scholarly article authored by one researcher: Articles (in scholarly journals or books) count 1, whereas monographs and doctoral dissertations are given higher weight and count 5.

Moreover, the figures are weighted for co-authorship by dividing the publication scores by the number of authors contributing. In this way an article co-authored by two persons counts as 0.5 (that is, 0.5 for each of them if both researchers are in the analysed sample). Article equivalents and co-author weights are used in the last table in Chapter 2 and in all tables in Chapter 4. For the remaining analyses, simple publication counts are used.

⁹ Including regular articles and review articles but not book reviews, editorials or letters. Conference reports are not included unless they are published by publishers classified as scientific.

¹⁰ The register is publically available at <http://dbh.nsd.uib.no/kanaler/>. See Appendix 2 for a description of the basis for classification.

Data limitations

Although they provide unique data, and represent a major improvement for bibliometric analyses, the Norwegian publications databases used in the performance-based budgeting – and in our analysis – are not without shortcomings. For example, some publications may be missing, and there may be cases where a publication has been given an incorrect classification code or has been reported multiple times. However, a test comparison of publications retrieved from the databases showed a very good correspondence with the publications as found in the researchers own CVs. We identified only a few publications in the CVs that did not appear in our databases. The missing publications were published in journals or by publishers that are not classified as scientific by the UHR.

In some cases, we identified relevant publications in our databases that for some reason were not included in the CVs. In other words, individual publication lists may also be an incomplete data source. It is also possible that some researchers will be puzzled by the low number of publications that are included in our analyses compared to their own CVs. The explanation for this is simple: CVs may contain a wide range of publications that do not meet the criteria outlined above for what counts as a scientific/scholarly publication. For example, book reviews, articles in popular magazines, internal institution reports, interviews, conference abstracts, and so on, do not qualify for inclusion in this analysis.

It should also be noted, from a general point of view (and not empirically tested in this report), that the data for the introduction/test year 2004 of the register may be incomplete. This years' data was not used for the performance based budgeting, and the coverage for 2004 seems not as good as for the following years.

The classification of publications has not been checked, and we have relied solely on the classification data in Frida and ForskDok. This means that a publication classified as a journal article is analysed as a journal article, even if the title indicates that it might be a book review. We did not, however, find any double listing of publications¹¹.

¹¹ E.g. because of misspelling of article titles.

2 Overall figures and trends

In our analysis, 41 out of 53 geographers come from the four major universities in Norway (NTNU, UiO, UiB and UiT). The analysis in this chapter covers all publications registered at the geography departments at these four universities during the period from 2004 to 2008.

Units not included

The reason why these initial analyses in Chapter 2 do not include *all* institutions selected for the evaluation is that the four major universities all have easily identifiable geography departments, where all the selected researchers work, and where they constitute a significant component of the institute's total number of researchers. This is not the case for UMB or UiA/Agder Research. These units are characterised by one – or both – of the following two characteristics: The selected researchers only constitute a very small percentage of the total number of employees at their departments, and the researchers do not necessarily work at easily identifiable geography departments. Rather, they may be working at departments that are more distantly related to geography. As an example:

There were three researchers selected for the evaluation from UMB. All of these work at the Department of International Environment and Development Studies (NORAGRIC). This is a large department with approximately 30 researchers (in addition to a large number of Ph.D. students). Since only three researchers were selected from this department, only a very limited proportion of the publications from this department is subject to our analyses. Furthermore, it is reasonable to believe that much of the research conducted here is beyond the scope of geography relevant to the evaluation.

The group of researchers in Agder is split between two institutions and several departments. Three researchers were selected for the evaluation from *Agder Research*. Compared to the other six departments in this analysis Agder Research is a special case. It is an independent research institute and is not organised in the same way as higher education departments. Although some of the researchers' work is clearly classifiable as geography content, it is difficult to pinpoint a geography section at this research institute. From *UiA*, there were six researchers selected for the evaluation. All of them work at the Faculty of Economics and Social Sciences, which consists of six departments. One of the selected researchers is the dean of the faculty, two work at the Centre for Development Studies, two work at the Department of Political Science and Management, and one works at the Department of Working Life and Innovation. The inclusion of all publications from these departments, or from the entire faculty, would not be a good starting point for a comparison of geography research across Norwegian research units.

In the 2004-2008 period we find that the Faculty of Economics and Social Sciences at UiA has a total of 443 scientific publications. However, as with UMB and Agder Research, it

would be wrong to include all these publications in our analyses, since it would imply including research within e.g. management, political science, economy and sociology. Similarly, at UiO, the geographers are attached to the Department of Sociology and Human Geography. In our analyses, we have excluded all publications (and personnel) that are attached to the sociology section of the Department.¹²

Overall trends 2004–2008

Table 2.1 shows the development of the number of publications by type for each year of the period covered.¹³ The numbers of publications in 2004 are rather low and should be interpreted cautiously (see Chapter 1). The introduction of performance-based budgeting in 2005 may have led to an increased number of publications, and we find that the annual number of publications is significantly higher in 2007 and 2008 than in the first years of the period. This may be due both to stronger incentives to publish and to stronger incentives to systematically register all scientific publications. Another possible explanatory factor is changes in the number of personnel affiliated with the departments during the period, where an increase generally would result in more publications (we have, however, not explored this hypothesis any further).

Table 2.1 Norwegian geography at selected university departments: Number of publications by type and year 2004-2008

Publication type	2004	2005	2006	2007	2008	Total	% published by selected researchers (n=41)
Books/Monographs	0	3	2	3	2	10	50.0% (n=5)
Book articles	28	21	24	37	52	162	56.7% (n=92)
Journal articles	36	52	45	70	42	245	53.9% (n=132)
Total	64	76	71	110	96	417	54.9% (n=229)

Source: Frida. The sample includes all publications registered at the geography departments at UiO, UiB, UiT and NTNU.

In the period from 2004 to 2008, the number of journal articles shows large annual fluctuations, ranging from 36 (the lowest number) in 2004 to 70 (the highest number) in 2007. In 2008, however, there were only 42 published journal articles, which is more in line with 2004 than 2007. Nevertheless, there is a positive trend. The number of book articles has increased during the period, with 2007 and 2008 differing from the previous years, and 2008 was the peak year with almost twice as many book articles as in 2004. The number of books/monographs is generally low, varying between 0 and 3 per year.

