Evaluation of the Centre for Development and the Environment (SUM)

November 1st, 2007

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1. Summary

The Centre for Development and the Environment (SUM) is an interdisciplinary research centre established with a mandate to conduct, coordinate, and stimulate research on topics related to development and environment, and also to provide teaching and knowledge dissemination in these fields.

SUM is funded in part through direct grants from the University of Oslo, and in part by grants from the Research Council of Norway and other external sources. University allocations have more than doubled since 2000, whereas external funding shows no clear trend. SUM was for several years very successful in obtaining PhD grants from the Research Council of Norway, but the centre has been negatively affected by the recent change in RCN policy with regard to individual PhD grants.

The evaluation committee finds that SUM compares reasonably well with corresponding institutions in terms of research *productivity*. Thus, in the most recent years (2005-2006) SUM comes close to the UiO departments of social anthropology and political science with regard to publication points per researcher. When it comes to *impact*, however, SUM seems to be less competitive. This may, at least in part, be due to the fact that SUM has a higher proportion of junior scholars than other institutions to which it has been compared in this report. We conclude that SUM has had a net positive effect on the overall *volume* of development research at the university. The net effect on *quality* is less clear. Within its own niche - research into the environment-development nexus - SUM's work complements research undertaken within university departments. In the field of environmental research at large, however, SUM has not made much of a difference. SUM has had some success in fostering cross- and interdisciplinary research within the domain of social sciences and the humanities, but does not have much to show for itself when it comes to the more demanding challenge of integrating natural and social science research.

SUM clearly fulfils the obligation to provide teaching at all levels, partly by offering its own courses and (sub)programs, partly by contributing to courses and programs run by other university units. We see the recent move to appoint a special coordinator for education as an important step to enhance quality. SUM has a fairly good record when it comes to creating and maintaining cross-disciplinary arenas and networks, particularly for students and PhD candidates. The mandate also instructs SUM to help coordinate and focus research undertaken within university departments and other academic units. This is a function that SUM has never been able to perform effectively.

The most important organizational development in the Oslo region over the past five years is the co-location of six environmental research institutes plus the Meteorology and Oceanography section of the UiO Department of Geosciences in a new building in the Oslo Innovation Centre complex, and the development of a framework for cooperation among these partners, known as the Oslo Centre for Interdisciplinary Environmental and Social Research (CIENS). In terms of volume and weight, CIENS stands out as the new centre of gravity for interdisciplinary environmental research. This development has, we believe, important implications for the future of SUM.

The committee considers two main options. One possibility is to adjust the mandate and organization of SUM better to its current profile and trajectory. More specifically, this would involve (1) focusing its mandate on development studies, including - as an important niche - the study of links between environment and development, and (2) recognizing that SUM's portfolio is dominated by social sciences (broadly defined), and therefore reorganizing it as a centre directly under the Faculty of Social Sciences.

The other and more ambitious option is to revitalize the original vision for SUM - within the context of CIENS. We see a very interesting potential for enhancing the value of SUM's expertise in development research - and particularly within its niche of environment-development linkages - in the context of the CIENS partnership. The committee therefore recommends this option. This recommendation is, however, *contingent* on a strategic decision followed by a concerted and sustained effort by the University of Oslo to develop further the CIENS partnership. In the absence of such a drive, we would recommend the former option.

The committee has briefly outlined the changes in the current statutes required to implement each of these two options.

2. The committee, the mandate, and the methodology

2.1. The committee

The Rector of the University of Oslo (UiO) has appointed a committee consisting of

- Arild Underdal, Professor, Department of Political Science, UiO (head)
- Annegrete Bruvoll, Head of Research, Unit for Energy and Environmental Economics, Statistics Norway

- Göran Hydén, Professor, Department of Political Science, University of Florida
- Nils Roar Sælthun, Head of Department, Department of Geosciences, UiO
- Gunnar Sørbø, Director, Chr. Michelsen Institute

to conduct an evaluation of the Centre for development and the Environment (SUM). Jo Thori Lind, Post doctoral fellow at the Department of Economics, UiO, acted as scientific secretary and Andreas Rosenberg, Senior Executive at the Department of Research Administration, UiO, acted as administrative secretary for the committee.

2.2. The mandate

The committee was given the following mandate:

1) To what extent has SUM managed to fulfil its mandate, that is, to act as a driving force for research on development and the environment, with regard to
   a) Research
   b) Teaching
   c) Application of knowledge?
2) What has SUM added to the research on development and the environment at UiO?
3) How is SUM's national and international reputation? How does SUM collaborate nationally and internationally? What potential for development does SUM have?
4) What is SUM's position with regard to recent organizational change in the field - such as the establishment of CIENS and other units - at UiO and nationally?
5) In what way have internal and external conditions, among these possibilities for financing and the possibility and interest in collaboration with SUM at UiO, affected SUM's possibility to fulfil its mandate?
6) Where should SUM be located organizationally? What alternatives do the committee envisage?
7) Does the evaluation suggest changes in SUM's mandate, and if so, what changes?

2.3. The evaluation process

The committee has had access to, and benefitted from, documentation prepared by SUM and the Department of Research Administration. Among these were a self evaluation conducted by SUM, strategic plans for the periods 2000-2004 and 2005-2009, recent annual reports, and the reports from the two previous evaluations, conducted in 1994 and 1999.

During two days, September 26 and 27, 2007, the committee conducted interviews with the following persons:

- Kristi Anne Stølen, Director of SUM
- Hans Christian Bugge, Head of the Board of SUM
- Desmond McNeill, former Acting Director of SUM
- Bente Herstad, former Director of SUM
- Dan Banik, Ingrid Nesheim, and Nina Witoszek, Researchers at SUM
- William Lafferty, Director of ProSus
- Mariel Støen and Irja Vormedal, PhD students at SUM
- Asbjørn Rødseth, Dean of the Faculty of Social Sciences, Knut Fægri, Dean of the Faculty of Mathematics and Natural Sciences, Mette Halskov Hansen, Vice Dean of the Faculty of Humanities, and Jon T. Johnsen, Dean of the Faculty of Law
- Jesper W. Simensen, Director, Division for Strategic Priorities, Department for Global Issues, The Research Council of Norway, and Inger-Ann Ulstein, Special Advisor, Division for Strategic Priorities, Department for Energy and the Environment, RCN.

In addition, the committee commissioned the Department of Research Administration to assemble more detailed data on publications, including impact analyses from ISI, some additional information about SUM's economic situation, and an overview of the past and current situation of similar centres associated with the other Norwegian universities.

3. Brief overview of SUM and its environment

3.1. SUM

SUM was initiated in the aftermath of the 1987 Brundtland commission. The centre was established in 1990, by merging three existing units: *Rådet for natur- og miljøfag*, *Senter for internasjonale utviklingsstudier*, and *Program for utviklingsforskning*. An important part of the mandate of the centre was to act as a coordinator and driving force for research on development and the environment within other academic units of the university. It seems to the committee that at that time, there was a widespread view that these topics were both very important and popular fields of research, so stimulating researchers to work on these topics would be a fairly straightforward operation, requiring only modest additional resources. The most important task was to coordinate and focus research within these fields. Therefore, it was believed, SUM could fulfil a very demanding mandate with only limited resources.

The centre grew to a fair size quite quickly, but had difficulties keeping senior staff, and the quality of the research output varied substantially. It seems that this led to some scepticism towards SUM among important potential partners, particularly within the natural science community. This created a range of difficulties, described in more detail in the earlier evaluation reports from 1994 and 1999. Both reports argued that SUM was quite far away from fulfilling its mandate. The 1999 report was clearly less negative than the 1994 report though, and both concluded that SUM's overall contribution was sufficiently valuable to warrant continuation as a separate centre.

SUM is organized as a centre reporting directly to the University Board. It is governed by its own Board where, among others, the five relevant Faculties are represented. SUM's current mandate, approved by the University Board January 26, 2004, is:

- *SUM is a cross-faculty centre with focus on cross-disciplinary research, networking, and coordination of research within the University of Oslo and with external agents. The centre should act as a driving force within the University and towards society and industry.*
- *SUM works with research, teaching, and dissemination on questions related to development and the environment, with main focus on the intersection between development and the environment.*
- *SUM teaches at all levels and provides courses to the programmes of associated faculties at the bachelor, master, and PhD levels.*

SUM's staff, excluding Professors II and master students, included 53 persons as of 2006. Of these, SUM reports that 9 were in administrative positions, making up 7 man years. Data from Database for statistikk om høgre utdanning (DBH) give a total of 8.5 man years employed in administration. The total composition of the staff is given in Figure 1, with a more detailed breakdown given in Appendix table 2. Of the scientific staff, only the two professors and one researcher have permanent positions. We find this a remarkably low number given the size of SUM.

