



Vetenskapsrådet



*The Swedish Research Council for Environment,
Agricultural Sciences and Spatial Planning*

FIRST EVALUATION OF THE 2008 LINNÆUS GRANTS

Report from the evaluation panel

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SUMMARY

This is the first evaluation of the Linnaeus environments granted in 2008, undertaken after two years. The evaluation has a specific focus on organisation, cooperation and leadership. A panel of five international scientific experts was appointed for the evaluation. The result is presented in this report along with the indicators used. Furthermore recommendations are made to the funding agencies to maintain, increase or decrease the funding for each environment.

The panel were generally impressed by the extent to which the Linnaeus environments were embedded within the Universities as perceived by the Vice chancellors. Most of the environments had a basic organisational structure in place; showed evidence of some collaboration and had an identifiable leadership structure. However procedures as regards the appointment of leaders were much less in evidence. In some cases it was not clear what added value the Linnaeus environment had provided. Variation also existed in the extent to which the environments were conscious of diversity or tried to create it; planned for sustainability and prioritised the creation of mentoring relationships. Responsibilities as regards PhD recruitment were also variable, with huge variation existing in the demand for PhD places in these environments. Generally little attention had been given to thinking about outreach activities, although most environments had a web site. The panel also noted large variations in the extent to which the Linnaeus environment had developed a strong identity and visibility; and there was considerable variation in the existence of 'roadmaps' for them to become national and international players. The existence of and the clarity with which, the structure and function of a Scientific Advisory Board had been defined also varied.

In some cases the documentation provided obscured rather than illuminated basic patterns (such as the proportion of women on the various structures). The quality of the presentations was also variable – with some groups largely ignoring the focus of the evaluation on organisation, co-operation and leadership. There were however some excellent presentations that highlighted these aspects. Overall the panel found the experience illuminating and the sessions helpful.

SVENSK SAMMANFATTNING

Första utvärderingen av Linnémiljöer beviljade 2008

Detta är den första utvärderingen av de 20 Linnémiljöer som beviljades bidrag 2008. Utvärderingen som genomförts ett och ett halvt år efter finansieringens start, fokuserar på organisation, samarbete och ledarskap. Utvärderingen kan leda till att forskningsmiljöns organisation eller ledarskap förändras eller utvecklas. De kan också leda till att råden villkorar eller förändrar stödet och eventuellt ökar eller minskar det, dock högst med 20 procent.

Linnéstödet utlystes för andra gången 2008 av Vetenskapsrådet och Formas tillsammans. Det riktar sig till starka miljöer för grundläggande forskning inom samtliga vetenskapsområden. Totalt satsas cirka 140 miljoner kronor per år, varav Formas bidrar med 10 miljoner kronor. Linnéstöden kan erhållas i upp till 10 år utan ny ansökan med mellan 5–10 miljoner kronor per år. Stödperioderna omfattar 2 år, 4 år och 4 år vardera. Utvärderingar ska enligt villkoren ske vid tre tillfällen, efter 1,5–2 år, efter 5 år samt efter hela stödperiodens slut. Målet med Linnéstödet är att skapa miljöer för grundläggande forskning som ger synergieffekter och som karakteriseras av högsta vetenskaplig kvalitet och potential för vetenskaplig förnyelse. Linnéstödet är ett komplement till högskolornas egna basresurser och forskningsrådets stöd till forskarinitierade projekt.

En utvärderarpanel bestående av fem utländska experter med bred expertis och erfarenhet av organisations- och ledarskapsfrågor från olika vetenskapliga områden utsågs. Panelen bestod av följande medlemmar:

Professor Pat O'Connor (ordförande), University of Limerick, Irland
Professor Candace Galen, University of Missouri, USA
Professor Johan R. Lillehaug, University of Bergen, Norge
Dr Marie-Christine Sawley, ETH Zurich, Schweiz
Professor Kalervo Väänänen, University of Eastern Finland, Finland

Utvärderingen ägde rum 11–16 april 2010 i Stockholm, då panelen genomförde intervjuer med representanter från varje miljö, vilka då också hade möjlighet att göra en kort inledande presentation. Innan mötet i Stockholm hade panelen tagit del av miljöernas skriftliga rapporter. Panelen hade också via telefonmöten och e-post identifierat ett antal indikatorer för de tre aspekterna organisation, samarbete och ledarskap som var fokus för utvärderingen.

Panelen ger i rapporten sin syn på och sina rekommendationer till miljöerna rörande dessas organisation, samarbete och ledarskap. Panelen säger sig generellt sett vara imponerad över i vilken grad som Linnémiljöerna enligt rektorernas utsago har införlivats i universitetens verksamheter. Panelen konstaterar att de flesta miljöerna har en grundläggande organisationsstruktur på plats; kan uppvisa bevis på samarbeten och har en identifierbar struktur för ledarskap. Panelen uppfattar också att variationen mellan miljöerna i många avseenden är stor, bland annat vad gäller tydlighet i hur ledare utses, hur mentorskap prioriteras, och i vilken utsträckning Linnémiljöerna har utvecklat en stark identitet och synlighet. I några fall finner panelen att det är oklart vilket mervärde som Linnémiljön har tillfört. På det stora hela finner panelen att mötena med miljöerna var givande.

Rapporten innehåller även, för respektive miljö, panelens rekommendationer riktade till forskningsfinansiärerna om stödets storlek bör behållas på samma nivå, eller om det bör ökas eller minskas.

INTRODUCTION

Background

The aim of the Linnaeus grants is to enhance support for research of the highest quality that can compete internationally. It also aims to encourage universities and colleges to prioritize research fields and to allocate funding for them. In order to accomplish this, the agreement stipulated that at least 50 percent additional support of the granted amount should be granted by the University in question. In June 2008 the Swedish Research Council and the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas) approved for the second time Linnaeus grants to 20 research environments. These represent different research domains – medicine, natural and engineering sciences, and humanities and social sciences. For each environment the amount of the Linnaeus grant is 5–10 million SEK annually for a maximum of ten years. The criteria for assessment of the applications were scientific quality and renewal, and in addition gender equality. Evaluation is to take place on three occasions. This is the first evaluation for the Linnaeus environments granted in 2008, performed after two years. According to the agreement, the first evaluation has a special focus on organisation, cooperation and leadership.

Evaluation process

A panel of five international scientific experts within complementary scientific areas was appointed for the evaluation. The task of the panel was to evaluate the Linnaeus environments with special focus on organisation, co-operation and leadership, and to present the quality indicators for, assessment and results of, the evaluation in a report. The report forms the basis for decisions on further financing by the Swedish Research Council and Formas. The support can be continued at the same level, increased or decreased up to a maximum of 20 percent of the grant for each Linnaeus environment.

The panel had two main sources of information for their assessment. At the end of October 2009 each Linnaeus environment was asked to describe their activity in a report according to certain instructions (appendix 1) and to submit it on 1st of February 2010. In April 2010, a series of interviews with representatives from each environment were undertaken by the panel over a week, (see schedule for interviews in appendix 2). Each interview lasted 45 minutes and included the vice chancellor, the coordinator and three or fewer additional representatives for each environment. In addition, the original applications were made available to the panel.