¹² Sociology personnel were identified by name lists on the institute's webpages. In addition to the names we found here, we have removed two deceased sociologists that no longer featured on the webpage.

¹³ Only "unique" articles are included. Some publications are reported multiple times because they are written by several authors, and will therefore appear on the publication lists of all the authors; thus they will appear more than once. In order to handle this problem we removed all the multiply reported items in the analysis of departments and groups (but not later on in the analysis of individuals), i.e. only unique publications were left.

Variations at department level

The geographers selected for the evaluation from NTNU, UiO, UiB and UiT have published 54.9 per cent of all publications from their departments.

Table 2.2 *Norwegian geography at selected university departments: Number of publications by type and department (totals for 2004-2008)*

Department	Books/Monographs		Book articles		Journal articles		N
	#	%	#	%	#	%	
NTNU: Department of Geography	1	0.6	68	43.6	87	55.8	156
UiB: Department of Geography	4	4.0	27	27.0	69	69.0	100
UiO: Department of Sociology and Human Geography	3	2.6	42	35.9	72	61.5	117
UiT: Department of Community Planning	2	4.3	25	54.3	19	41.3	46
Total	10	2.4	162	38.7	247	58.9	419

Source: Frida. The sample includes all publications registered at the geography departments at UiO, UiB, UiT and NTNU. All sociologists at UiO have been removed.

Table 2.2 shows the same publications as Table 2.1, distributed across university departments. It is quite remarkable that we basically find the same total number of publications in the two tables (417 and 419). This is because *only two* of the 417 publications from the four geography departments had authors from more than one of these institutions, i.e. between 2004 and 2008 there was practically no co-authorship between the four largest university departments within geography.

Journals are the most frequently used publishing channel. As much as 58.9 per cent of the publications are journal articles (Table 2.2, total for the period). In particular, the Department of Geography at UiB has a high proportion of journal articles; 69 per cent of their scholarly publications are journal articles. On the other side, UiT stands out with a low total percentage of journal articles (41.3 per cent), and UiT has the highest proportion of book articles (54.3 per cent). The number and proportion of monographs are low at all departments.

In total, NTNU has the highest number of publications in the period (156), approximately 3.4 times as many as UiT at the bottom (46 publications in the 5-year period). UiB and UiO have intermediate positions, but UiO has a slightly larger production than UiB, 117 and 100 publications, respectively.

Table 2.3 Norwegian geography: Number of article equivalents* by department and year 2004-2008

Department	2004	2005	2006	2007	2008	Total	% of article equivalents from the selected researchers
NTNU: Department of Geography	21.25	24.16	22.42	19.76	27.35	114.94	55.3 % (63.66 equiv.)
UiB: Department of Geography	11.53	15.79	11.38	22.68	11.02	72.40	59.4 % (43.05 equiv.)
UiO: Department of Sociology and Human Geography	19.48	14.57	19.67	18.43	12.02	84.17	42.2 % (35.57 equiv.)
UiT: Department of Community Planning	0.0	10.0	4.83	17.13	11.19	43.15	17.3 % (7.45 equiv.)
Total	52.26	64.52	58.30	78.00	61.58	314.66	47.6 % (149.73 equiv.)

Source: Frida. The sample includes all publications registered at the geography departments at UiO, UiB, UiT and NTNU. All sociologists at UiO have been removed. *The table includes the same 419 publications as Table 2, weighted as article equivalents.

In Table 2.3, the publications are counted as article equivalents,¹⁴ showing the weighted sum of scholarly publications annually for each of the four departments (for an explanation of article equivalents, see Chapter 1). The results correspond well with the patterns found in Table 2.2. NTNU has the highest total number of article equivalents (114.9), approximately 2.6 times as many as UiT at the bottom (43.2), with UiB and UiO positioned in between. The average number of article equivalents per year is highest at NTNU (22.9), followed by UiO (16.8), UiB (14.4) and UiT (8.6).

When studying changes over time from 2004 to 2008, we find that NTNU has a higher number of article equivalents in 2008 compared to 2004. This is not the case at UiB or UiO where article equivalents are lower in 2008 than in 2004. However, this does not reflect any trend. Both institutions have had their ups and downs throughout these years. UiT is also rather stable, despite having 0 article equivalents in 2004 (which must be considered a unique case). NTNU aside, all departments score higher on article equivalents than on publication counts. This implies that NTNU has a larger percentage of co-authorship with external collaboration partners than the other departments.

¹⁴ This means that we consider *all* publications, not only unique publications.

3 Publication profiles: Frequently used journals, language and co-authorship

This chapter analyses the publication patterns for the 53 selected geographers in terms of frequently used journals, publication language and co-authorship.

In the 5-year period studied, the 53 geographers have published articles in 101 different journals. Of these, 69 journals are only used once. Table 3.1 shows the number of journal articles by journal and department. Only journals with at least two articles are shown in the table.

Table 3.1 Norwegian geography: Frequently used journals, by department and journal level, 2004-2008

Journal	Level ^a	NTNU	UiB	UiO	Other**	Total
Norsk Geografisk Tidsskrift	1	13	6	3	2	24
The Holocene	2	0	9	0	0	9
Geografiska Annaler. Series B. Human Geography*	2	1	2	0	2	5
GeoJournal*	2	3	0	1	1	5
AI & Society	1	0	0	0	4	4
Forum for Development Studies	1	0	1	1	2	4
Global Environmental Studies	1	0	0	3	1	4
Mountain Research and Development Journal	1	0	1	1	2	4
Political Geography	2	2	1	0	1	4
Quaternary Science Reviews	2	0	4	0	0	4
Die Erde	1	0	0	3	0	3
European Journal of Development Research	1	0	1	0	2	3
Gender, Technology and Development	2	3	0	0	0	3
Geoforum	2	2	0	0	1	3
Children's Geographies*	2	2	0	0	0	2
Climate Policy	1	0	0	2	0	2
Climatic Change	1	0	0	2	0	2
Conflict Management and Peace Science	1	2	0	0	0	2
Contemporary Southeast Asia	1	0	0	0	2	2
Electronic Journal of Information Systems in Developing Countries	1	0	0	0	2	2
Entrepreneurship and Regional Development	1	1	0	0	1	2
Global and Planetary Change	1	0	2	0	0	2
Human Ecology*	2	0	1	0	1	2
International Journal of Strategic Property Management	1	2	0	0	0	2
Landscape Research	1 & 2	2	0	0	0	2
Nordisk Samhällsgeografisk Tidsskrift	1	0	1	1	0	2
Norsk Geologisk Tidsskrift	1	1	1	0	0	2
The Canadian Geographer / Le Géographe Canadien	1 & 2	0	2	0	0	2
The International Information & Library Review	1	0	0	0	2	2
Third World Quarterly	1 & 2	0	0	2	0	2
Tidsskrift for samfunnsforskning	1	0	0	2	0	2
Urban Studies	1 & 2	0	0	1	1	2
54 level 1 journals with 1 article each		12	11	8	23	54
15 level 2 journals with 1 article each		2	7	1	5	15
Total		48	50	31	55	184
Total Level 1		32	25	27	43	127
Total Level 2		16	25	4	12	57