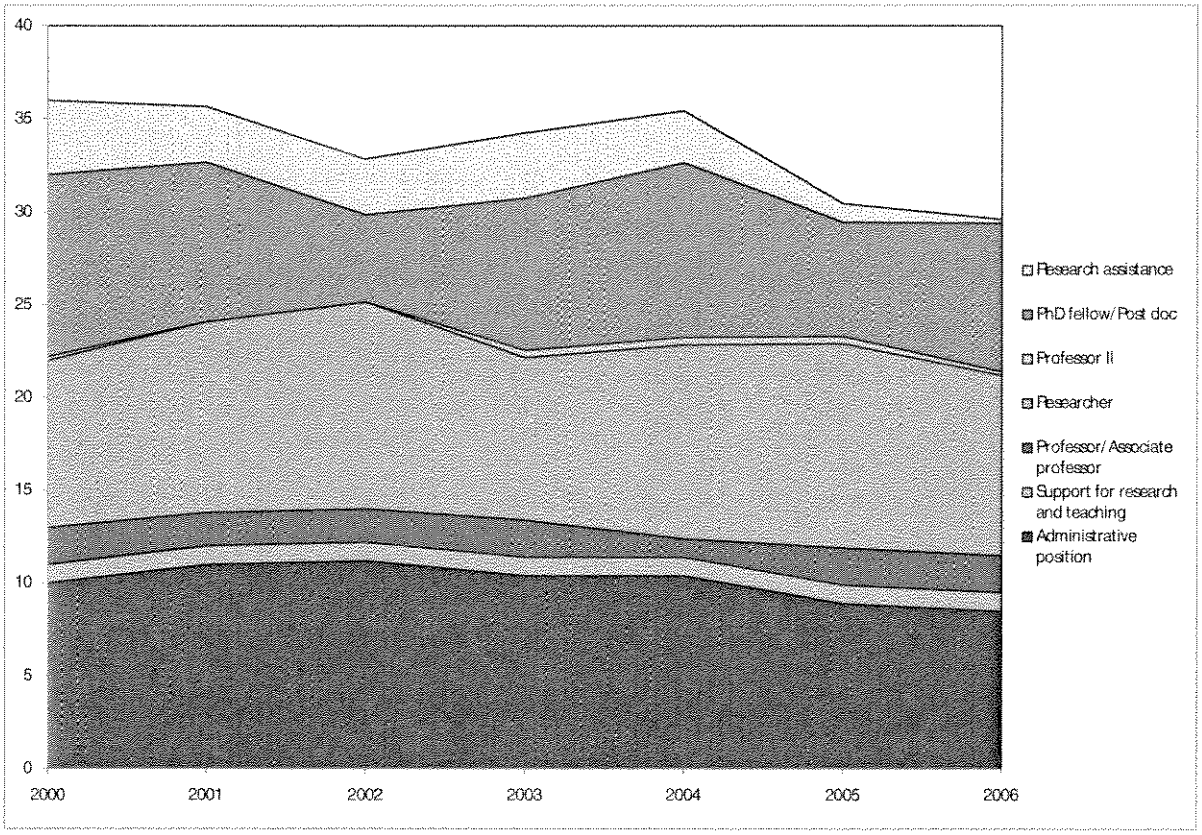


Figure 1 Composition of the staff at SUM

Source: DBH

SUM had in 2006 a budget of around 24 million NOK. The evolution since 2000 of revenues and the composition between financing through UiO and external revenues are shown in Figure 2. External revenues are variable, but show no marked trend. Financing through UiO, on the other hand, has more than doubled since 2000, and internal financing has gone from 21 % of total revenues in 2000 to 43 % in 2006.

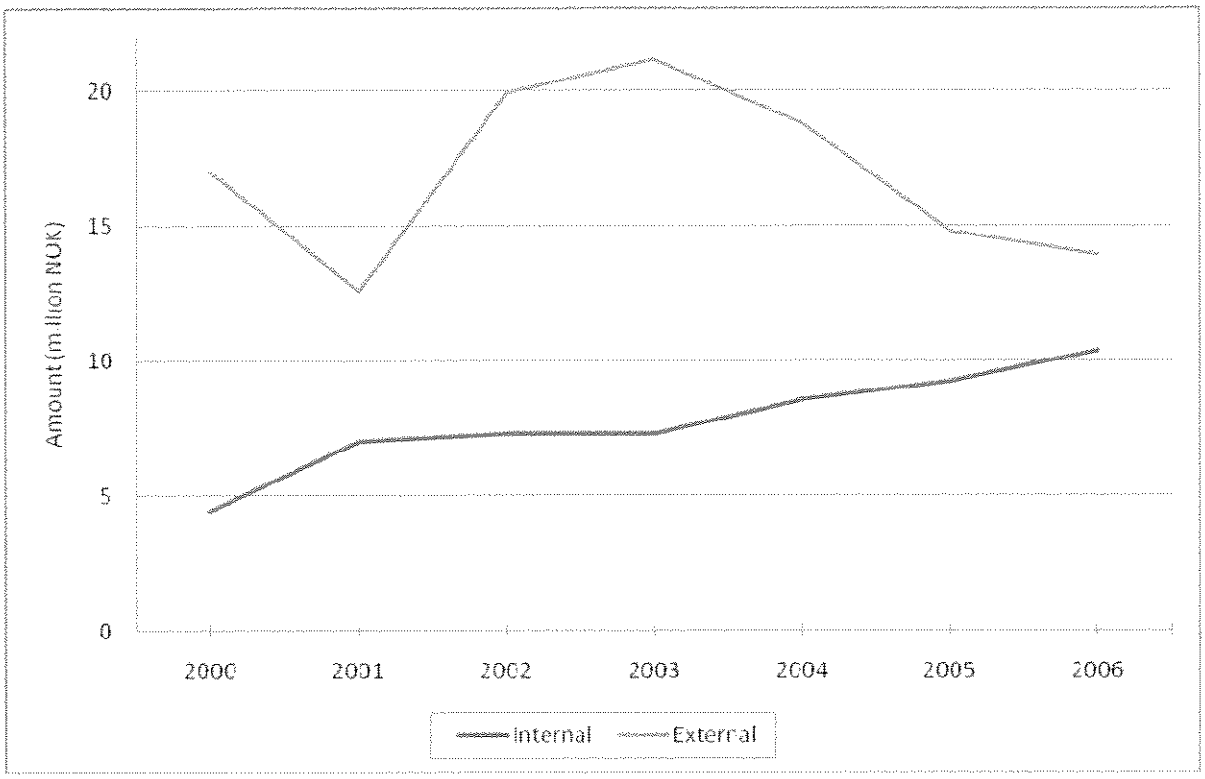


Figure 2 SUMs revenues by source

Source: Self evaluation, Annex 6

SUM has been quite successful in attracting money from the Research Council of Norway. Figure 3 shows the amount of funding received from RCN. In constructing this Figure, we have for each project taken the amount available and divided by the number of days the project was running. Adding over all projects, we get an estimate of the resources available for an average day. ProSus received a Strategic University Programme (SUP) grant of NOK 36.6 million running from 2000 to 2008. This grant is so much larger than the other grants received by SUM that the Figure also shows the situation without this grant. We notice a marked increase in the amount of funding during the 1990s, but then a levelling off and even a slight decreasing tendency during the 2000s. This seems in large part to be due to the organisational change in RCN whereby individual scholarships for PhD's have been abandoned in favour of transfers directly through the universities. This hypothesis is confirmed by the light grey curve in Figure 1, which shows funding for projects with a project length below 3 years. This curve excludes PhD grants, but also other long projects. This curve seems to be slightly increasing from 2000 to 2007, so there is no fall in revenue from grants for short projects. Finally, SUM has not worked particularly hard to attract grants from relevant research programmes on the environment. This is an area in which it might have been able to obtain additional funding from the Research Council.