In January 2010, the panel had a telephone conference where they discussed the quality indicators for the evaluation prior to reading the reports from the Linnaeus environments. A distribution of responsibilities was made within the panel in order to prepare for the interviews and report writing. Each environment was assessed in detail by at least three panel members (one first rapporteur and two co-rapporteurs) and more briefly by the other panel members. During the interview week in April 2010, time was set aside for report writing so that the joint panel report could be completed before the end of the week. The chair later made some minor editorial adjustments to the report.

Evaluation panel

The panel comprised five experts:

Professor Pat O'Connor (chair of the panel), University of Limerick, Ireland

Professor Candace Galen, University of Missouri, USA

Professor Johan R. Lillehaug, University of Bergen, Norway

Dr Marie-Christine Sawley, ETH Zurich, Switzerland

Professor Kalervo Väänänen, University of Eastern Finland, Finland.

Short biographies of the panel members can be found in appendix 3.

Evaluation secretariat and reference group

The evaluation process was planned and supported by a secretariat with staff from the Swedish Research Council – Margareta Eliasson, Sten Söderberg and Maud Quist (project manager). A reference group was appointed comprised of Arne Johansson, Carl Jacobsson and Maria Starborg – all from the Swedish Research Council and Bengt H. Olsson, from Formas.

EVALUATION INDICATORS

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

Indicators: For organisational dimension

- 1 Clarity of formal organisational structure – is it clear who is responsible legally at University level; who is responsible at project level and for what; is Linnaeus a separate structure (and if so, how is it formally linked in?).
- 2 Clarity of day-to-day organisational structure – as regards money; research tasks; management of researchers; recruitment of PhD students, organisation of PhD programmes etc.
- 3 Evidence that the structure works on dimensions above (including remit and frequency of meetings at project level; updating of web site etc).
- 4 Clarity about who has the authority for changing strategies, identifying new collaborations, closing down existing projects.
- 5 Evidence that day to day relationships with prior structures such as Departments work (e.g. who is responsible for giving space; laboratories; other resources etc – and does this arrangement work?).
- 6 Strategies to ensure a clear flow of information throughout the project (i.e. between sub-project leaders; post docs; PhD students etc).
- 7 How transparent is the decision making structure to those inside and outside Linnaeus?
- 8 Are University policies as regards gender identified? Evidence of their implementation in the Linnaeus?
- 9 Evidence of the extent to which strategies are in place to ensure sustainability of the structure and diversity in it (including in terms of gender).
- 10 Is there access by the Linnaeus group to the infrastructures that is necessary for the duration of the grant secured (special facilities, instrument, supercomputer, testbed, etc...)? Have the costs pertaining to this been included?

Indicators: For Co-operational Dimension

- 1 The identity and status of partner institutions/structures in terms of research, PhD students or knowledge transfer?
- 2 Existence of co-operation inside or outside Linnaeus in terms of research projects; PhD students, and postdocs.
- 3 Evidence that co-operation is actually taking place and is not simply rhetorical (e.g. actual sharing of facilities; co-operation in PhD programmes, joint publications).
- 4 Extent to which the Linnaeus project has added value by creating synergy; new collaborations/new projects, transformed other structures etc at the level of research, PhD students etc.
- 5 Mechanisms in place to ensure that the effects of the project are integrated/mainstreamed into the broader university context at the level of research; PhD student formation?
- 6 Has the Linnaeus grant raised significantly the visibility/attractiveness of the University as a co-operator? Have there been any attempts to apply for collaborative funding?

Indicators: For Leadership Dimension

- 1 Existence of an overall head of the Project? A leadership group?
- 2 Who is the strategic leader? Who is the scientific leader? What are the mechanisms in place to facilitate co-operation between these two?
- 3 Extent to which the strategic and/or scientific leadership is diverse- in terms of gender; upcoming and established etc.
- 4 Extent to which the leadership team is balanced across all aspects of the grant.
- 5 Evidence as regards the existence of strategic leadership of Linnaeus as regards research projects; attraction of PhD students; organisation of courses; diversity; reallocation of funds or closing of faltering projects.
- 6 Existence of an Advisory Board consisting of people outside the institution, and including national and international members.
- 7 Evidence on the way leaders are chosen – and the appropriateness of this process.
- 8 Evidence as regards the kinds of strategies that have been used to increase diversity at leadership and membership level – and the evidence of commitment to them.
- 9 The extent to which mentoring and other kinds of leadership training are used.
- 10 Strategies to deal with risk management – including the possibility that critical people leave.
- 11 Has the Centre made attempts to leverage additional funds using the Linnaeus grant? With what result?
- 12 Strategy to deal with outreach/dissemination: e.g. scientific cafés, technology and knowledge transfer, sharing of good practices, industry advisory board (when applicable), access to new relevant testbeds, etc.

Centre for Bio-inspired Supramolecular Function and design, SUPRA

Organisation

SUPRA is well integrated into the Chalmers University structure being placed directly under the President's authority and administratively linked to the Department of Chemistry and Biological Engineering. The Chalmers University has identified eight areas of advance, and SUPRA falls within one of these areas. The members (PIs) of SUPRA are professors from two different departments at Chalmers. The administrative function of the host department was unclear and this was not satisfactorily explained. The SUPRA centre has a "flat" organisational structure led by a coordinator and all PIs are members of a "Board" that meets 3–4 times a year. The authority of the coordinator is not well defined in the report and the centre does not have a deputy coordinator. During the discussion it became evident that the coordinator has a very high degree of authority, but uses this with caution. In practice, the leadership appears to be strong but open discussions in the Board meetings are actively used.

The main research activities are divided into three clusters, without leaders. The absence of defined leadership of the three research clusters did not appear to be a concern to either the coordinator or to the President. Co-operation is mediated through volunteer collaboration within and between the three clusters. The added value of collaboration in the centre was indicated by joint publications and by the fact that collaboration between physicists and chemists within this area of research is rather unique on a global basis. The ten PIs form the scientific board that makes recommendations to the coordinator on hiring and budget matters. Issues like how the coordinator is elected, for how long and what the coordinator's authority is as regards scientific leadership and budgets were not presented in the report. No specific procedure for future change of leadership was in place and absence of such procedures appeared not to be an issue for the university. A key recognised challenge is to prevent the clusters becoming isolated from each other.

Apart from the authority of the President, the lines of command from the university to the clusters appear to be weak or absent. In particular, the role of the "Host department" is not identified. It is stated that SUPRA is organised under the Department of Chemistry and Biological Engineering, however, the responsibilities of the department are not well defined. Since all PIs hold positions at the university, at two different departments, there should be some kind of mechanism to sort out potential conflict of interest between university priorities and centre interests/budgets.

SUPRA does not at present have a Science Advisory Board (SAB), but the coordinator recognised that a SAB would be needed within the next year or so especially with regard to advice on administrative matters. The expert panel was somewhat surprised that establishing a SAB was not seen as a high priority. Research productivity seems to be dominated by a few senior scientists.

Chalmers recognises that gender is an issue. Only two of the ten PIs are women; as are four of the ten PhD students and four of the ten associated researchers (total is 10/30). Reference is made in very broad terms to a new strategy that is in place since 2007 as regards gender, in a context where 50 percent of the students are women. SUPRA has taken steps to recruit female researchers by inviting two younger female scientists to become associate researchers of the centre. Organised mentoring at the level of junior faculty is not in place.