Source: Frida and ForskDok. The sample includes the publications of the 53 selected researchers.

See Appendix 1 for a full list of the journals.

^a Due to the annual level revisions one journal may be rated at both level 1 and 2, i.e. our institutions have published in a journal both when it was rated at level 1, and when it was rated at level 2.

* Indicates that these journals have changed level during the period 2004-2008, but the Norwegian institutions only published in them when they were at the indicated level in the table.

** For simplicity's sake, we have placed UMB, AF and UiA together. UiT did not have any publications in the journals reported in Table 3.1.

One journal stands out as the most frequently used channel for publication: *Norsk Geografisk Tidsskrift-Norwegian Journal of Geography*. This journal only publishes

scholarly papers in English (although book reviews, letters, etc. may be written in Norwegian). Most institutions publish work in this journal. Aside from this, there are no other journals in which all the institutions publish articles. It appears that each department more or less has its own set of journals which it prefers or in which it is accustomed to publishing. This may partly be a consequence of differences in research profiles.

The work of the four researchers within physical geography seem focused on climatic issues, e.g. ice and glacier research. These researchers have their own set of journals in which they publish their work, and which are not used by any of the other geographers in this evaluation.¹⁵ For example: *The Holocene* – number two on our list – published 9 papers from the selected researchers at UiB in 2004-2008, but no papers from any of the other selected researchers. In addition to the above journals these four researchers also publish in the two very common journals *Norsk Geologisk Tidsskrift* and *Norsk Geografisk Tidsskrift*.

The total distribution of articles by journal level for all units is shown in Table 3.2.

Table 3.2 *Norwegian geography: Journal articles by department and journal level, 2004-2008*

Journal	NTNU	UiB	UiO	UiT	UiA/AF	UMB	Total
Total level 1	32	25	26	4	34	8	129
Total level 2	15	25	5	0	3	7	55

Source: Frida and ForskDok. The sample includes the publications of the 53 selected researchers.

There are some differences between the departments in terms of their journal level patterns. UiB has the same number of articles at level 2 and level 1 (UMB comes close to this as well). For the other departments there is a clear majority of publications at level 1.

¹⁵ This includes the following journals: *Boreas*; *Climate Dynamics*; *Earth and Planetary Science Letters*; *Geografiska Annaler*; *Geomorphology*; *International Journal of Climatology*; *Quaternary Research*; *Quaternary Geochronology*; *Journal of Quaternary Science*; *Global and Planetary Change*; *Quaternary Science Reviews*; *The Holocene*.

Table 3.3 Norwegian geography: Scholarly publications by outlet/journal level and year (2004-2008), per cent

Type	Publication level	2004	2005	2006	2007	2008	2004-2008
Monographs	Per cent level 1	100.0	100.0	100.0	100.0	0.0	66.7
	Per cent level 2	0.0	0.0	0.0	0.0	100.0	33.3
N (publications)		1	1	1	1	2	6
Book articles	Per cent level 1	65.4	76.9	61.5	87.0	33.3	57.7
	Per cent level 2	34.6	23.1	38.5	13.0	66.7	42.3
N (publications)		26	13	13	23	48	123
Journal articles	Per cent level 1	87.5	68.6	76.5	60.0	63.6	70.1
	Per cent level 2	12.5	31.4	23.5	40.0	36.4	29.9
N (publications)		32	35	34	50	33	184
Total	Per cent level 1	78.0	71.4	72.9	68.9	44.6	65.2
	Per cent level 2	22.0	28.6	27.1	31.1	55.4	34.8
N (publications)		59	49	48	74	83	313

Source: Frida and ForskDok. The sample includes the publications of the 53 selected researchers.

A relatively high proportion of the journal articles, 29.9 per cent, is published in level 2 journals (Table 3.3). 2007 and 2008 were particularly “good years” with 36-40 per cent of the articles at level 2. As much as 42.3 per cent of all book articles were published in level 2 channels. The large number of book articles, both in total and in percentage at level 2, in year 2008 (66.7 per cent at level 2) contributes significantly to this high average. Two factors are important in explaining the high percentage this year. *Firstly*, UMB had an unusually “good” year with 10 level 2 publications. *Secondly*, both NTNU and UiB had an unusually “good” year in 2008, with a majority of all publications at level 2.

In total, 34.8 per cent of the publications of the 53 geographers are published at level 2. As level 2 is defined to cover approximately 20 per cent of the publications in a field/discipline, the proportion of level 2 publishing among the included geographers may be considered high. However, this is slightly lower compared to the 417 publications from the four major university departments we studied in Chapter 2, of which 37.2 per cent were published at level 2.

Table 3.4 Norwegian geography: The language of the publications* (totals for 2004-2008). Per cent

Type	Scandinavian	English	Other languages	N
Monographs	33.3	50.0	16.7	6
Book articles	35.0	64.2	0.8	123
Journal articles	3.3	96.7	0.0	184
Total	16.3	83.1	0.6	313

Source: Frida. The sample includes the publications of the 53 selected researchers.

*Language is defined as the language of the publication - not e.g. the language of the journal's title.