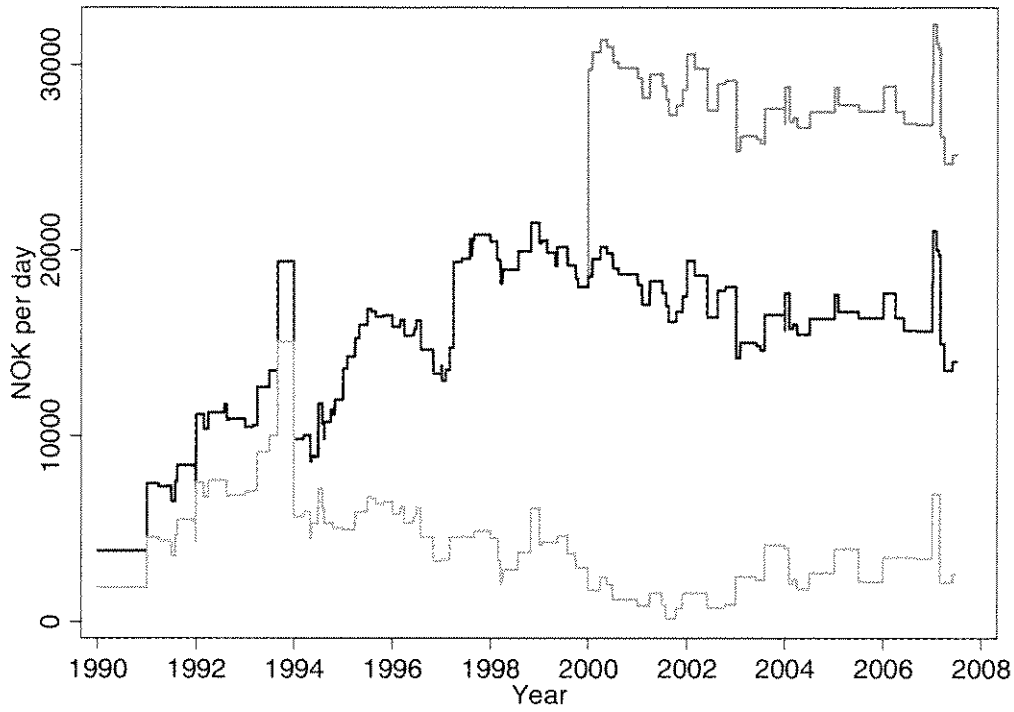


Figure 3 Funding from NRC by day

The dark gray line is overall funding per day, the black line funding excluding the grant for ProSus and the light gray line funding for projects with length less than 3 years.
Source: RCN

Another important source of funding, which also serves as an important quality indicator, is the success in obtaining grants from the EU.

Table 1 gives an overview of these. The first two projects were also coordinated by SUM, but we have no data on the exact amount that accrued to SUM specifically.

Finally, SUM had over the period 2000-2007 four projects for other departments than the Ministry of Education and Research.

Variation in external financing from one year to another is not unusual for research institutes, but the doubling of internal financing within a six-year period is quite unusual among such institutes in Norway. It has given SUM a financial stability that most institutes in the development research field do not come close to.

Table 1 EU projects where SUM have been involved

Project title	Project leader	Total grant (€)	Grant to UiO (€)	Start date	End date
Interdisciplinary Reasearch on Development & the Enviroment: An international workshop	McNeill, Desmond	29,981	29,981	1/1/2000	12/30/2000
Thematic Network: Strategies for Regional Sustainable Development, an Integrated Approach beyond Best practices	Lafferty, William	925,493	56,136	3/1/2002	2/28/2004
Sustainable economiv utilisation of wild South American camelids: Strategies for improving rural productivity in pastoral communities in Latin America: New Management systems of the S A Camelids	McNeill, Desmond	900,000	51,462	6/1/2002	10/29/2004
Environmental Policy Integration and Multilevel Governance	Lafferty, William	844,364	23,001	2/1/2006	1/30/2009
An Integrated Interdisclipinary Assessment in Four Twinning River Basins in Europe and Asia	Nesheim, Ingrid	2,489,650	184,000	7/1/2006	6/29/2009
Land Use Policies and Sustainable Development in Developing Countries	McNeill, Desmond	2,100,000	254,000	2/1/2007	8/1/2010

3.2. ProSus

The Program for research and Documentation for a Sustainable Society (ProSus) is an applied strategic research program established by the Research Council of Norway (RCN) in 1995. Its mandate is to provide targeted research and dissemination of knowledge on sustainable development. A particular focus is on Norway's follow-up of the Rio Declaration and Agenda 21.

From 2000, ProSus has been attached to SUM, and from 1.1.2006, ProSus has been formally incorporated into SUM so that by now it appears as one of the four research areas of the centre. ProSus initially had an annual budget of 5 million NOK funded by RCN, but RCN has decided to scale down ProSus starting in 2006, with termination planned for 2008.

The collaboration between SUM and ProSus has not been as productive as initially expected. One important reason seems to have been that ProSus found SUM's administrative regime less well suited to the needs of the program. The fact that there are few collaborative projects between members of

ProSus and other members of the academic staff of the centre also indicates that the two have not connected as well as one might have hoped for.

3.3. Similar institutions at the other universities

A Centre for Development Studies (CDS) was established at the University of Bergen in 1986. Later, three other centres were established and came (with the CDS) under a Program for Sustainable Development: the Centre for Environmental and Resource Studies, the Centre for International Health and the HEMIL Centre at the Faculty of Psychology. At some point during the mid-1990s, there was a plan to move the four centres together in the same building, but this plan was never implemented. Instead, there was a move to connect the centres closer to faculties. The Centre for Environmental and Resource Studies became much engaged in teaching at the Faculty of Science, perhaps so much that its rationale as a separate centre was increasingly questioned. It was closed down in 2005. The Centre for International Health is under the Faculties of Medicine and Odontology, has its own Master and PhD program, and is generally recognised as very successful. In 2005, it was decided to establish CIH as a regular institute, yet retaining the character of a centre (which implies e.g. a degree of autonomy when it comes to handling projects and economic matters). CDS has been closed down and its staff moved to Unifob and a new department there, Unifob Global. While CDS was under the Faculty of Social Science, the idea behind Unifob Global (just established) is to forge links, create cooperative ventures and build bridges across the boundaries of faculties. Unifob Global will also handle large projects such as the Nile Basin Initiative which is a guest researcher program involving visiting research fellows from countries of the Nile Basin. It remains to be seen how this new construct will function.

SUM had a sister centre in Trondhem called the Centre for the Environment and Development (Senter for miljø og utvikling – SMU). During the creation of NTNU, it was decided that the general rule should be do discontinue physical centres in favour of integrating these into the ordinary department structure. SMU was split into two separate networks. The development research part became the Programme for Development Cooperation, whose only employee is its head. The environmental part as continued as the Industrial Ecology Programme.

SUM's sister centre at the University of Tromsø is the Centre for Environment- and Development Studies (SEMUT). SEMUT has only three employees and is hence much smaller than SUM. It was for a while organizationally located under the Department of Research (Forskningsavdelinga), but was reorganized as a separate entity directly under the University Board with a status that resembles SUM's.

4. SUM's contribution to development and environment research at UiO

By its mandate SUM is expected to contribute to development and environment research partly through its own projects and publications, partly through stimulating, focusing, and coordinating research undertaken within university departments and other academic units. The research contributions are clearly the more important.

SUM's performance as a research unit is not easily compared to that of regular university departments. This is due mainly to incongruities in the composition of the research staff. Most importantly, SUM has had a relatively high proportion of young researchers, who may be as productive as their senior colleagues but in most cases will not yet have obtained the international visibility and recognition required to do well on citation scores. Moreover, positions at the same level of the academic hierarchy often differ with regard to "task profile". For example, the proportion of time set aside to research relative to time allocated to teaching will by and large be somewhat lower at university departments. Also the share of total output contributed by guest researchers and adjunct positions may vary significantly. To be able to build a first comparative cut on official DBH data, which provide more complete and valid list of publications than international data bases such as ISI, we therefore include only what might be called "pure" SUM contributions, excluding publications by guest researchers, adjunct professors (Professor II), and retired researchers. This gives us Table 2 below:

Table 2 Publications at SUM over time

	Publication points	Man years	Publication points per man year
2002	15.00	20.7	0.72
2003	28.58	22.8	1.25
2004	16.20	24.1	0.67
2005	24.45	20.5	1.19
2006	19.32	20.1	0.96

Source: DBH

The figures for SUM compare reasonably well with average publication levels at Norwegian universities. Thus, if we look at the two most recent years, the average publication scores per academic "man year" were .93 for the University of Oslo, .83 for the University of Bergen, .68 for NTNU, and .62 for the University of Tromsø. Since publication levels and patterns vary significantly among disciplines and academic units, it would arguably be more appropriate to match SUM against "corresponding" departments. In such a comparison, SUM (with an average of 1.08 for 2005-2006)

comes fairly close to the scores obtained by the UiO departments of social anthropology (1.27) and political science (1.20).