Co-operation

Co-operation between the three different clusters appears to be entirely voluntary and no specific incentives to stimulate cooperation between the participating clusters have been established. Joint supervision of PhD students is seen as a most effective way of stimulating collaboration. The members of SUPRA give classes that may be taken by students in both chemistry and physics

Reference is made to co-operation stimulated by SUPRA inside Chalmers University (Nanotechnology and Materials science) and externally with Gothenburg; Southampton; Aarhus, Athens and others. There are some industrial links even though the major research efforts are very fundamental and not directly suited to industrialisation.

There is no plan to establish a graduate school within SUPRA. The reason is that the students are members of existing separate graduate schools in chemistry and physics. SUPRA has its own website but has not put much effort in making the site an attractive one and there is no link to the Molecular Frontiers website which is highly relevant. SUPRA has established a successful visiting program for high school students.

Leadership

No obvious scientific leadership structure is established. The leadership is defined by the present strong coordinator. The gender issue is problematic in the sense that only men are in leadership positions and no initiative to recruit females into the leadership level has been taken or is planned.

There does not seem to be any specific strategies in place as regards risk management – including dealing with the possibility that key core people leave.

It is not clear who is responsible for recruiting PhD students but the joint supervision of students is seen as important.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

The flat structure of the SUPRA organisation seems very effective since the centre is small. However, this type of organisation is vulnerable on the longer term. The panel strongly recommends that a deputy coordinator is appointed and that a SAB is formed. The centre should identify and strengthen responsibilities at the different levels. Especially, a SAB with responsibilities related to research activities should be established as soon as possible.

Recommendation: The panel recommends maintained funding.

The Human Regenerative Map, THRM

Organisation

THRM is placed at the Department of Cell and Molecular Biology (CMB) at Karolinska Institutet (KI) and is led by a coordinator/director (and a deputy coordinator). THRM has a PI council led by the coordinator. All PIs (employees of KI and Uppsala University) of the centre are members of the council. A senior clinical coordinator oversees the clinical part of the collaboration. A Science Advisory Board (SAB) has been established. The research activity is divided into five subtasks and data analysis and publications are done collaboratively. The CMB department provides full support with regard to budget, personnel issues, teaching and courses, and computer and general IT. Leadership succession procedures are not in place.

It is stated that THRM is part of the Karolinska Institutet's (KI) strategic plan. The KI Board of Research receives an annual report from THRM, including an internal assessment of scientific achievements with a publication list, milestones and deliverables achieved a report on the dissemination plan, a gender equality report, an updated risk/contingency plan, as well as a report on the centre's financial status. In addition, the director of THRM updates the leadership of KI on centre affairs, likewise the Uppsala PI's report to the Uppsala University leadership via the Vice Chancellor.

The centre is highly dependent on state-of-the-art infrastructure and therefore has very advanced instrumentations on site and well established collaborations with both local and national resources, for example in DNA sequencing. THRM works very closely with SciLifeLab and the head of the genomics section of SciLifeLab has been recruited as a new PI in THRM.

Co-operation

Students and post docs spend much time in several of the participating laboratories as part of their research activities. Recruiting of PhDs to two or more research areas is novel and likely to result in strengthened interdisciplinary capacity. Strategic hires have provided for new research directions. Resources (10 percent) are set aside for specific grants for new collaborations with clinicians in the Translational Research Center (TReC), which is a joint effort with the DBRM Linnaeus environment (Developmental Biology for Regenerative Medicine) to promote translational work.

Other collaborations, national and international, are very good but it is not obvious that these are the consequence of the Linnaeus grant. However, the Linnaeus grant has strengthened visibility and possible success in obtaining other grants. Only minor contacts with industry exist.

The centre has an overall very good gender balance. The coordinator is male and the deputy coordinator is female. The proportion of males to females is overall close to equal (44 percent females at the time of application and 48 percent now). Two of eight PIs are females. There is a keen awareness of the gender problem, especially related to the physics part of the environment. Three new PIs have been recruited, one of whom is female.

Leadership

The leadership experience of the deputy coordinator is extensive. The coordinator and deputy coordinator work closely together to coordinate the project, with the coordinator being the formal leader of the research environment. Management of THRM is run by the director/coordinator, with the help of the deputy director/coordinator and the team leaders. The PIs meet to discuss issues related to

personnel, budget allocations, management, and policies in the Centre. Weekly seminars for Centre and monthly meetings for research teams allow for exchange of ideas and new developments. The coordinator has final authority but consults the Council of THRM (the PI Council) in matters of high priority. The distribution of resources directly follows the budget but is nevertheless subject to reallocations. The director/coordinator reports matters of importance to KI centrally (see above). There does not appear to be any formal involvement of the postdocs or PhD students in leading the centre. The PI Council will decide on recruitment of new PIs to the Centre.

The SAB has had no meetings to date and no meetings appear to be planned. Thus, the function of SAB is unclear.

There is no formal program for mentoring younger scientists. However, all PhD students have two advisors one of these functions as a mentor. PhD students and postdoc recruitments have on most occasions been joint decisions between two or more of the participating PIs.

With regard to visibility of the centre, the centre research has been featured in the journal *Science*, and seminars are given frequently. Outreach is directed to the scientific community, the larger public and policy makers. The THRM also has an effective, easily navigated website: www.thrm.ki.se.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

The THRM centre has a focused research objective. The coordinator and the deputy coordinator are both very enthusiastic and a common vision has been the glue so far. It would be helpful if the meetings of the council were formalised with minutes and if the SAB were used in a more identifiable way. The panel could not identify clearly what roles KI and Uppsala University have in the organisational structure of the centre. It appears that the coordinator has wide privileges of authority that are conscientiously used by him.

Recommendation: The panel recommends maintained funding.

Linné Center for Prevention of Breast and Prostate Cancer: CrisP

Organisation

CrisP is one of many large research projects organised by Department of Medical Epidemiology and Biostatistics (MEB) in Karolinska Institutet (KI). This department houses several other large research initiatives including Swedish Twin Registry and KI Biobank. CrisP is a matrix organisation and has a steering committee, an executive group, project managers and a scientific director. There are twelve groups from six different departments participating in CrisP. This gives a unique possibility to set up a longitudinal study of large cohorts that has now been initiated (about 100 000 males for prostate cancer and 100 000 females for breast cancer). The aim is to discover new biomarkers, proceed in clinical trials for testing and finally implement the results to clinical practice. These are obviously high risk projects and would not be possible without constant and longstanding financial support.

KI Board of Research follows CrisP activities biannually and in addition, there are informal discussions with the President of KI. The steering committee consists of all twelve PIs and is chaired by the director. Two deputy directors have been appointed. A small executive group (director, two deputy directors and a scientific coordinator) help the director in daily decision making. The executive group also prepares recruitment proposals. The steering group meets regularly every second month. The director is also a chair of the steering committee. CrisP has recruited a post-doctoral fellow to act as a scientific coordinator. A Scientific Advisory Board has been nominated and will submit reports of the scientific progress. However, it remains unclear how often this will happen.

The gender balance is uneven but there is a plan, although not very clear, to increase the number of female researchers at different levels.