The proportion of publications in English is high: 83.1 per cent (Table 3.4). Close to all journal articles are written in English. A clear majority of book articles are also written in English (64 per cent). Publications in other languages than English and Scandinavian are

close to non-existent (n=2). Has this changed over the years? The percentage of publications written in English was 81.4 per cent in 2004, 91.8 per cent in 2005, 81.3 per cent in 2006, 75.7 per cent in 2007 and 86.7 per cent in 2008 (not shown in tables). Thus, there are no grounds to speak of an increase in the use of English. The percentage was high already in 2004 and has remained so over the years, albeit with annual fluctuations. For example, the percentage was lower in 2007 (75.7) than in 2004 (81.4).¹⁶

Table 3.5 *Norwegian geography: The outlet/journal level and language of the publications by department (totals for 2004-2008). Per cent*

Department	Per cent English	Per cent level 2	N
NTNU: Department of Geography	74.2	36.6	93
UiB: Department of Geography	84.3	45.7	70
UiO: Department of Sociology and Human Geography	87.5	37.5	56
UiT: Department of Community Planning	40.0	10.0	10
UiA: Faculty of Economic and Social Sciences & Agder Research	96.7	13.1	61
UMB: Department of International Environment and Development Studies, NORAGRIC	87.0	56.5	23
Total	83.1	34.8	313

Source: Frida and ForskDok. The sample includes the publications of the 53 selected researchers. Included publications: Monographs, book articles and journal articles.

The proportion of publications in English varies between the departments (Table 3.5). Nearly all the scholarly publications of the geographers in Agder are in English. UMB, UiO and UiB have also very high shares of English-language publications (84-87 per cent). UiT's percentage of English-language publications (40 per cent) stands out as remarkably low compared to the other departments.

There are large differences in level 2 publication between the departments. UMB (57 per cent) and UiB (46 per cent) score considerably higher than the other departments. NTNU and UiO also have high shares of publications at level 2. UiA/Agder Research and UiT have all shares below 15 per cent (Table 3.5). Thus, in terms of level 2 publishing there is a strong divide between two groups: Four departments with proportions in the range of 36-56 per cent, and the three other departments in the range of 10-13 per cent.

Co-authorship

Table 3.6 shows the proportion of the different kinds of publications that have more than one author. Sixty per cent of book articles and 69 per cent of journal articles are co-authored. During the 2004-2008 period we find an increase in co-authorship both when we consider book articles and journal articles.

¹⁶ In the same way, we find many ups and downs at the department level. For example: UiO had a percentage of publications in English of 100 per cent in 2004. This percentage was only 66.7 in 2008. All of UiB's publications were written in English in both 2004 and 2008, whereas in 2006 the figure was only 56.7 per cent. Thus, the percentage of English language is high, but there is no sign of an increase.

Table 3.6 *Norwegian geography: Co-authorship of scholarly publications: Proportion of co-authored publications^a by type and year, 2004-2008, per cent*

Type	2004	2005	2006	2007	2008	2004-2008
Book articles	57.7	46.2	38.5	69.6	66.7	60.2
Journal articles	62.5	71.4	67.6	68.0	75.8	69.0
Total per cent co-authored¹	61.0	63.3	58.3	68.9	71.1	65.5
<i>Total number of publications¹</i>	<i>59</i>	<i>49</i>	<i>48</i>	<i>74</i>	<i>83</i>	<i>313</i>

Source: Frida and ForskDok. The sample includes the publications of the 53 selected researchers.

^a Monographs are not included in the table, due to the low total number (6). Of these, 66.7 per cent were co-authored.

¹ Total numbers include monographs (n=6).

The analysis includes all kinds of co-authorship – internally at the institution, cross-institutional and international. However, as explained in Chapter 2, practically no co-authorship is found between the four major geography departments. We have no separate data for international co-authorship. The data still give some basis for separating different kinds of co-authorships. In total there are 205 co-authored publications. 23 of these were co-authored with one of the selected researchers at the same department, 18 were co-authored within the department but with a researcher *not* included in the analysis, and 8 publications were co-authored by two of the six departments included in this analysis. This means that there are 156 co-authored publications without co-authors from any of the Norwegian geography departments. The most likely explanations for such a large proportion of co-authored publications with co-authors from outside our sample are that there is a great deal of international collaboration, and/or much of the geography research is interdisciplinary (i.e. involves co-authorship with non-geography departments). Moreover, many of the articles co-authored with(in) the geography departments, had additional co-authors – these may come from abroad or from other disciplines.

Table 3.7 shows co-authorship by department and type of publication. The highest and lowest proportions of co-authored publications are found at the departments with the fewest selected researchers. UiT has the lowest percentage of co-authorship (40 per cent). UMB stands out as the institution with the highest percentage of co-authorship (83 per cent).

Table 3.7 *Norwegian geography: Co-authorship of scholarly publications: Proportion of co-authored publications by type and department, totals for 2004-2008. Per cent*

Department	Monographs		Book articles		Journal articles		Total publications	
	#	Per cent co-authored	#	Per cent co-authored	#	Per cent co-authored	#	Per cent co-authored
NTNU: Department of Geography	1	0.0	45	55.6	47	59.6	93	57.0
UiB: Department of Geography	3	66.7	17	52.9	50	86.0	70	77.1
UiO: Department of Sociology and Human Geography	1	100.0	24	75.0	31	64.5	56	69.6
UiT: Department of Community Planning	0	N/A	6	50.0	4	25.0	10	40.0
UiA: Faculty of Economics and Social Sciences & Agder Research	0	N/A	24	58.3	37	59.5	61	59.0
UMB: Department of International Environment and Development Studies, NORAGRIC	1	100.0	7	71.4	15	86.7	23	82.6
Total	6	66.7	123	60.2	184	69.0	313	65.5

Source: Frida and ForskDok. The sample includes the publications of the 53 selected researchers.

4 Number of publications per researcher

This chapter analyses possible differences in publication activity between the departments, positions, age and gender. Publications are weighted for co-authorship and type in order to have a comparable measure for publication activity, a measure called *article equivalent*.

The *article equivalents* are divided by the number of researchers included in the analysis, resulting in an average measure for publication activity per researcher (see explanation in Chapter 1 and in the notes to the tables). An article equivalent equals one scholarly article authored by one researcher. Articles (in scholarly journals or books) count 1. Monographs and doctoral dissertations count 5. The figures in Table 4.1 are weighted for co-authorship by dividing the publication scores by the numbers of contributing authors.