The recently published evaluation of Norwegian development research provides interesting productivity and impact data for research published in 63 journals in which "research relevant to development" is regularly published. The data cover the period 1991-2005. In Table 3 we have compared productivity and impact scores for SUM to scores for four university departments and one major research institute (the Christian Michelsen Institute - CMI). Looking, first, at researchers who can be considered development studies specialists, we find SUM at roughly the same level as CMI with regard to productivity, but significantly behind in terms of impact (citations). Comparison with "corresponding" university departments is more difficult since the number of faculty members devoting most of their research time to development studies is very low. What seems clear is that, again, SUM does better with regard to productivity than impact. The lower citation scores may in some instances be explained by differences in the "centrality" of publication channels. Thus, the expected citation rate for articles in the journals in which SUM has published development research is lower than the corresponding rates for the two UiB departments and also for CMI. SUM's publication channels do, however, compare well to those of the two UiO departments. Here, we find that the average score of publications by SUM researches fall slightly below (-.7) the expected level (i.e. average for the journals concerned), while both university departments do better (+3.7 for the Department of Political Science and +1.4 for the Department of Social Anthropology). This picture does not change fundamentally if we include also researchers who have published in the field of development studies but devote most of their research time to other areas.

Table 3 Productivity and impact: SUM compared to five other institutions

Research unit	Researchers	Articles	Sum citations	Citations per article	Articles per researcher	Citations per researcher
UiO: The Centre for Development and the Environment	*18 (26)*	*11*	*20*	*1.8*	*0.61 (.42)*	*1.11 (.77)*
UiO: Department of Political Science	1 (10)	6	35	5.8	6.00 (.60)	35.00 (3.50)
UiO: Department of Social Anthropology	0 (8)	3	8	2.7	- (.38)	- (1.00)
UiB: Department of Social Anthropology	2 (15)	2	9	4.5	1.00 (.13)	4.50 (.60)
UiB: Department of Comparative Politics	2 (4)	1	4	4.0	0.50 (.25)	2.00 (1.00)
CMI - Chr. Michelsen Institute	35 (44)	23	124	5.4	0.66 (.52)	3.54 (2.82)

Researchers is the number of researchers with main position at the institution who devote at least half of their research time to development research. Figures in parenthesis include also researchers who have at least one publication in the field of development studies but devote most of their time to other areas. Publication and staff data cover the period 2001-2005. Comparisons with a more complete list of institutions can be fond in Appendix table 1.
Source: Research Council of Norway.

As indicated above, the lower impact scores for articles published by SUM researchers may, at least to some extent, be explained in terms of differences in the composition of the scientific staff. SUM has a substantially higher proportion of "junior" staff (83%, if we focus on "specialists" only) than any of the other institutions included in Table 2 (the corresponding figures for the UiO Faculty of Social Sciences is 57% and for CMI only 17%). Junior researchers may be as productive as their senior colleagues, but it takes time to acquire the visibility and recognition required to do well on citation scores. We have looked more specifically at some individual impact scores in the two categories, and the overall impression is that - controlled for staff composition - SUM does not seem to deviate substantially from "corresponding" departments at Norwegian universities.

Publications of SUM researchers are typically representative of a qualitative or "soft" science approach. With a few exceptions, the preferred outlets have been general social science journals dealing with development and/or environment issues. Only a small number of articles appear in journals that use "hard science" criteria for accepting papers. Whether a cause or effect of the centre's small number of researchers in natural sciences and economics, it is evident that the prevailing image in the broader Norwegian research community is that its comparative advantage lies in providing social science insights that are ignored in more discipline-oriented research or for some other reason not incorporated into mainstream social science models.

In Table 3 we have limited our search to articles listed in the ISI database. A considerable amount of SUM's work has been published through other channels. The most striking trend is a significant increase in the number of articles in ISI-indexed journals. This in itself is a positive indication of increasing international visibility. Moreover, the number of citations per article and the mean impact are both higher in the 2000s than in the 1990s, with a peak of citations in the 2001-2003 period.[1] Total impact also rose, primarily as a consequence of the increase in the number of publications. We therefore conclude that with regard to these indicators, SUM has been on a positive trajectory.

Table 4. SUM articles listed in the ISI database

Period	Number of articles	Citations		Impact	
		Mean	Total	Mean	Total
1990-94	6	0.67	4	0.55	2.75
1995-97	1	2.00	2	1.25	1.25
1998-2000	8	0.38	3	0.52	3.65

[1] A small number of "outliers" account for this peak. The only four articles with more than ten citation each were published in 2003. These were all published in biology or economics journals, with higher expected citation rates than journals in (other) social sciences and the humanities. Moreover, the unusually high impact scores in the early 2000s can be attributed largely to one single researcher.

2001-03	18	5.22	94	1.10	19.76
2004-06	22	0.86	19	0.95	19.91

"Mean" refers to the average number of citations and impact score per article. "Total" refers to the sum of citations (impact scores) for each time period.
Source: ISI Web of Knowledge

Overall, the analysis of bibliometrical indicators tends to confirm the impression left by qualitative and less systematic assessments, that (a) SUM compares reasonably well with corresponding institutions in terms of productivity, but (b) have relatively few researchers and publications that are widely quoted by the international research community.[2] The latter seems, at least in part, to be due to the fact that SUM has a much higher proportion of junior scholars than any of the institutions to which it has been compared in this report.

SUM was charged with the mandate of undertaking and promoting research in a broad field that the university itself as well as the government wanted to upgrade. SUM was, in other words, expected to be *different* from "corresponding" university departments. If we consider, first, the field of development studies - which is where we find most of SUM's activities - data for the period 2001-2005 indicate that SUM had roughly the same number of "specialists" (18, including junior as well as senior staff) as the UiO Faculty of Social Sciences as a whole (21). If we look at the number of articles in journals regularly publishing development research over the period 1991-2005, we find the relative distribution between SUM and the Faculty of Social Sciences to be in the order of 1:3.[3] Now, we do not know to what extent and in which direction the figures for university departments would have changed in the absence of SUM. If we assume that the funding channelled directly to SUM from the university had instead been allocated to "corresponding" departments as base grants, and that such a reallocation would not have affected the *proportion* of resources allocated by these departments to development research, we can conclude that SUM has had a *net positive effect* on the overall *volume* of development research at UiO. The net effect on *quality* is less clear. The same conclusions obtain if we make what seems to be a more realistic assumption saying that the effect of SUM on the relative priority given to development research by these departments themselves is neutral or weakly negative, while SUM has contributed positively to attracting external funding and particularly to the recruitment of young and promising scholars to the field at large.[4] At the level of PhD grants, SUM's record in

[2] For some of the senior researchers with relatively high citation scores - in particular Arne Næss and William M. Lafferty - work published during their "pre-SUM" careers make up substantial proportions of the total.

[3] Since this time interval includes also SUM's build-up period, we would expect this ratio to be significantly lower than the current ratio for development studies specialists.

[4] The former component of this assumption builds on the premise that, overall, SUM has made a slightly greater impact by taking responsibility for tasks that the departments concerned would otherwise have given higher

obtaining RCN funding stands out as remarkably good. Particularly within its own niche - research into the environment-development nexus - SUM's work complements research undertaken within university departments. Its ability to make inroads in the field of environmental research more generally has, however, been quite low, and failed to meet the ambitions expressed in its original mandate.