None of the professors, not even the director, dedicate more than 20 percent of their time to CrisP activities. It remains somewhat uncertain what is the added value of CrisP compared to other large research project at MEB. There is a plan to publish an annual newsletter in the future. Some conferences have also been arranged by CrisP. The duties of the scientific coordinator are being expanded for dissemination, and especially contact with industries.

Co-operation

It is mentioned that several new collaborations have been established as a result of the Linnaeus environment. A lot of interest to collaborate with CrisP has appeared among departments that are affiliated with it and there is also collaboration with researchers outside affiliated departments. At national level CrisP researchers are collaborating with researchers in other large cohort studies e.g. with SciLifeLab and SeRC. There are also plans to establish a closer collaboration with two large breast cancer networks in USA. At this point collaboration with the industry, although potential, remains at the planning stage. The director and other PIs have found that CrisP offers an excellent possibility to increase the visibility of cancer research since more than 200 000 people are recruited into the cohorts. International visibility is increasing although the first call for post-doctoral fellows was disappointing in terms of international interest. However, this was mainly due to bad timing of the call.

Leadership

Researchers in CrisP have good national and international visibility. The director of CrisP is also the chairman of the Department of Medical Epidemiology and Biostatistics. The steering committee includes four females and eight males. The role of the executive group remains somewhat unclear. It is mentioned that financial resources are not evenly distributed among the members of the steering committee and there is a capacity to direct funding and identify the priority. The director has a clear role and authority to make difficult decisions if the steering committee is divided.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

CrisP is a very well structured environment. It has already shown good capacity to organise large cohort studies. There is a lot of internal collaboration and the local as well as international visibility is obviously increasing rapidly. The leadership is clear. The gender issue is well recognized but there still remains a lot to be done in order to reach the optimal gender balance.

Recommendation: The panel recommends maintained funding.

Center for Research on Inflammation and Cardiovascular Disease, CERIC

Organisation

CERIC is based on two academic departments of Karolinska Institutet (KI), the Department of Medicine (CMM) and Department of Medical Biochemistry and Biophysics (MBB). There are ten participating groups, laboratories locating mainly in these two Departments. Three groups work at MBB and seven groups at CMM. Connections between the two locations are mainly via joint projects and weekly meetings. The basis of CERIC is very much “substance based” and it offers a joint platform for researchers working on selected topics of chronic inflammation. Thus the value of CERIC is especially in translational research moving results from biosciences to clinical sciences.

At present, six post-doctoral fellows have been recruited and they work between the partner laboratories. This is considered to be an effective way to increase the collaboration between groups. Molecular immunology and bioinformatics have been selected as areas to strengthen. A program manager has also been recruited.

The Steering committee includes all ten PIs and the chairman has the casting vote if opinions are divided. The Steering committee meets regularly once a month and more often, if necessary. The coordinator chairs the steering committee where all important decisions are made. The international advisory board (IAB) has been nominated and it had its first meeting half a year ago. All five members are males.

The CERIC consortium has made a strategic decision to train only post-doctoral fellows. This is based on the fact that there are already enough PhD-programs at KI and post-doctoral fellows are considered to be a more effective way of rapidly promoting scientific excellence. CERIC also announced that one of its strategic goals is to cultivate a new generation of scientific leaders to its research area.

There are four females and six males among the PIs. At the junior faculty level the gender ratio is almost 50:50 and the majority of postdoctoral fellows are women. The gender balance is thus within 40–60 percent range among participants. So far, there have not been any major changes in the participating groups. There is no clear process yet to bring new groups into CERIC, although it obviously will be done via the Steering group discussions.

The Linnaeus grant has made it possible to start longstanding cohort studies and to recruit young excellent scientists to strengthen the research environment.

CERIC runs weekly seminars which are open also for researchers outside CERIC. A website has been created to deliver information about CERIC activities.

Co-operation

In the report, collaboration was described in little detail. During the interview it became clear that the groups are intensively collaborating and new recruitments have strengthen the collaboration since post-doctoral fellows are linked to more than one research group. Weekly joint seminars are seen as an effective way to further enhance the internal collaboration. Three conferences have been arranged. Multiple research projects involve several participating groups.

National and international collaboration is extensive but mostly based on individual connections. There is no clear strategy to increase international visibility other than high quality publications.

Leadership

The centre is governed by the steering group. There is a male CERIC coordinator and a female vice coordinator. The steering group makes all strategic decisions including budget allocations and recruitments. A scientific manager is supporting the steering group by organising seminars, web page etc.

The IAB with six prestigious members has visited and discussed strategic goals with CERIC participants last autumn. The leadership is clear and should allow difficult decisions to be made if needed.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

The original report does not provide enough details to conclude the actual added value of the CERIC consortium. The structure of environment as well as the leadership is clear and well organised. The outreach program thus far is insufficient and should be improved in the future.

Recommendation: The panel recommends maintained funding.

Control, Autonomy, and Decision-making in Complex Systems, CADICS

Organisation

It is clear that CADICS has received and continues to receive strong support from the University top level. The rationale behind the creation of CADICS, following the success of former initiatives, such as MOVIII is clearly stated. The counterpart of this positioning is a weak formal identity for CADICS, and this is confirmed in the report as the centre is presented as funding channel for participating departments.

Indeed, the lack of visibility of the centre starts from the way it is connected to the top management, with many layers in between. It is attached to the Department of Electrical Engineering, which is itself part of the faculty of Science and Engineering. The project runs across five domains and four themes have been attached to it, each of them with a leader. The Council, the executive body of CADICS, is comprised of the four original PIs as leaders plus the coordinator.

Regarding the mechanism under which these four themes are articulated with the domains, the organisation is lean, with an executive role given to the Council: with its brief including research strategies, funding allocation and graduate courses. There is absolutely no gender diversity – with all those involved in the project, including the Advisory Board being men. We should also point out that there is no reference to organised mentoring for developing capacity at higher positions.

Co-operation

There are four departments; Electrical Engineering, Computer science, Biomedical Engineering, and Science and Technology participating in CADICS, which is a positive indication of the breadth and the depth of its scope. CADICS represents a significant effort in the area of integration between these different disciplines. It also stands at the crossing point of a number of important multi disciplinary initiatives in IT: the coordinator of CADICS was the main PI for eLLIIT (IT and Mobile communications), a joint proposal between Lund and Linköping which received recently a significant grant; CADICS is somehow the extension of an SSF (Swedish Foundation for Strategic research) project called MOVIII therefore it could benefit of the results of this five-year effort with one year overlap. CADICS is positioned to be one link of a high value chain of initiatives well framed by existing departments and PIs who know each other well and work well together.

The collaboration effect, clearly a positive effect of CADICS, was underlined a number of times during the presentation: both across departments (from the mathematicians for example), or across universities (as in the case of the Linnaeus centre LCCC at Lund University).

There are about 20 PhD students involved with CADICS but only a minority are funded through it, and only partially. The creation of the CADICS Core Curriculum, platform constructed from basic tools used across disciplines is clearly a positive outcome, and will benefit the whole academic environment at Linköping University. It will also be a good way of promoting the cross collaborative culture.

Although the report clearly mentions CADICS as concerned with basic research effort it has valued networks with key industrial partners and communicates frequently about the results, based on the MOVIII demonstrator.