Please note that dissertations were not included in the analyses in the previous chapters, but are included in this chapter to obtain a better “per researcher” measure. We have only included doctoral dissertations that met the following criteria: the researcher was working at the current institution at the time of the dissertation. This means that if a researcher at NTNU submitted his/her dissertation at NTNU in 2004 but now works at UiB,¹⁷ UiB does not get any credit for this dissertation in our analysis, but neither does NTNU, as the researcher is not among the NTNU researchers to be included in the evaluation. On the other hand, if a person was affiliated with UiB in 2004 and was awarded his/her doctorate from NTNU (in 2004) UiB does get credit for this in our analysis (whereas NTNU gets no credit). Based on this principle, we have included seven dissertations in the analysis.

It is important to keep in mind that we have only included publications from the period the researchers have been affiliated with their respective departments. This means that not all persons have been active or been credited publications from the entire five-year period, and this may be a potentially important factor in explaining productivity differences between departments. Based on the researchers’ submitted CVs, we believe that approximately 70 per cent of the researchers have been working at their current departments throughout the period, whereas 30 per cent have changed workplace during the period, or have been on leave for shorter or longer periods. We have therefore adjusted the productivity numbers for length of affiliation with current department. However, since these adjustments are based on self-reported data (with mixed quality) from the researchers’ CVs, the results of the analysis should be interpreted with caution. Also: productivity measures based on a very small sample of researchers (in total 53), are highly influenced by extreme values; e.g. researchers with either zero or a very high number of publications.

¹⁷ And was selected as one of UiB’s researchers for this evaluation.

Table 4.1 Norwegian geography: Number of publications per researcher by year 2004-2008 (weighted for co-authorship)

Type	2004	2005	2006	2007	2008	2004-2008
Monographs	2.50	5.00	5.00	2.50	5.00	20.00
Number of researchers	43	47	51	52	53	53
Average publications per researcher	0.06	0.11	0.10	0.05	0.09	0.37
Book articles	16.08	9.46	10.20	13.89	28.92	78.55
Number of researchers	43	47	51	52	53	53
Average publications per researcher	0.37	0.20	0.20	0.27	0.53	1.48
Journal articles	19.18	17.09	20.28	27.43	16.26	100.24
Number of researchers	43	47	51	52	53	53
Average publications per researcher	0.45	0.36	0.40	0.53	0.30	1.85
Doctoral dissertations	10.00	5.00	0.00	10.00	10.00	35.00
Number of researchers	43	47	51	52	53	53
Average publications per researcher	0.23	0.11	0.00	0.19	0.18	0.64
Article equivalents	47.76	36.55	35.48	53.82	60.18	233.79
Number of researchers	43	47	51	52	53	53
Average publications per researcher	1.11	0.78	0.70	1.04	1.11	4.41

Sources: Frida, ForsDok and NIFU STEP Doctoral Degree Register. The sample includes the publications of the 53 selected researchers. The researchers are included in the analysis from the time when they became affiliated with their current departments (based on information from the researchers' CVs). Hence the number of researcher differs from 43 in 2004 to 53 in 2008.

Table 4.1 shows that publication per researcher varies during the period. The researchers are included in the analysis from the time they became affiliated with their current departments. 2005 and 2006 represent the two least productive years in terms of article equivalents. The peak years for article equivalents are 2004 and 2008, with 1.1 article equivalents per researcher. Monographs and doctoral dissertations account for a very small proportion of the article equivalents. In total, the average level of article equivalents per researcher is 4.4, i.e. 0.9 article equivalents per year.

Most departments have large productivity variations among the selected researchers (not shown in tables). Minimum-maximum levels for number of *publications* (not article equivalents) per researcher were: 1-4 (UiT), 0-15 (UiO), 1-13 (NTNU), 0-24 (UiB), 0-19 (UiA/Agder Research), 5-13 (UMB). From this we conclude that the small group of researchers from UMB is the most “uniform” sample of researchers in terms of productivity; all of them has published, and even though the difference between minimum and maximum is large, the minimum number of *publications* exceeds the maximum number at UiT. At the other end, UiO, UiB and UiA/Agder Research have large differences between minimum (researchers with zero publications) and maximum (researchers with a very high number of publications). The most productive researcher in our study sample is a researcher at UiB with 24 *publications* between 2004 and 2008. Only two researchers (from NTNU and UiA/Agder Research) have more than 10 *article equivalents*.

Among the 53 researchers, there were only three who had no registered scholarly publications at all during the period (one from UiA/Agder Research, one from UiB and one from UiO). This low number of non-publishing researchers exerts minimal impact on the overall productivity results, and we have therefore not conducted separate analyses where these three persons are removed.

There are large differences in publishing levels, both between researchers and between departments. Analysing all 53 selected researchers, the smaller groups at UMB and UiT have the highest level of article equivalents per researcher (7.1 and 5.6). At *UMB* all three researchers have high levels of article equivalents (5.7 – 8.4). About 2/3 of the article equivalents are due to co-authorship between two selected researchers. Many of their publications were eventually included in a doctoral thesis, thus providing UMB with additional article equivalents.

At *UiT* the four researchers have article equivalents ranging from 4 to 6.9. The average number of article equivalents per researcher is 5.6, which is the highest average among the four major university departments (NTNU, UiO, UiB and UiT). However, at UiT we have included three doctoral dissertations, whereas the production of monographs, book articles and journal articles is close to zero for the institution. Hence the three doctoral dissertations increase the level of article equivalents by 301 per cent.

In *Agder*, all but one of the researchers had scientific publications during the period. Article equivalents range from 1 to 12.1 among those who had published. The average number of article equivalents per researcher is 5.4.

At *UiO*, nine out of ten researchers had scientific publications during the period. Article equivalents ranged from 1.3 to 8.2 among those who had published. The median among these was 2.7. For all ten researchers, the article equivalents per researcher is 3.5.

At *UiB*, 11 out of 12 researchers had scientific publications during the period. Article equivalents ranged from 2 to 9.5 among those who had published. The median among these was 3.6. For all twelve researchers, the article equivalents per researcher is 4.0.

At *NTNU*, all researchers had scientific publications. Article equivalents ranged from 0.2 to 11.8. The median was 3.0. The article equivalent per researcher was 4.2. Thus, among the four major university departments (UiO, UiT, UiB and NTNU), NTNU ranks second, but all these universities are closely positioned, from 3.5 to 4.6 article equivalents per researcher (Table 4.2).