SUM has been charged also with fostering cross- and interdisciplinary research within its field. The committee concludes that in this respect SUM has had some success *within* the HUMSAM domain, and has also made efforts to enhance our understanding of the general challenges involved. However, when it comes to the most complex challenge - that of integrating natural sciences with research in the social sciences and the humanities - it has largely failed. Success within the HUMSAM domain can be seen partly in projects and studies crossing disciplinary boundaries, partly in the recruitment of (young) scholars with an educational background that probably would have been harder to accommodate within a mono-disciplinary department. There are, to be sure, also some individual success stories of constructive integration of natural and social sciences to be told - one coupling biology and social anthropology to study plant diversity and its use in a neo-tropical rain forest inhabited by migrants. In an overall assessment, however, SUM's record in this regard is not impressive, and significantly weaker than that of another interdisciplinary centre established at UiO at almost the same time: Center for Climate and Environmental Research - Oslo (CICERO). It may be instructive to pause briefly to explore why the latter has more to show for itself in terms of research crossing the divide between natural and social sciences. One important part of the explanation is no doubt the fact that CICERO was able to start with a "clean slate", recruiting people on its own premises, while SUM "inherited" activities that had already been established and in some cases acquired a muted reputation, particularly within the natural science community, which found that some of the work failed to meet their professional standards. Another factor seems to be that CICERO can concentrate on a more narrow and specialised domain - climate change - that has helped provide a common focus. A third reason seems to be that CICERO from the very beginning achieved a better cross-disciplinary "fit". This "fit" is in part a matter of fortunate matching of the profiles of individual scientists, but it is also a function of the *configuration* of expertise within the academic staff. Interestingly, at CICERO economists - a very small group at SUM - seem to have served as important intermediaries between fellow social scientists and colleagues in the natural sciences, thereby facilitating joint projects as well as a more general interdisciplinary dialogue.

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priority than by inspiring faculty at the same departments to engage in development research or by enhancing their performance by inspiring, focusing, or coordinating research activities.

5. SUM's success in fulfilling its mandate

5.1. Research - coordination and networking

An assessment of SUM's own research activities has been provided in chapter 4. It remains, however, to consider other research-related tasks specified in the mandate, more specifically SUM's role as a "driving force" for research on environment and development within the university, and in coordinating research undertaken within departments and other academic units.

Overall, we find that SUM has little to show for itself in terms of its coordination mission, but has been much more successful in providing cross-disciplinary arenas, conferences and other events, particularly for students and PhD candidates. The representatives from the faculties interviewed by the committee evaluated SUM's role as research coordinator as ranging from "essentially zero" to "to some extent". There seem to be several reasons why SUM never managed to fill this role as initially envisaged:

- Much through activities that it inherited, the centre initially gained a somewhat unfavourable reputation. As a consequence, its status within the university community suffered and made it particularly hard to claim the role of coordinator vis-a-vis research undertaken elsewhere. Its reputation has improved substantially over the years, but first impressions tend to leave their marks, and did so for a long time in this particular case.

- The centre has never had the resources required to serve as an integrating "engine". This is particularly evident vis-à-vis the natural sciences. By and large, SUM has also had a limited repertoire of tools for providing coordinating services. A somewhat larger number of joint positions may have been an effective instrument, but the modest efforts that have been made to involve university faculties in such deals have in most cases failed.

- With a few exceptions at the level of individual faculty members, the demand from the research community itself for research coordination services from SUM has been stable at a level close to zero.

SUM has a much better record when it comes to creating and managing arenas and networks for researchers and/or students and researchers to meet and exchange ideas and views. U-landsseminaret, a seminar series arranged jointly by SUM and SAIH, has for a long time attracted a lot of attention among the students and has probably enhanced interest in environment and development research. The

recent establishment of the Arne Næss Chair has also generated activities that have brought natural science faculty and HUMSAM scholars together, and attracted considerable public attention also outside the university. SUM has played an important role in hosting and coordinating networks, such as the Network for Asia Studies and the Local Politics Network. A number of ad hoc conferences and other events - some of which staged by PROSUS - have also been quite effective in calling attention to important challenges and stimulating interest in environment-development studies. Adding up all this, we conclude that SUM has been quite successful in creating and managing cross-disciplinary arenas and networks for students as well as researchers.

5.2. Teaching

The mandate instructs SUM to provide teaching at all levels. SUM clearly fulfils this obligation, partly by offering its own courses and (sub)programs, partly by contributing to courses and programs run by other university units (in recent years the Department of Political Science seems to have been the main "customer"). SUM regularly offers three courses at the undergraduate level (adding up to 40 credit points), a Master specialization program in Culture, Environment, and Sustainability (with the Faculty of Humanities), and a Research School for PhD students. SUM currently has 11 PhD students under its own "roof", with more attending seminars, lectures by visiting scholars, and other activities. SUM also provides scholarships for a varying number of master students writing their theses at SUM.

Cross-disciplinary teaching has its own challenges, and some of the undergraduate courses offered by SUM have previously been criticized for being fragmented and appearing more like a seminar series, and also for prioritizing scope over depth. The latter seems in part to explain the muted enthusiasm shown earlier by some departments for including these courses into their own programs. We see the move recently made by SUM to appoint a special coordinator for education as an important step to strengthen its role in teaching. Overall, we conclude that SUM clearly fulfils this part of its mandate, and that its overall contribution to UiO education within the field of environment-development studies has increased significantly in recent years.

5.3. Dissemination of knowledge

Some staff members - Arne Næss and Nina Witoszek being prominent examples - have been very active and highly visible in the public sphere and contributed to public debate over a fairly wide range of topics, some of which central to SUM's mission, others more peripheral. SUM - and even more so PROSUS - can point to several outreach activities targeted at a more specific audience. SUM keeps close links to relevant ministries, NORAD, and some international organizations but compared to other development research institutes SUM seems less interactive with - and therefore also less

dependent on - the policy community. As far as we can determine, only a few members of the academic staff have had significant direct contact with industry. This no doubt reflects SUM's conception of its own "organizational essence" - as an independent centre for problem-oriented and cross-disciplinary research, teaching and outreach, leaving consultancy work and direct involvement in operational activities to others. The representatives of the Research Council of Norway by and large expressed satisfaction with SUM's performance in this role.

6. SUM's reputation nationally and internationally

The recently concluded evaluation of development research in Norway did not conduct assessments of particular institutions but did identify features of this setting that are relevant to this evaluation of SUM. The following points seem to be of particular relevance: (1) the need for more funding from the Research Council for independent research; (2) the importance of longer term allocations of funds for strengthening individual institutions; and (3) the relatively competitive position of the institute sector when compared with academic departments.

As a research centre under the University of Oslo, SUM is of course not typical of the institute sector at large. It enjoys a base allocation that has been growing and has allowed its researchers to engage in projects without the same degree of pressure to finish as the case is in many of the institutes outside the university sector. Researchers at SUM have also been able to take advantage of their close connection to the University. This includes access to a first-rate university library as well as interaction with other scholars in relevant fields. This institutional security and close connection to the scholarly world are reasons why researchers at SUM have been able to be quite prolific authors of research publications. And their products have often been published in good or very good peer-reviewed journals as the statistics presented in this report indicate.

Its connection to the University of Oslo, however, has also had another consequence that may not be as positive. Unlike other independent research institutes, which operate independently, e.g. Chr. Michelsen Institute or CICERO, SUM is not particularly well known as an institution. This certainly applies to the situation outside Norway. While senior individual researchers are internationally recognized names, their affiliation to SUM is largely inconsequential for their reputation. For example, many of the books produced by these senior scholars – and also some by junior colleagues – can be found in the University of Florida Library. When academics working in the field of development research at the same university were asked if they had heard of SUM (or the name as translated into English) only one out of twelve respondents knew of the Centre.

There is little doubt that the researchers at SUM – both senior and junior – have produced not only a large number of publications, but also many that are good or very good. In comparison with other development research institutions in Norway SUM is competitive when it comes to the academic quality of its publications. The high level of productivity, however, has not resulted in publications that can be described as truly excellent or "cutting edge". Whether quantity affects quality in a negative way is impossible to establish but it is nonetheless worth pointing out that it is hard to find publications that can be rated as truly excellent by international standards.

7. Organizational change in the field of environment and development research

The most important organizational development in the Oslo region over the past five years is the co-location of six environmental research institutes/centres plus the Meteorology and Oceanography section of the UiO Department of Geosciences in a new building within the Oslo Innovation Centre complex, and the development of a framework for cooperation, known as the Oslo Centre for Interdisciplinary Environmental and Social Research (CIENS). The institutes and centres involved are the Norwegian Meteorological Institute (met.no), the Norwegian Institute for Air Research (NILU), the Norwegian Institute for Water Research (NIVA), the Norwegian Institute for Nature Research (NINA), CICERO, The Norwegian Institute of Urban and Regional Research (NIBR), and the Institute of Transport Economics (TØI). The former three (and the UiO Geosciences section) are essentially natural science units, while NIBR and TØI concentrate on social science research and CICERO is involved in both. Even by international standards, this is a relatively large concentration of environmental research activities, opening up new possibilities for joint projects and other activities crossing traditional divides between "basic" and "applied" research and also between natural and social sciences.