The website is dry and factual, interesting only to researchers of the same field, and possibly not even to them. The value of the collaboration between Computer scientists and Electrical engineers is not promoted nor illustrated at all, the outreach and dissemination should sell CADICS more effectively

The Intranet part of the web site offers, in contrast, a good value for the participating partners.

Leadership

The four leaders and the coordinator are recognized scientists in the field, and have successfully worked together in the past. However, CADICS operates as a rigid box: no open call to collaborators for writing the original proposal, no possibility for adding an additional group, no procedures for the replacement of the coordinator in two years time (with the replacement person already decided by the University VC). Mentoring happens “within each group”, which may not be sufficient in terms of developing new competences at a higher level, in a collaborative spirit.

Definitely not enough attention is given to gender issues: no identifiable efforts for trying to integrate a female PI, even by slightly steering the focus of the research; no female member of the international Advisory Board.

What is not very clear is what will happen to the demonstrator once MOVIII finishes, as the link with it will still be needed by CADICS.

Efforts around this centre may be more effective if CADICS had a stronger identity and more flexibility. There is the overall impression that the intricate connection with other projects, willingly woven, makes it difficult to evaluate the span and the impact of the effort in any of the areas: education, research, outreach, or long term infrastructure building.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

CADICS is a fertile ground on which new collaborations can be rooted. The project seems to be fostering new ways of collaborations between disciplines, through actions such as the CADICS Core Curriculum. It is however closed as a managerial environment, with no flexibility for inserting new groups. Its intricate connection with other groups and initiatives makes it hard to evaluate the whole span of it and the added value provided by Linnaeus funding. Its identity seems low, although the group clearly sees it as an attractive label to recruit new students. The culture of collaboration and mentoring could be more actively promoted.

Recommendation: The panel recommends maintained funding.

Linnaeus Centre for Research on Hearing and Deafness, HEAD: Excellence in the field of Cognitive Hearing Science

Organisation

Linnaeus Centre HEAD (LCH) is organised as an autonomous Research Centre within Linköping University. It is built on the established infrastructure of SIDR (Swedish Institute for Disability Research). Legally the responsible person is the Vice-Chancellor. Connection to the university is well established since the Vice-Chancellor meets with the steering group once a month. SIDR's director is also director and research manager for LCH. In addition the chair of the university board is also chair of the board of SIDR.

The steering group of LCH meets 3–4 times per year and makes all strategic decisions including personnel recruitment and budget allocation. LCH and HEAD Graduate School (HGS) have separate budget processes. HGS is managed by another professor and has its own steering group which meets four times per year.

The core group of LCH consists of all 10 original applicants and meets 1–2 times per semester. The core group discusses general and specific matters of all 22 projects. It remains open what is the relationship between original applicants and other more recently affiliated PIs.

LCH has also an International Advisory Board (IAB) with esteemed members of the international research community. There are three females and three males in the IAB. Until now the IAB has already had four meetings. In addition, the supervisory meeting group has telephone conferences with the IAB three times per semester.

In conclusion, both LCH and HGS have well planned structures and responsibilities for different tasks seem to be well divided. The staff has created a flexible and efficient organisation. Formal organisation is clear and day to day management is well organised. The decision making process is transparent enough and it appears that there is good policy for continuous exchange of information between different actors.

LCH runs its own seminar series and organises post-seminar events and informal meetings to facilitate discussion between researchers.

All PhD-students of LCH belongs automatically to HGS. HGS does not pay salaries for PhD-students but it organises courses, supports visits to other laboratories and conferences. Additional funding is needed for HGS as the requested funding from the Linnaeus grant is beyond the scope of the fiscal adjustments. However, the panel encourages the steering group to continue to identify other additional resources to run HGS as it is of high value for the centre.

The gender profile is well described and with two new recruitments is more balanced than in the original application. The gender balance within 40–60 percent at all levels from PhD students to professors has been accomplished.

LCH has been able to obtain very good national as well as international recognition and recruitment has been successful. It is obvious that there has been clear added value to develop a more attractive and collaborative research environment due to Linnaeus grant.

Co-operation

Three universities, namely Linköping, Örebro and Lund, are participating via SIDR although the participation of the two latter is more modest. Collaboration at different levels inside the environment

is well described and it is obvious that Linnaeus grant has enhanced markedly research collaboration at different levels. Some large projects involve almost all participating groups forming a good basis for internal collaboration. There are also well described collaborations between LCH groups and other groups in the university and the centre has created several collaborative agreements with different national institutions. International collaboration involves both group-to- group as well as centre -to- centre collaborative agreements. According to the report and the interview it is obvious that the visibility of the university and especially the research done in the centre has increased a lot, both at the international and well as national level. This is indicated by several foreign recruitments.

It is specifically worth mentioning that collaboration within LCH has increased both external funding as well as publications of research groups. In addition, it is reported that some new collaboration with industry has already been initiated.

Leadership

Leadership at different levels of organisation appears to be well arranged and functioning. The different roles and responsibilities in the project are clearly indicated and there is both an active steering group and an exceptionally active International Advisory Board. There are clear responsibilities between different players despite the large number of groups involved (22 PIs). There is a good gender balance among PIs as well as in the steering group and advisory board. Supervision of PhD-students in the graduate school is well organised each student having two supervisors, one female and one male. Mentoring of postdoctoral fellows remains less structured.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

The environment built thanks to the Linnaeus grant has clearly given added value and has created new activities among participating groups. Especially, international recognition of the university and research area has increased and the centre has a good potential to become a major centre in the research of cognitive hearing science.

Recommendation: The panel strongly recommends increased funding.

LUCID Lund University Centre of Excellence for integration of social and natural dimensions of sustainability

Organisation

LUCID is affiliated with, and based at, the Lund University Centre for Sustainability Studies (LUCSUS). The founding director is the appointed Coordinator of LUCID. As the LUCID Coordinator, he is also the head of the LUCID Steering Committee. The Coordinator reports directly to the Deputy Vice-Chancellor for research on matters related to the Centre's leadership and management as well as for following up plans, activities and progress. The Steering Committee meets monthly during the academic year. It deals with personnel and financial matters. It is supported by a Scientific Advisory Panel (SAP) of internationally renowned scientists interacting with LUCSUS and LUCID.

At the University level, the Deputy Vice Chancellor for research is responsible for LUCID. He holds individual meetings annually with the Coordinator. The formal structure is clear – with LUCID consisting of eight university units, with the head of one of these, the Centre for Sustainability Studies, also being the Coordinator of LUCID. The composition of the Steering Committee consists of one scientist from each of the participating units, and two PhD candidates elected by the total PhD group. This encourages interdisciplinary collaboration within the Centre by requiring a continuous dialogue across disciplines. Clear mechanisms for maintaining/changing the composition of the Steering Group (apart from the student representatives) need further articulation.

The Coordinator reports to the Department Chair about day-to-day fiscal, employment and budgetary matters, in a relationship of negotiation. Meetings with Heads of Department take place annually and this seems to be sufficient. The relationship between LUCSUS and LUCID offers a stable basis of operation regarding professional and administrative services including advanced marketing and enhanced visibility. The Steering Committee meets monthly during the academic year. Its gender profile is skewed (eight men and two women).