We should, however, provide a few comments to these figures, and to how the differences between departments may be interpreted: *Firstly*, those institutions that have been credited doctoral dissertation points have received extra article equivalents that in some cases equal the total article equivalents for all other researchers at the same institutions. For a small institution, with few researchers included in this analysis, one or two doctoral dissertations may increase the level of article equivalents per researcher from close to zero, to the very top of all included institutions. We have therefore also calculated article equivalents excluding all doctoral dissertations.

Table 4.2 Norwegian geography: Article equivalents per researcher by department (totals for 2004-2008)

Department	Total number of article equivalents	Including all 53 researchers		Article equivalents per researcher	
		Number of researchers	Article equivalents per researcher	Excluding doctoral dissertations	Excl. doctoral dissertations and adjusted for capacity*
NTNU: Department of Geography	63.66	15	4.24	4.24	4.24
UiB: Department of Geography	48.05	12	4.00	3.58	4.42
UiO: Department of Sociology and Human Geography	35.57	10	3.55	3.55	3.55
UiT: Department of Community Planning	22.45	4	5.61	1.86	2.22
UiA: Faculty of Economics and Social Sciences & Agder Research	48.73	9	5.41	4.30	4.64
UMB: Department of International Environment and Development Studies, NORAGRIC	21.43	3	7.14	5.47	5.47
Total	239.89	53	4.52	3.86	4.35

Sources: Frida and NIFU STEP Doctoral Degree Register. The sample includes the publications of the 53 selected researchers. *Article equivalents are adjusted for capacity by the formula: Article equivalents (excluding doctoral dissertations) * ((1/Capacity score) * Total number of article equivalents) * 100.

Secondly, there are some researchers (3 out of 53) who have no registered scholarly publications in the period studied: One professor and two assistant professors. One of them was not appointed to his current department until 2006, whereas the other two were employed at their institutions all 5 years. One of these, however, has had a substantial teaching responsibility.

Finally, and related to the above, the conditions and traditions for conducting research may also differ *between* the units, e.g. in the amount of the teaching load and time available for research. For example, the activity of independent research institutes is generally dominated by contract research and the results are more often published as “grey literature” such as reports than as articles in journals and books. These are factors that need to be taken into account when interpreting the results and using them for evaluation purposes.

In the analysis where doctoral dissertations have been excluded (Table 4.2, second column from right), some of the smaller departments and/or departments with few researchers included have had their article equivalents per researcher reduced. This is particularly the case for UiT (from 5.6 to 1.9), where most of the article equivalents were due to doctoral dissertations. The alternative ranking shows that the article equivalents per researcher is still highest at UMB (5.5), but NTNU (4.2) now performs best among the four major university departments. UiT has moved downwards in the ranking and is now below UiO and UiB.

Finally, we calculated a productivity indicator for all the researchers included, measured as a variant of the number of fractional publications per man-year (Table 4.2, column to the right). So far we have included all publications of the individuals examined, but not work carried out before they became affiliated with the respective departments. Since many of

the researchers have changed workplace between 2004 and 2008 (with some first being appointed late in 2008), we consider it useful to adjust our previous results for the time the researchers have been affiliated with their current departments. This represents the fairest way of comparing and assessing scientific productivity between institutions. Because this analysis is based on data from the researchers' submitted CVs with mixed quality and level of completeness, the reliability is lower. The results, nevertheless, give supplementary information on productivity differences among the units.

We examined the researchers' CVs and tried to identify the length of time they had been working at their current institutions. In some cases this was easy, as the CVs clearly stated that a given researcher had been at his current institute from a very specific date. If that date was e.g. 01.10.2006, we have registered that this person was "missing" from his/her current workplace for 33 months (i.e. 12 months in 2004, 12 months in 2005 and 9 months in 2006). In other cases it was less obvious. In some CVs only the year of appointment is provided. If a researcher changed workplace in 2007 we cannot know for sure whether this means the first of January or during the summer. A third problem is that many researchers have (or had) multiple positions and percentages of affiliation are not presented in the CVs. We have used 100 per cent unless something else has been explicitly stated in the CV.

For each researcher, it is possible to have 60 months of work at their current institution (5 years x 12 months). UiO, with 10 researchers, thus has a potential maximum of 600 months. Since two researchers were absent from the institution from longer periods of time (13 and 55 months), UiO is in fact 68 months short of full capacity. Thus, UiO's actual work capacity during the period was (600-68) 532 months, which equals 88.7 per cent of full capacity. UiB had the highest rate of absence during the period: 136 months. With 12 researchers (720 months), its actual work capacity was 81.1 per cent. Similar capacity calculations for the other institutes show: 92.9 (NTNU), 94 (UiT), 92 (UiA/Agder Research), and 100 (UMB). Article equivalents per researchers (excluding doctoral dissertations) have been standardised by the percentage of full capacity as outlined above.¹⁸

Incorporating absences from work during the 5-year period into the analysis does not change the results in Table 4.2 much. UiB, UiT, UiA/Agder Research have had their article equivalents increased. UMB still has the highest average article equivalents per researcher. Standardising the equivalents for work capacity also resulted in UiB's moving ahead of NTNU in the ranking.

In Table 4.3 the researchers are categorised according to their total number of article equivalents in the 5 year-period.¹⁹ Since, many of them have changed both positions and/or workplace between 2004 and 2008 such a classification is not without shortcomings. The

¹⁸ Formula: $((1/\text{Capacity score}) * \text{Total number of article equivalents}) * 100$.

¹⁹ In others words, in contrast to the other tables in this report, it is the geographers and not the publications that are the primary units of the analysis.

CVs that the researchers submitted in 2009 are in many cases different from that which is registered in RRP in 2007. However, we have relied on the registered position in 2007 for this analysis. The following categories are used:

- Full professors (including a Dean)
- Associate professors
- Other (includes: three senior researchers at Agder Research, two post docs, one senior lecturer and one college lecturer)

5.7 per cent of the geographers have no article equivalents during the period. 15.1 per cent had article equivalents below 2 (but more than 0). 37.7 per cent had 2-5 article equivalents. 37.7 per cent had between 5 and 10 article equivalents. Only two researchers (3.8 per cent) had more than 10 article equivalents (Table 4.3).