The CIENS partners invited SUM to join. Their interest in SUM seems to have been based mainly on a wish to strengthen competence in development studies in order to open new frontiers for environmental research. Another motive seems to have been to strengthen social science research within the CIENS partnership. SUM declined this invitation, and our interviews with SUM management and staff indicate that there are only a few regrets today. Three main reasons are given for not joining CIENS. One - and perhaps the most important - is the fear that a partnership with institutes oriented primarily towards applied research would move SUM towards similar kinds of work, and perhaps even consulting activities. Another and closely related reason is the fear that

integration into CIENS activities would pull SUM away from the university, thereby jeopardizing cooperative relationships that have been developed over the years with regard to teaching as well as research, and - in a worst case scenario - also the financial support provided by the university. Finally, SUM seems to have feared that its portfolio in development and environment-development studies would have be changed significantly in order to fit the concentration of the CIENS institutes on environmental research "proper".

We find these concerns legitimate and at least to some extent appropriate, but we also believe that they reflect an unnecessarily defensive orientation on the part of SUM. We will have more to say about this in Chapter 9, but one important observation can be made already at this point. The establishment of CIENS has created a new and potentially very potent framework for cooperation between UiO and other CIENS partners in the field of environmental research. SUM may well be able to contribute to the field through specific projects and other activities, but the centre of gravity for environmental research and for fostering cooperation and interdisciplinary research in this field now definitely lies elsewhere. In terms of volume and weight, SUM cannot - in its present format - be a major player in environmental research, nor can it serve as the main instrument for UiO in developing cooperation with other environment research institutions. This applies even within the social science domain, particularly with regard to economics. For Department of Economics faculty involved in environmental research other institutions - including the Frisch Centre for Economic Research, and Statistics Norway - are much more important partners. In these respects, the establishment of CIENS has changed SUM's task environment fundamentally.

Interesting and important developments have taken place also elsewhere. On the Scandinavian scene, the establishment of the Stockholm Resilience Centre is particularly noteworthy. This centre integrates University of Stockholm units with the Beijer Institute of Ecological Economics and the Stockholm Environment Institute, and builds on substantial and long-term funding from the Foundation for Strategic Environmental Research (MISTRA) . On the global scene, the further development of the so-called global change programs and the ambitious effort to join forces under a new and comprehensive Earth System Science Partnership to some extent influence research agendas of a number of institutions around the world. Neither of these developments (need) affect SUM directly. The Stockholm Resilience Centre stands a very good chance of becoming recognized by the international research community as a centre of excellence, but the core of its research agenda does not overlap directly with that of SUM. SUM has not been much involved in any of the global change programs, and with its current profile and strategy there is no compelling need to change that position.

8. Conditions and possibilities for fulfilling the mandate

The analysis summarized in Chapters 4-7 suggests two important implications. First, the initial ambitions for SUM as *coordinator* of research undertaken within university departments and other academic units were overly ambitious. It seems fair to say (a) that SUM never had the means to fulfil this part of the mandate, and (b) that the demand for such services from departments and faculties has been largely absent. It seems equally clear that even a significant increase in base grants from the University would not have been sufficient to change that situation fundamentally. Wisely used, more resources may have helped SUM enhance its "weight" and status within the research community. There is, however, a more fundamental constraint that cannot be overcome through more generous funding. Once we get beyond technicalities, coordination inevitably involves some division of labour and some kind of priority-setting. And once we get beyond individual projects, the latter becomes a task for governing bodies and leaders, not for a research unit. SUM can contribute substantially to creating and managing arenas and networks and thereby foster cooperation, but it cannot fulfil the more general role of coordinator as originally envisaged. The mandate should be adjusted accordingly.

Second, the developments described in Chapter 7 suggest that SUM can not - at least not without a fairly radical reorientation - be a major player in environmental research at large, nor serve as the main tool for the University in developing cooperation with other institutions in this field. It does, however, have a unique and important role in studying the environment-development nexus. It also has a fairly comprehensive portfolio in development research more generally. As far as we can determine, this is a profile that makes sense for the University at large. The mandate should reflect this situation.

9. SUM's future mandate and organization

The evaluation committee has considered four main options for the future.

Option I: Termination of SUM itself

The option of *terminating* SUM as a distinct organizational unit, with important activities taken over by some other unit(s) seems to implicitly have been left out of the mandate formulated for this evaluation. The committee, however, believes that it should be considered side by side of other options.

There are at least three circumstances under which this might be the best solution for the university. One would occur were the University of Oslo to change its strategic priorities so that (most of) the

funding now allocated to environment and development research were shifted to other fields. This is a matter far beyond the mandate of this committee to consider. What follows is therefore premised on the assumption that no such change will be made over the next 5-10 years.

Another circumstance in which termination might be the best solution would be one where the centre had already accomplished the mission for which it was established. This certainly does not apply to SUM; the field(s) of research focused in its mandate is becoming increasingly important, and the need for sustainability research and teaching transcending established disciplinary divides seems more pressing than ever.

A third situation in which termination might be the optimal solution would be one where the centre has largely failed to "add value", and where the probability of significant improvement seems to be low. "Success" and "failure" in this context would not be merely a matter of scores on standard quality and productivity indicators, but as much a question of the extent to which the centre *complements* and/or *integrates* activities undertaken by corresponding faculties and departments. Our assessment in chapters four and five concludes that SUM's success in fulfilling its mandate ranges from poor to very good. Despite low scores on integrating natural and social science and on coordinating services, we find that the centre does contribute to broadening and strengthening the university's research, teaching, and outreach activities in important fields. SUM does so partly through its own programs and projects, and partly by serving as an arena for cross-disciplinary communication and as a stimulating setting particularly for PhD students and other young scholars (some of whom came to SUM with an interdisciplinary background that may well have been less appreciated by a regular department). Some of its projects could most likely have been undertaken equally well within a disciplinary setting. Moreover, the university could probably have gotten as much - if not more - research with international impact from reallocating most of the funding that goes to SUM to corresponding departments. However, as indicated in chapter 4, most of that funding would in that case almost certainly have been channelled to other fields. In particular, development studies and research on environment-development links would most likely have suffered. Moreover, for a classical university organized mainly along disciplinary lines, it is important to have internal mechanisms for transcending established boundaries in research as well as teaching and "outward oriented activities". The committee concludes that SUM does serve as such a mechanism. We even believe that there is an interesting potential for enhancing this role in the future (see option IV below).

Option II: Steady course

Since SUM plays a useful role in its present shape, one option is simply to keep SUM's mandate and organization unchanged, at least in terms of substance. The self evaluation report, as well as most of

the interviews with leaders and staff, indicates that this is the option preferred by SUM itself. The committee does, however, believe that the development of the centre itself - seen in the context of important changes in its task environment - calls for serious consideration of alternative options. At the very least, the lasting discrepancy between the mandate and the actual pattern of activities - most notably the heavy emphasis on development studies and the failure to serve as coordinator for research activities of departments and other university units - needs to be addressed. SUM does not have the resources and tools required to serve its coordinating function effectively. Moreover, demand for its coordinating services seems to be largely absent within the faculties and departments concerned. Combining these two observations, the committee recommends that the mandate be adjusted to "relieve" SUM of a function it has not and can not effectively perform, given that the University finds the remaining activities worth funding. Furthermore, with several major environmental research institutes co-located in a new building on the extended campus, and with the establishment of CIENS as a framework for cooperation including also the University of Oslo, we see no realistic prospect of SUM in its current shape acting as a significant player in fostering environmental research integrating natural and "HUMSAM" sciences within the university. Nor can it be the most effective instrument for developing cooperation between the university and environmental research institutes. SUM may well continue to contribute through individual projects of high quality, and the centre can still have an important niche in improving our understanding of the environment-development nexus. But for environmental research more generally, the centre of gravity definitely lies elsewhere. The committee therefore recommends that, even if the "steady course" option is chosen, the mandate be adjusted to respond to these changes in the task environment.