This Linnaeus project has been very much about the creation of a new academic area – sustainability science. There is clear evidence of the success of that initiative – not least in the establishment of it as a highly attractive PhD discipline. The fact that the Steering Committee is so broadly based arguably facilitates the mainstreaming of its ideas across a wide range of departments.

Reference is made to a University Gender Policy and it is noted that 'LUCID prioritises gender balance' along with research skills in the appointment of young researchers. Thus, in addition to selecting ten men and ten women for interview a gender balanced interview team is engaged. LUCID is working toward gender equity at the PhD level by accepting an initial cohort of 15 students comprised of eight women and seven men for the 'LUCID Research School on Sustainability'. Nevertheless 16 of the total of 22 PhDs are men and at more senior levels, gender balance is also far from equitable: with a Steering Committee skewed to eight men and two women. The report claims that this imbalance will be addressed in a variety of ways, but specifics would be more helpful.

There have been strategic changes from the original application including the decision to focus on PhD students rather than postdocs; and the decision to start a LUCID research school. LUCID consists of a consortium of seven disciplines spanning three faculties at LU plus the new research field of sustainability science. Central to the mission of LUCID is its interdisciplinary PhD research group in Sustainability Science spanning eight disciplines. The core of the project is the LUCID PhD group who function as the key element in bringing to fruition this new area of sustainability studies in the LUCID

Research School on Sustainability. To encourage cross-disciplinary collaboration, fulltime office space at the Geo-Centre is provided for all LUCID PhD candidates regardless of discipline. LUCID has been extremely successful in attracting prospective students for its PhD program – 300 applicants for 15 places. For dissemination of best practices among Linnaeus environments, it would be very helpful to know how recruitment has been so successful.

An attempt is made to ensure a free flow of information in various ways including seminars and meetings; web site; putting publications up on the homepage; through networks and mailing lists and teaching activities.

Co-operation

A core element in the mission of LUCID is the crossing of disciplinary lines and this is implicit in the very structure of LUCID and in its publications and the pattern of PhD supervision. It is recognised that there is a tension between students 'home discipline' and the new discipline of sustainability studies and an attempt is made to deal with this by encouraging supervisors to engage in seminars etc in sustainability studies.

Four Departments are situated physically close to the Centre for Sustainability Studies and four others are further away: and there is some concern that this affects the latter's involvement with the Centre. Nonetheless, there is evidence of research collaboration within Lund University on both broader Swedish projects. LUCID has been invited to participate in large collaborative research proposals under FR7. There is also informal support from scholars in the EU, USA and Japan.

Members of the LUCID family are strategically encouraged to develop new initiatives for collaborative research projects. That this is paying off is evident in multiple synergistic collaborations linking LUCID with other centres at Lund University including the programme, 'Legal Empowerment of the Poor', (LEP) in which six disciplines in four faculties participate; CIRCLE (Centre for Innovation Research and Competence in the Learning Economy) and the VINNOVA Centre NGIL (Next Generation Innovative Logistics). Nationally, LUCID has a strong portfolio of collaborations with The Swedish Royal Academy of Sciences (KVA), the Stockholm Environment Institute, the School of Global Studies at University of Göteborg, the Centre for Climate Science and Policy Research at Linköping University, and the Stockholm Resilience Centre. Internationally, junior and senior researchers are offered early exposure to the international research community on sustainability via funding their participation in the open science meeting in Bonn of the International Human Dimensions Programme on Global Environmental Change (IHDP). Collaborations are ongoing with EU and USA (AAAS) leading groups in Sustainability and with the National Taiwan University. A collaboration with the Right Livelihood College should extend LUCID's impact into Africa and Asia as will engagement in work on desertification sponsored by the UN.

Leadership

An overall leader of the project is identified – and the mechanism for choosing that person is partly defined by the fact that the Coordinator is the Director of the Centre for Sustainability Studies. However it is not completely clear how that person is chosen. Nor is there a process in place for selecting/replacing other key people should that be necessary in the future. There also appears to be different views about the Centre's balance between research and activism and this should be managed more deliberately. There also seems to be some tension between being turned inwards to the academy in an attempt to create a new academic discipline and turning outwards in an attempt to apply that knowledge to a particular agenda.

The centre is highly visible at national and international levels. Engagement of PhDs in assessment of the Research School bodes well for a spirit of scrutiny and flexibility at LUCID. Participation of junior and senior researchers in "Lucid Assessments" also provides opportunities for professional developments as well as providing for collaboration across disciplines. Nonetheless, while LUCID has a

strong focus on integrating research and teaching in its PhD program, there is (surprisingly) no formal system of mentoring.

The panel identified several areas in need of improvement on an administrative level. There is no clear plan to address gender imbalance in the Steering Committee and the panel advises that this too be deliberately addressed with mechanisms identified.

A four person Scientific Advisory Panel (SAP) – mainly international – has just been created. It is clearly advisory since it is intended that it will meet annually. This group is gender balanced providing strong role models for younger researchers. However, the SAP has yet to meet physically and the panel advises that it meet at LUCID as soon as possible.

There is an aim to target different key stakeholders, and to encourage the use of all kinds of media and formats- including teaching and public events, radio, tv etc in addition to research. However, there are no procedures in place as regards presenting material to the media which might be misrepresented- with reference being simply made to individual faculty being 'fairly careful' .

LUCID gains some integration with less developed countries via inclusion of PhD students from South America, Africa, China etc – but the SAP consisting of two Americans and two Europeans could usefully be extended to include expertise from the developing world.

Overall, the importance of the Linnaeus grant in validating the efforts of those in this project to create a new scientific area of sustainability studies was seen as very important.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

This is an exciting attempt to build a new discipline – focusing on the development of PhD students in the area, and building on existing work done by the Centre for Sustainability Studies. The panel recommends that priority be given to mechanisms for dialogue on the balance of activism and fundamental research, filters for communication with the public on Centre findings, and gender balance in all aspects of the Centre.

Recommendation: The panel recommends maintained funding.

Lund Centre for studies of Carbon Cycle and Climate Interaction, LUCCI

Organisation

LUCCI has an organisation that is based on five work packages (WP), each including two groups. There are altogether 36 senior scientists, 26 junior scientists, 28 PhD-students and 7 technicians. The steering committee chaired by a coordinator meets four times per year and consists of two members from each WP as well as junior scientists and PhD-students. The International Advisory Board (IAB) includes four persons, three males and one female. All members of the IAB are from Europe.

There is also a small project office consisting of a Web site manager and a scientific secretary. The coordinator reports directly to the Vice Chancellor of the University. If the steering committee is divided, the coordinator will decide; if he cannot decide then a decision is taken to the Vice-Chancellor.

At the University level, the Deputy Vice Chancellor facilitates the dialogue between Linnaeus coordinators, Heads of departments and Deans in order to facilitate interactions beyond disciplinary boundaries. In the host faculty communication is by regular meetings and is supported by the fact that Coordinator is a member of faculty presidium.

It appears that overall responsibilities between different actors are well divided, The coordinator having an overall responsibility of the project but the steering committee having also a very strong position in the decision making process. Each WP has two leaders in charge and both of them can participate in the steering committee meetings which also ensure timely distribution of information.