Table 4.3 *Norwegian geography: Number of publications per researcher by academic position and gender (totals for 2004-2008). Per cent*

Position*	Gender	***Article equivalents 2004-2008					**Mean	N (researchers)
		0	0,01- 1,99	2,00- 4,99	5,00- 9,99	10,00-		
Full professors	Women	0.0	20.0	40.0	40.0	0.0	4.90	5
	Men	6.3	12.5	37.5	37.5	6.3	4.87	16
	Total	4.8	14.3	38.1	38.1	4.8	4.87	21
Associate professors	Women	10.0	0.0	40.0	50.0	0.0	4.76	10
	Men	6.7	26.7	40.0	20.0	6.7	3.36	15
	Total	8.0	16.0	40.0	32.0	4.0	3.92	25
Other	Women	0.0	0.0	50.0	50.0	0.0	6.05	2
	Men	0.0	20.0	20.0	60.0	0.0	5.45	5
	Total	0.0	14.3	28.6	57.1	0.0	5.62	7
Total (per cent)	Women	5.9	5.9	41.2	47.1	0.0	4.95	17
	Men	5.6	19.4	36.1	33.3	5.6	4.32	36
	Total	5.7	15.1	37.7	37.7	3.8	4.52	53

Sources: Frida, ForsDok, NIFU STEP Doctoral Degree Register and personnel lists from the eight included departments. The sample includes the publications of the 53 selected researchers.

*According to RRP, NIFU STEP 2007.

Explanation: In this table the unit of analysis is researchers, *not* publications. The table shows the proportion of researchers with 0, 0,1-1,99, 2-4,99, 5-9,99, and 10 and above, publications in the period (row percentages).

**The second last column shows the average number of article equivalents per researchers, *not* percentages.

***An article equivalent equals one scholarly article authored by one researcher: Articles (in scholarly journals or books) count as 1, monographs and doctoral dissertations count as 5. The figures are weighted for co-authorship by dividing the publications scores by the number of authors contributing.

The first issue in Table 4.3 that draws our attention is the relatively high level of article equivalents among “others”. These include senior researchers, post-doctoral fellows and lecturers. These positions were merged into one group because of the low number of individuals from each position. Still, what these researchers had in common was a high level of article equivalents (range 1-9.5, median: 6.4). The two lecturers had 7.3 and 9.5 article equivalents, respectively. Four out of 7 researchers in this category have doctoral dissertations in this period.

Full professors have a slightly higher article equivalent number than associate professors; i.e. compared to associate professors, a larger percentage of full professors have a high number of equivalents, and their mean level of article equivalents is higher (4.9 compared

to 3.9). Full professors do not, however, have a higher mean number of article equivalents than the “others” category (4.9 and 5.6 respectively), but we must keep in mind the low number of “others” that are included in this analysis.

Both researchers with more than 10 article equivalents were men. Aside from this, there is a higher proportion of women researchers with high publication activity (defined as more than 2 article equivalents). Women researchers have higher shares than men both in the 2–5 and the 5–10 article equivalent intervals. This is seen for all researchers, as well as for full professors and associate professors. Total mean average article equivalents during the period was 4.3 for all men and 5 for women, indicating that women geographers are more productive than their male colleagues.

As shown in Table 4.4, the publication activity varies by both age and gender. In total, the productivity decreases by age. 30-39 is the most productive age group (6.6). The age-groups 40-49 (4.2) and 50-59 (4.4) are almost identical. The lowest mean level of article equivalents per researcher is found in the oldest age group (3.7). Women are more productive than men in all age groups except 30-39, where we find the highest age and/or gender-specific productivity score: an average of 8.8 article equivalents for men. However, women researchers display productivity scores over 4.5 for the categories 30-39, 40-49 and 50-59, whereas the only age category in which men score more than 4.5 is for the youngest age group.

It should be noted that the number of researchers in the different age and gender categories is low, and consequently the average values in tables 4.3 and 4.4 are highly dependent on the publication activity of individual researchers.

Table 4.4 Norwegian geography: Average number of article equivalents per researcher by age and gender (totals for 2004-2008). Means

Age	Gender	Article equivalents*				N (researchers)
		Mean	Minimum	Maximum	Std. Deviation	
30-39	Women	5.74	3.00	9.50	2.528	5
	Men	8.76	6.44	11.08	3.280	2
	Total	6.60	3.00	11.08	2.866	7
40-49	Women	4.72	1.70	8.24	2.399	6
	Men	3.96	0	9.50	2.930	16
	Total	4.17	0	9.50	2.761	22
50-59	Women	4.63	0	7.33	2.899	5
	Men	4.32	1.00	12.15	3.677	13
	Total	4.41	0	12.15	3.985	18
60 and above	Women	4.00	4.00	4.00	0.000	1
	Men	3.67	0	9.40	3.905	5
	Total	3.73	0	9.40	3.495	6
Total	Women	4.95	0	9.50	2.408	17
	Men	4.32	0	12.15	3.408	36
	Total	4.52	0	12.15	3.113	53

Sources: Frida, ForskDok, NIFU STEP Doctoral Degree Register and RRP. The sample includes the publications of the 53 selected researchers.*An article equivalent equals one scholarly article authored by one researcher: Articles (in scholarly journals or books) count as 1, monographs and doctoral dissertations count as 5. The figures are weighted for co-authorship by dividing the publications scores by the number of authors contributing.