Option III: Adjusting mandate and organization to its current profile

One way of doing so would be to focus SUMs mandate on development studies, including - as an important niche - the study of links between environment and development. This would be the easy way out, as it is essentially a matter of adjusting SUM's mandate and strategies to its current profile. If this option is chosen, the committee sees no compelling reason for keeping SUM as a unit reporting directly to the University board and the Rector. As defined by the Research Council of Norway, and as practiced by SUM itself, development research falls largely within the domain of the social sciences, albeit with contributions also from a wide range of other disciplines. Moreover, at this stage SUM is no longer an infant, pioneering venture. With a portfolio dominated by social sciences (broadly defined), and relieved of coordinating functions it cannot effectively perform, the "academic home" of the centre would be under the Faculty of Social Sciences. It is, however, important to preserve SUM as an inter- and multidisciplinary centre. SUM adds value not by doing disciplinary research and teaching better than the corresponding departments, but by engaging in complementary and cross-boundary

activities. In this model, SUM will therefore become a centre directly under the Faculty board and the Dean, along with ARENA and TIK. It will be governed by its own board, including members also from other faculties (and representatives of staff, students, and the outside world). The Director will take part in regular "leaders' meetings" on equal footing with Heads of departments and other centre leaders. Day-to-day interaction among researchers would be facilitated by moving SUM to the Eilert Sundt complex, but this seems not to be a realistic option for the immediate future. The change in mandate and organizational status will not in itself imply a change in its overall budget, nor in the internal allocation of resources for different functions (research, teaching, and outreach). With more frequent and regular contact with faculty and department leaders, SUM may, though, be invited to take a more active role in the development and running of study programs within its domain. Moreover, SUM may play an active role in the development and management of new interdisciplinary networks or programs, such as the new network proposed for Latin American studies or a new centre or program for African studies. The funding of such new crosscutting ventures would be a matter for the university at large, not merely for the Faculty of Social Sciences.

Option IV: Revitalizing the original vision - in the context of CIENS

There is, however, also a more ambitious option that deserves to be seriously explored. Paradoxically, the establishment of CIENS seems to create a new window of opportunity for SUM to revitalize the vision of its founders, in the context of a new partnership. With a wide range of environmental research concentrated in the new Oslo Innovation Centre building, and with a cooperative framework involving also the University of Oslo in place, the value of SUM's expertise in development research - and particularly its rather unique expertise in environment-development links - may well increase. Also the kind of sustainability research championed by PROSUS might be revitalized in a such a setting. For the latter, possibilities of developing new links with science and technology, possibly involving SINTEF as a partner, seem particularly exciting. To avoid misunderstanding, the committee would like to emphasize that pursuing these opportunities would not be a matter of converting SUM into another environmental research unit. On the contrary, SUM can best contribute by providing expertise that is *different from* and *complementary to* that provided by other CIENS partners (and university departments). It can do so by, inter alia, bringing models and propositions from development research to bear on the study of environmental change and environmental policy, and by further strengthening its own grasp on the environment-development nexus. Nor would it be a matter of converting SUM into a unit devoted to short term contract research. SUM would remain a university centre in fact as well as in form, and contribute to joint activities in that capacity.

9.1. Assessment and recommendation

The evaluation committee considers Option IV to be the most exciting, but also the most demanding and risky. It would require a strategic decision followed by a concerted and sustained effort by the University of Oslo to develop CIENS further as a framework for cooperation within environmental research in Oslo. Such a drive should be designed also to explore possibilities of developing cooperation with SINTEF over sustainable development problems. It need not involve substantial reallocation of budgets on the part of the university. A combination of intellectual and entrepreneurial leadership, seed money to facilitate the development of joint projects, and moves to increase flexibility for, e.g., temporary co-location of small research teams, could be sufficient to make a significant difference. (To the extent that these efforts succeed in generating new activities that attract external funding, the distribution of resources may, though, change over time.) At least during the initial stage such a concerted effort will require active support and encouragement from the Rector and from the Deans of the faculties most directly affected (MN and SV). In this scenario, the committee would see SUM remaining directly under the University board for a limited transition period, simply to ensure sufficient flexibility on the part of the university while the role of the centre in the context of CIENS is being explored and worked out. With SUM retaining its current orientation towards development research, with the study of environment-development links as a particular and important responsibility, it can then join the Faculty of Social Sciences, with a mandate reflecting its new role in the CIENS partnership. SUM would become a partner in CIENS, at least in so far as research and other academic activities are concerned. Cooperation with other CIENS partners would benefit from having SUM in the same building, but co-location is not a critical requirement, and may no longer be a practical option. Space may, though, be found in other parts of the Oslo Innovation Centre complex.

The committee recommends option IV. This recommendation is, however, *contingent* on a strategic decision followed by a concerted and sustained effort by the University of Oslo to develop further the CIENS partnership. In the absence of such a drive, the committee would recommend Option III.

9.2. Suggestions for changing the mandate

Below we outline the changes in the current statutes required to implement Option III or IV as described in Chapter 9. Only paragraphs in which we see a need for *substantive* changes have been reformulated, and only a Norwegian text is provided.

Option III. Adjusting mandate and organization to current profile

§ 1 Senterets formål og finansiering

SUM er et universitetssenter som har som overordnet formål å drive tverrfaglig forskning, undervisning og formidling om utviklingsspørsmål, med skjæringsfeltet mellom utvikling og miljø som et særlig ansvarsområde.

Senteret skal gjennom sin virksomhet bidra til å fremme forskning og utdanning om utvikling og miljø ved Universitetet i Oslo. Senteret skal være utadvendt, medvirke aktivt til å utvikle tverrfaglige arenaer og nettverk, og søke kontakt og samarbeid med andre forskningsinstitusjoner i inn- og utland, og med myndigheter, samfunn og næringsliv.

Senteret skal drive undervisning på alle nivåer, og etter nærmere avtale levere enkeltemner eller større emnegrupper til studieprogrammer under SV-fakultetet og andre samarbeidende fakulteter. Senteret skal ha et særlig ansvar for å fremme kvalitativt god forskerutdanning innenfor sitt fagområde.

SUM finansieres gjennom grunnbevilgning fra Det samfunnsvitenskapelig fakultet og gjennom eksternt finansierte prosjekter.

§ 2 Senterets institusjonelle plassering

Senteret er organisert som en enhet direkte under Det samfunnsvitenskapelige fakultet. Senteret rapporterer til fakultetets dekan.

§4.2 (Styrets) sammensetning

SUMs styre har 11 medlemmer som fordeler seg slik:

(a) To representanter for Det samfunnsvitenskapelige fakultet, utpekt blant fakultetets vitenskapelige personale

(b) To representanter for andre samarbeidende fakulteter ved UiO, utpekt blant fakultetenes vitenskapelige personale

(c) To representanter for de vitenskapelig tilsatte ved senteret, herav én i stipendiat- eller post.doc-stilling

(d) Én representant for de teknisk-administrativt tilsatte ved senteret

(e) To studentrepresentanter

(f) To eksterne representanter

Senterstyret oppnevnes av Det samfunnsvitenskapelige fakultet på grunnlag av forslag hentet inn gjennom følgende prosedyre:

- Forslag på representanter for andre samarbeidende fakulteter innhentes fra HF, MN, JUS og MED. De to av disse fakultetene som ikke blir representert gjennom faste styremedlemmer, representeres gjennom varamedlemmer.
- Representanter for de tilsatte ved senteret foreslås av de gruppene de utgår fra, i samsvar med nærmere fastsatte regler.
- Representanter for studentene foreslås av Studentparlamentet. Minst én av disse skal ha en direkte tilknytning til SUM i form av å være registrert deltaker på undervisningstiltak gitt av SUM eller ha oppnevnt veileder fra SUM.
- Eksterne representanter foreslås av senterets direktør.

Alle oppnevnes med personlige varamedlemmer.

Oppnevningstiden er fire år. For studentrepresentantene og representanten for stipendiat/post.doc.-gruppen er perioden ett år. En representant eller vararepresentant fratrer hvis vedkommendes tilknytning til den enhet eller kategori han/hun er foreslått fra, opphører.

I § 6 tilføyes, etter annet ledd:

Direktøren inngår i fakultetets ledergruppe på linje med instituttledere og ledere for andre sentre som ligger direkte under fakultetet.

Gjennomgående erstattes "rektor" med "dekan", og "universitetsstyret" med "fakultetsstyret".

Option IV: Revitalizing the original vision - in the context of CIENS

The changes proposed below pertain to the *interim period*. As explained in Chapter 9, we suggest that the status of SUM as a centre directly under the University board/Rector be reviewed after a period of two to three years, when a new framework for participation in the CIENS framework has been established (or proved not to work out as envisaged). In the latter case, option III applies. Also in the

former case we see a "move" to the Faculty of Social Science as the longer-term solution, but the statutes would have to be adapted to reflect SUM's involvement in the CIENS partnership.