A good gender balance is reported despite the small number of female professors to draw from. Only 20 percent of professors are female but among WP-leaders the balance is better, being 40:60 percent (female/male). In the IAB the ratio is 1:3 F/M representing a place for more efforts in this regard. The general assembly of the project is once a year with different WP meetings on a monthly basis. There is no Centre sponsored graduate school but many activities are formally arranged in the graduate school fashion. The LUCCI environment has its own PhD-students and some courses are given within the environment. All post-doctoral recruitments are done via international route and only top candidates are recruited.

Co-operation

Collaboration is well described in the report and indicates that a lot of new initiatives within the Linnaeus environment, and between the Linnaeus environment and other parts of the university. Within LUCCI modelling is growing as a mechanism for integrating WPs scientifically. A graduate course integrates across modelling and empirical topics increasing the collaboration. A pool of flexible money has also been used primarily to bring in guest professors and catalyze "the bridging process". However, it appears that LUCCI may still have a rather weak identity and this may be related to the university policy.

LUCCI has developed strong collaborations with other institutions in Sweden. It is worth mentioning that "the Linnaeus process" facilitated fusion of two Departments. LUCCI is an important contributor to ICOS (Integrated Carbon Observation System for Europe) as the national focal point for Sweden.

Leadership

The coordinator reports directly to the Deputy Vice Chancellor. The coordinator allocates 75 percent of his time to LUCCI environment which obviously is an important factor for success. A deputy coordinator should be nominated. A small project office supports the coordinator and takes care of some practical matters, including web pages etc. Description of leadership is simple and clear and gives convincing picture of LUCCI environment.

The Web-site is frequently updated to ensure good flow of information between the participants.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

In conclusion, the LUCCI environment appears to be very successful in most aspects considered by the panel. The organisation of the environment is well structured, the leadership is clear. It has created a lot of new collaboration at different levels and has excellent possibilities to become very visible also internationally.

Recommendation: The panel recommends maintained funding.

Centre for Animal Movement Research (CAnMove)

Organisation

The Linnaeus Centre for Animal Movement Research (CAnMove) is hosted by the Department of Biology at Lund University. This affiliation provides a channel for continuous dialogue with the Vice-Chancellor of Lund University and enhances the visibility of the Centre. Communication with the University administration is also facilitated by dialogue through the deputy vice chancellor. The structure of the project is hierarchical with administrative decisions carried out by the program coordinator, assisted by the project assistant. Planning decisions for the program are proposed by a steering committee, made up of 9 of the 14 Principal Investigators (14PI) making up the Centre. Planning and communication are optimized through monthly meetings of the steering committee and quarterly meetings of the 14PI group. The Steering committee receives advice from a Scientific Advisor Board (SAB). This board has three members at present, but the CAnMove Steering Committee plans to invite two more in the near future. One role of this board is to assist in evaluation of proposals for postdoctoral recruitment. The SAB initially met infrequently with the Steering Committee, but plans to meet on a yearly basis in the future. All CAnMove personnel meet yearly to discuss research, identify cross cutting areas, and share research progress. There is a desire to engage new members in the Centre, but no formal mechanism yet in place for bringing them in. Sustainability of the organisational structure is a bit unclear without this mechanism.

CAnMove is organised into nine Action Groups, each coordinated by one of the 14 PIs and organised around a research theme. Action Groups include PIs, postdocs, associated scientists, PhD students and technical personnel. Action Groups provide a mechanism to increase interactions among personnel, stimulating scientific progress. The Action Group model provides for flexibility in tracking and organising around newly emerging research themes. It also optimizes communication and collaboration across professional ranks. PIs of action groups can apply for funding through "Synergy Proposals" to initiate new research projects. It is not clear that these have been subject to review in the past, but the panel advises that the Centre charge the SAB with this task. CAnMove does not support graduate students. Instead, Centre funding is aimed at strategic hiring of postdocs to integrate between Action Groups. These postdocs represent a source of innovation and energy in the Centre and an effective force for exchange between Action Groups.

Opportunities for new research are created by the nine Action Groups, collaborating among themselves and with partners at university, national and international levels. For example, development of a new system of automatic recording of individually coded transmitters has opened up opportunities to more directly and accurately track migration and habitat use. Similarly, the Nanobiology Action Group is developing techniques to individually track animals as small as macroscopic zooplankton. Collaborating with "Nanocentrum" – another Linnaeus environment at Lund University granted in 2006, this research should create whole new understanding of population structure and dispersal for aquatic organisms. The dynamic and flexible nature of the Action Group organisation coupled with the clear innovation that groups have demonstrated in developing new tools and relationships bodes well for future research in CAnMove.

Communication among sub-groups (Action Groups) is facilitated through 7–10 meetings of the 14PI group yearly to coordinate joint projects, administer the postdoc program, and explore synergistic opportunities for collaboration. Monthly CAnMove seminars and workshops allow for communication of research progress and discussion of joint projects. Communication of findings across the program is

further ensured through Internal CanMove Conferences (one day) every other year. All Associated Scientists and the SAB attend these conferences, providing opportunities for assessment and guidance by the SAB. In addition to these opportunities for formal communication, informal dialogue is promoted through a blog where PIs, postdocs and technical personnel can write about research. This also allows for public input and promotes public engagement with Centre activities.

The newly appointed Program Coordinator is a woman. However, all other members of the steering committee are men and in the 14PI group only three other women are included. Similarly, among associate scientists women are poorly represented: 6/19. Only at the more junior levels: postdoc, PhD and technical support, is this situation improved. One new female associate scientist has been brought on board, a sign that the Centre is taking action to improve the situation. The panel advises that as new members are added to the SAB, a strong effort should be made to insure women are among them.

Co-operation

Conferences have been used to gain international exposure via hosting international symposia related to CanMove research (e.g., International Behavioural Ecology Congress in 2012). To further promote international collaborations the Centre also hosts PhD courses open to the international community. The first of these, in 2009, was a resounding success.

CanMove has done remarkably well in very short time at initiating collaborations with other programs/centres. These have been launched by intentionally sponsoring interdisciplinary symposia that bring in speakers mainly from outside the CanMove research expertise – for example in Physics or Medicine. Key scientific collaborators are: The Lund University Nanometer Structure Consortium, Biophysical Chemistry and Applied Biochemistry and the Bioimaging Centre. Other centres engaged in collaboration with CanMove are Lund Laser Centre, Nanometer Structure Consortium, and the Center for Environmental and Climate Research. These inter-centre and inter-institute collaborations are developing new tools for tracking animal movement that may open whole new research areas.

Collaborations within the CanMove are described as cross-disciplinary though from an outside perspective this seems a bit of a stretch. The questions do address how processes acting at different scales of biological organisation interact (e.g., wing morphology evolution and bird migration). At an organisational level CanMove has functioned well to bring researchers and departments together to develop common interests.

CanMove also contributes to national research initiatives such as SwedishLifeWatch and Global Biodiversity Information Facility (GBIF). The latter collaboration is enhanced by CanMove Technical coordinator's service on the GBIF steering committee. Other collaborations at the national level include Stockholm Resilience Centre. These collaborations are advantageous as they will allow expertise in CanMove to serve research objectives nationally and at the same time give the centre positive public exposure. CanMove has also made strides in science outreach; notably the Coordinator has published a book for the popular press.

Internationally CanMove scientists have initiated strong collaborations with peers in the UK (Exeter Univ.) and at Max Planck. As migration and movement generally are processes that cut across political and geographic boundaries, these collaborations are central to the mission of CanMove.