Appendix 1 Journals

Table A 1 Journals in which the researchers included have published, 2004-2008

Journals	Level ^a	Total
Norsk Geografisk Tidsskrift	1	24
The Holocene	2	9
Geografiska Annaler. Series B. Human Geography*	2	5
GeoJournal*	2	5
AI & Society: The Journal of Human-Centred Systems and Machine Intelligence	1	4
Forum for Development Studies	1	4
Global Environmental Change	1	4
Mountain Research and Development Journal	1	4
Political Geography	2	4
Quaternary Science Reviews	2	4
Die Erde	1	3
European Journal of Development Research	1	3
Gender, Technology and Development	2	3
Geoforum	2	3
Children's Geographies*	2	2
Climate Policy	1	2
Climatic Change	1	2
Conflict Management and Peace Science	1	2
Contemporary Southeast Asia	1	2
Electronic Journal of Information Systems in Developing Countries	1	2
Entrepreneurship and Regional Development	1	2
Global and Planetary Change	1	2
Human Ecology*	2	2
International Journal of Strategic Property Management	1	2
Landscape research	1 and 2	2
Nordisk Samhällsgeografisk Tidsskrift	1	2
Norsk Geologisk Tidsskrift	1	2
The Canadian Geographer / Le Géographe canadien	1 and 2	2
The International Information & Library Review	1	2
Third World Quarterly	1 and 2	2
Tidsskrift for samfunnsforskning	1	2
Urban Studies	2	2
Africa*	2	1
Ambio	1	1
American Journal of Economics and Sociology	1	1
Annals of the Association of American Geographers*	2	1
Antipode	2	1
ASEAN Journal on Hospitality & Tourism	1	1
Boreas	1	1
Cartographica	1	1
Climate Dynamics	1	1
Climate Research (CR)	1	1
Communications of the Association for Information Systems	1	1
Critical Asian studies (Print)	1	1
Cultural Geographies*	1	1
Diedut / Sámi instituhtta	1	1
Earth and Planetary Science Letters	2	1
Environmental Science and Policy	1	1
Erdkunde	1	1
European Planning Studies	2	1
Geografiska Annaler	1	1
Geographical Journal	1	1
Geomorphology	2	1
Health Policy	1	1
Heimen	1	1
Housing, Theory and Society	1	1
Information Development	1	1
Internasjonal Politikk	1	1

International Journal of Climatology	1	1
International Journal of Educational Development	1	1
International Journal of Entrepreneurship and Innovation	1	1
International Journal of Entrepreneurship and Innovation Management	1	1
International Journal of Heritage Studies (IJHS)	1	1
International Journal of Political Economy	1	1
International Journal of Services Technology and Management	1	1
International Journal of Urban and Regional Research	2	1
International Organization	2	1
Journal of Community Informatics	1	1
Journal of Economic Geography*	1	1
Journal of Enterprising Communities: People and Places in the Global Economy	1	1
Journal of Enterprising Culture	1	1
Journal of Entrepreneurship	1	1
Journal of Housing and the Built Environment	1	1
Journal of International Development	1	1
Journal of Modern African Studies	1	1
Journal of Peace Research	2	1
Journal of Quaternary Science	1	1
Journal of Real Estate Literature	1	1
Journal of Rural Studies	2	1
Marine Policy	1	1
Maritime Studies	1	1
Michael	1	1
Mitigation and Adaptation Strategies for Global Change	1	1
Modern Asian Studies*	2	1
Nordiske organisasjonsstudier	1	1
Nordisk Museologi	1	1
Norsk Epidemiologi	1	1
Open learning	1	1
Quaternary Geochronology	1	1
Quaternary Research	2	1
Regional studies	2	1
Seminar.net : Media, Technology and Lifelong Learning	1	1
Service Industries Journal	1	1
Singapore Journal of Tropical Geography	1	1
Social & Cultural Geography (Print)	2	1
Sociologia Ruralis*	1	1
Social Policy and Administration	1	1
Sosiologi i dag	1	1
Systemic Practice and Action Research	1	1
Tidsskrift for kjønnsforskning	1	1
World Development*	2	1

Source: Frida and ForskDok. The sample includes publications of the 53 selected researchers.

^a Due to the annual level revisions a journal may be rated at both level 1 and 2, i.e. our institutions have published in a journal both when it was rated at level 1, and when it was rated at level 2.

* Indicates that these journals have changed level during the period 2004-2008, but the Norwegian institutions only published in them when they were at the indicated level in the table.

Appendix 2 Performance-based budgeting of Norwegian higher education institutions

Performance-based budgeting of Norwegian higher education institutions

Part of the state basic funding of Norwegian higher education institutions is based on performance indicators, comprising both education and research activities. In total, the research component accounts for about 15 per cent of the basic funding (most of this, but not all, is performance-based). The performance-based education indicators account for about 25 per cent of basic funding. The research component is the interesting one in our context – and particularly its publication score indicator (first implemented for the budget year 2006). The research component includes four indicators as shown in the table below. In total, 1.8 per cent of the basic funding in the sector is allocated on the basis of the publication scores (more for the universities and less for the university colleges).

Research indicators and their weighting

Indicator	Weight
Doctoral candidates	0.3
EU research funding	0.2
RCN research funding	0.2
Scholarly publications	0.3

Note: These are the present indicators and weights for the higher education sector. According to plans, a similar model will also be implemented for the institute sector.

The funding formula for publication activity includes two dimensions. First, articles in journals (ISSN-titles), articles in books and books/monographs (ISBN-titles) are given different weights. Moreover, publication outlets are divided into two levels in order to avoid an incentive to productivity alone. The outlets given extra weight are those defined to be the leading and most selective international journals, series and publishers (limited to about 20 per cent of the publications). The national councils in each discipline or field of research participate annually in determining and revising the highest level under the guidance of the Norwegian Association of Higher Education Institutions. The table below shows the relative weights given the different types of publications at the two levels.

Publication weights

Publication type	Outlets at normal level	Outlets at high level
Articles in ISSN-titles (journals)	1	3
Articles in ISBN-titles (books)	0.7	1
Books (ISBN-titles)	5	8

Note: Co-authored publications are shared among the participating institutions.

The formula only includes “scholarly publications”. Series in which more than two-thirds of the authors are from the same institution, for instance, are not included. There are plans for including other types of publications and forms of communication as well, but so far these have not been implemented. The definition is that a scholarly publication must:

1. present new insight;
2. be presented in a form that allows the research findings to be verified and/or used in new research activity;
3. be written in a language and have a distribution that makes the publication accessible to most interested researchers;
4. appear in a publication channel (journal, series, book publisher, website) that has routines for external peer review. (Source: “Vekt på forskning” English translation, UHR 2007).

Source: Box 4.1 i “Norwegian Development Research – An Evaluation”. Oslo, Research Council of Norway, 2007.



This publication may be downloaded
from www.rcn.no/publications

The Research Council of Norway
Stensberggata 26
P.O. Box 2700 St. Hanshaugen
NO-0131 Oslo

Telephone: +47 22 03 70 00
Telefax: +47 22 03 70 01
post@rcn.no
www.rcn.no

February 2011
ISBN 978-82-12-02889-0 (printed version)
ISBN 978-82-12-02890-6 (pdf)

Number of copies: 350
Print: 07 Gruppen
Design cover: Blanke Ark