§ 1 Senterets formål og finansiering

SUM er et universitetssenter som har som overordnet formål å drive tverrfaglig forskning, undervisning og formidling om utviklings- og miljøspørsmål, med skjæringsfeltet mellom utvikling og miljø som et særlig ansvarsområde.

Senteret skal gjennom sin virksomhet bidra til å fremme forskning og utdanning om utvikling og miljø ved Universitetet i Oslo. Senteret skal delta i det faglige samarbeidet innenfor CIENS - Oslo Centre for Interdisciplinary Environmental and Social Research. Senteret skal være utadvendt, medvirke aktivt til å utvikle tverrfaglige arenaer og nettverk, og søke kontakt og samarbeid med andre forskningsinstitusjoner i inn- og utland, og med myndigheter, samfunn og næringsliv.

Senteret skal drive undervisning på alle nivåer, og etter nærmere avtale levere enkeltemner eller større emnegrupper til studieprogrammer under samarbeidende fakulteter. Senteret skal ha et særlig ansvar for å fremme kvalitativt god forskerutdanning innenfor sitt fagområde.

SUM finansieres gjennom basisbevilgning fra Universitetet i Oslo og gjennom eksternt finansierte prosjekter.

§4.2 (Styrets) sammensetning

SUMs styre har 11 medlemmer som fordeler seg slik:

(g) Tre representanter for samarbeidende fakulteter ved Universitetet i Oslo. Én av disse skal utpekes blant MN-fakultetets vitenskapelige personale, én blant det vitenskapelige personalet ved SV-fakultetet, og én blant det vitenskapelige personalet ved HF eller JUS.

(h) Én representant for ett av de forskningsinstituttene som inngår i CIENS.

(i) To representanter for de vitenskapelig tilsatte ved senteret, herav én i stipendiat- eller post.doc-stilling

(j) Én representant for de teknisk-administrativt tilsatte ved senteret

(k) To studentrepresentanter

(l) To eksterne representanter, uten tilknytning til UiO eller CIENS

Senterstyret oppnevnes av rektor på grunnlag av forslag hentet inn gjennom følgende prosedyre:

- Forslag på representanter for samarbeidende fakulteter innhentes fra disse fakultetene.
- Representanten for forskningsinstituttene som inngår i CIENS foreslås av disse instituttene i fellesskap.
- Representanter for de tilsatte ved senteret foreslås av de gruppene de utgår fra, i samsvar med nærmere fastsatte regler.
- Representanter for studentene foreslås av Studentparlamentet. Minst én av disse skal ha en direkte tilknytning til SUM i form av å være registrert deltaker på undervisningstiltak gitt av SUM eller ha oppnevnt veileder fra SUM.
- Eksterne representanter foreslås av senterets direktør.

Alle oppnevnes med personlige varamedlemmer.

Oppnevningstiden er fire år. For studentrepresentantene og representanten for stipendiat/post.doc.-gruppen er perioden ett år. En representant eller vararepresentant fratrer hvis vedkommendes tilknytning til den enhet eller kategori han/hun er foreslått fra, opphører.

Appendix

Appendix table 1

Research unit	Researchers	Articles	Sum citations	Citations per article	Articles per researcher	Citations per researcher
UiO: The Centre for Development and the Environment	*18*	*11*	*20*	*1.8*	*0.61*	*1.11*
Units at universities and university colleges						
UMB: Department of Economics and Resource Management	6	21	112	5.3	3.50	18.67
NHH -Norwegian School of Economics and Business Adm.	4	15	40	2.7	3.75	10.00
NTNU: Department of Economics	8	12	24	2	1.50	3.00
UiO: Department of Economics	8	11	32	2.9	1.38	4.00
UMB: Noragric	33	11	45	4.1	0.33	1.36
UiO: Department of Sociology and Human Geography	12	10	54	5.4	0.83	4.50
UiO: Norwegian Centre for Human Rights	6	7	16	2.3	1.17	2.67
UiO: Department of Political Science	1	6	35	5.8	6.00	35.00
UiO: Institute for Educational Research	10	3	4	1.3	0.30	0.40
UiO: Department of Social Anthropology		3	8	2.7		
UiB: Department of Social Anthropology	2	2	9	4.5	1.00	4.50
NTNU: Department of Geography	20	1	0	0	0.05	0.00
UiB: Comparative Research Programme on Poverty	2	1	1	1	0.50	0.50
UiB: Department of Comparative Politics	2	1	4	4	0.50	2.00
UiB: Centre for Development Studies	4	1	0	0	0.25	0.00
Institutes						
CMI -Chr. Michelsen Institute	35	23	124	5.4	0.66	3.54
PRIO -International Peace Research Institute	18	22	135	6.1	1.22	7.50
FNI -Fridtjof Nansen Institute	5	6	13	2.2	1.20	2.60
NINA -Norwegian Institute for Nature Research	2	6	27	4.5	3.00	13.50
NUPI -Norwegian Institute of International Affairs	22	5	8	1.6	0.23	0.36
Fafo	23	3	5	1.7	0.13	0.22
NIBR -Norwegian Institute for Urban and Regional Research	10	1	0	0	0.10	0.00

Appendix table 2 Detailed overview of the staff at SUM

	2000	2001	2002	2003	2004	2005	2006
Administrative stillinger	**10,00**	**11,00**	**11,20**	**10,40**	**10,40**	**8,90**	**8,50**
Mellomlederstillinger	*1,00*	*2,00*	*2,00*	*2,00*	*2,00*	*2,00*	*2,00*
Kontorsjef (1054)	1,00	1,00	1,00	1,00	1,00	1,00	1,00
Seksjonssjef (1211)		1,00	1,00	1,00	1,00	1,00	1,00
Saksbehandler-/utrederstillinger	*9,00*	*9,00*	*9,20*	*8,40*	*8,40*	*6,90*	*6,50*
Førstesekretær (1063)	1,00	1,00	1,00	1,00	1,00		
Konsulent (1065)	0,90			0,50		1,00	1,00
Førstekonsulent (1067)	6,10	5,10	5,30	6,00			
Seniorkonsulent (1363)		1,00	1,00				
Førstekonsulent (1408)	1,00	1,90	1,90	0,90	7,40	5,90	5,50
Støttestillinger for undervisning, forskning og formidling	**1,00**	**1,00**	**1,00**	**1,00**	**1,00**	**1,00**	**1,00**
Ingeniører	*1,00*	*1,00*	*1,00*	*1,00*	*1,00*	*1,00*	*1,00*
Avdelingsingeniør (1085)	1,00	1,00	1,00	1,00			
Overingeniør (1087)					1,00	1,00	1,00
Undervisnings-, forsknings- og formidlingsstillinger	**25,00**	**23,67**	**20,65**	**22,85**	**24,05**	**20,55**	**20,10**
Undervisnings- og forskerstillinger	*11,00*	*12,07*	*12,95*	*10,75*	*11,45*	*13,00*	*11,70*
Førsteamanuensis (1011)	1,00	0,80	0,80	1,00		1,00	1,00
Professor (1013)	1,00	1,00	1,00	1,00	1,00	1,00	1,00
Forsker (1108)	4,80	4,00	4,75	1,95	2,95	5,30	2,50
Forsker (1109)	2,00	4,07	3,00	3,80	5,50	3,20	5,20
Forsker (1183)	2,20	2,20	3,40	3,00	2,00	2,50	2,00
Professor II	*0,20*			*0,40*	*0,40*	*0,40*	*0,20*
Professor II (8013)	0,20			0,40	0,40	0,40	0,20
Rekrutteringsstillinger	*9,80*	*8,60*	*4,70*	*8,20*	*9,40*	*6,15*	*8,00*
Stipendiat (1017)	9,80	8,60	4,70	8,20	9,40	6,15	7,00
Post doktor (1352)							1,00
Hjelpestillinger for undervisning, forskning og formidling	*4,00*	*3,00*	*3,00*	*3,50*	*2,80*	*1,00*	*0,20*
Vitenskapelig ass. (1019)			1,00	1,00	1,00		
Vitenskapelig ass. (1020)	4,00	3,00	2,00	2,50	1,80	1,00	0,20
Total	**36,00**	**35,67**	**32,85**	**34,25**	**35,45**	**30,45**	**29,60**