Leadership

Primary leadership in CanMove is provided by the coordinator with guidance from the steering committee and input from the 14PI group. The coordinator of CanMove has been at the program since its inception. She and the steering committee have a three year initial term. The coordinator has taken leadership courses and participated in Lund University leadership programs. CanMove is doing an excellent job of providing leadership in its scientific domain via offering a highly regarded PhD level

course in Ecology of Animal Migration. Evidence of its high visibility can be seen in the interest of funded Associate Scientists to engage in research at the Centre. The assistant to the coordinator has formulated a communications strategy for CanMove that is currently being implemented.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

CanMove has synergized exciting new co-operative research advances both among programs and globally with external collaborators. Balanced against advances in collaboration is the cautious pace at which administrative mechanisms for conducting the Centre's activities and responsibilities have been implemented. Clear mechanisms are needed for bringing in new action groups, releasing groups when projects are completed, reviewing Synergy Proposals, creating mentoring systems for postdoctoral fellows and junior scientists, and assembling a full SAB. The Steering Board is cognizant of these needs but has acted slowly in fulfilling them. The panel recommends the pace be expedited to ensure continued viability of the Centre.

Recommendation: The panel recommends maintained funding.

Bagadilico – a joint initiative for the development of novel therapies for basal ganglia disorders

Organisation

The deputy vice chancellor for research was appointed by the vice-chancellor as responsible for contacts with all Linnaeus environments at Lund University. Follow-up meetings between the University and the Centre takes place on a regular basis. Such coordinating meetings have also been held with the deans of the participating faculties. The centre is affiliated to the Department of Experimental Medical Science, Faculty of Medicine. The affiliation provides a basis of operation regarding staff-related issues and administrative services including budget and IT, and contributing with aspects such as enhanced marketing and information.

The centre is headed by a coordinator (male) and vice-coordinator (female) on a two year rotating term basis, the vice-coordinator will then become coordinator (switch responsibilities). The Board is made up of participating PIs (of original application) and has responsibilities regarding appointment of coordinator and vice-coordinator, scientific matters, and budget allocations. To support the coordinator and vice-coordinator, an Executive Group of three PIs is in place. The term of office for those in the group is not defined. The Board is aware of gender equality at all levels including the Executive Group. From the Executive Group, the coordinator will be chosen by the Board. The Bagadilico centre has its own (small, three persons) administrative staff and a Science Advisory Board (SAB) of five international scientists.

An important goal of the centre is to foster young scientists to excellence both scientifically and as science administrators. The establishing of a continuous, dynamic administrative structure is in part intended to provide leadership training and mentoring of younger PIs of the Centre. Other training includes a combination of courses at the university level and within the Centre itself. Very interestingly, the mentor program is a research project in itself jointly led by two of the PIs. Mentors from outside of the Centre, but at the university are used.

Revision and renewal of research activities is the responsibility of the Board. For instance, replacement of retiring PI(s) is done by nominations from the Centre PIs and acceptance is by 2/3 majority vote.

Bagadilico is established as an independent structure, even though the PIs are employees of different departments, three faculties, and Lund University Hospital. This creates some problems in management, especially with respect to budgetary matters. At the research side, no conflicts of interest were apparent between the different partners.

University gender policies are acknowledged. Special support (training in management and mentoring) for female researchers in the start-up period is in place. Flexible working arrangements to aid reconciliation of professional and private life for both men and women have been implemented in Bagadilico. Gender representation in leadership appears well taken care of.

Co-operation

The organisation demands good strategies for true interactions and collaborations relevant for the different work packages. Several measures have been adopted. First, the Centre initially asked participating groups to submit project proposals that were reviewed by SAB before the Board decided on funding. In this process, the Board also made strategic choices not only based on scientific strength of

project. Further, the Centre has established several technical platforms that are freely available to the different groups. This is expected to increase insight into novel technologies/approaches and promote interactions. Most importantly, a “Taskforce” has been created that reviews novel interactive projects. The total budget is 2 MSEK and each project may receive up to 400 KSEK. In addition, to strengthen both Centre identity and centre research, the centre supports a series of internal activities (social and seminars, etc) and collaborates with other centres in organising relevant activities.

The Centre is in active contact with relevant industry but at present, no collaboration is established that involves funding from industry. The Centre has also hired a grant manager whose task is to help funding activities.

Leadership

As outlined above, the Centre has chosen to establish a different administrative model than most other centres. Therefore, the leadership role also becomes different. In the start-up period the senior scientists, who have strong experience in leadership, have functioned as coordinator and Vice-coordinator, but over time they will be replaced by younger researchers that have been trained through being members of the Board and Executive Group. The Board is responsible for making decisions on research policies and allocation of resources. Personnel matters are handled by the Executive group. Each PI is responsible for his/her own recruiting of PhDs and postdocs. However, depending on PI affiliations, the different department and faculty have different procedures that have to be implemented. Priorities when allocating funds for recruiting were set in collaboration with SAB. Later, priorities will have to focus on the need of the work packages more than individual projects.

“Day-to-day” economic management is the responsibility of the Executive group.

The Centre has established a communication program. It has a part-time journalist and has established a website, uses for instance Facebook and Twitter.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

This centre seems to be excellently organised and should receive further strong support. It has taken a very brave decision to create an administrative structure that will allow young scientists to develop not only as scientists but also as managers of scientific structures. An additional value is that senior members will free time to be more active scientists contributing to the various research projects. It is also noteworthy that the different departments, faculties and the hospital share responsibilities for the centre and at the same time are willing to hand over authority for both personnel and economy to the centre. The panel was very much impressed with the centre and is of the opinion that it represents an important experiment in a novel model of managing science and thereby possibly creating a new mechanism for motivating research collaboration.

Recommendation: The panel strongly recommends increased funding.

LCCC – Lund Center for Control of Complex Engineering Systems

Organisation

The centre is a joint effort between the Departments of Telecommunications and Automatic Control in the Faculty of Engineering. It is however affiliated with the Automatic Control department, as its director has been appointed coordinator of the Linnaeus centre LCCC.

The organisational structure is based on the LCCC Board, comprised of the 11 PIs of the original proposal. It deals with decisions and strategy for LCCC and reports to the Department Board. On the “informal side” of the organisation chart we find the Steering Committee that meets every second week. The members on the Board of LCCC are those of the Steering Committee minus a student representative and the new junior professor. The reason for having such groups so close in membership with different roles (one informal and one formal) is unclear. The LCCC Board (in contrast to the Steering Committee) meets very infrequently – i.e. twice a year. The Board has official responsibility for deciding about the allocation of funds/development of new areas.

It has to be noted that the double commitment of the coordinator (who is heading at the same time the Automatic Control department) may represent a potential conflict of interest with other sectors of this department. For example, the Board of the Automatic Control department appoints the membership of the LCCC Board. However, the administrative needs of LCCC are well catered by the service of the Automatic control department.

Finally there is mention of a scientific board, which never meets in corpore, and an unconvincing explanation was given for this. An annual meeting of the Scientific Board, face to face, is advisable, while a meeting via video conferencing can be even more easily organised, if the will is present.

Although a number of strategic decisions at start up are detailed in the report, the role and responsibility of such bodies is not described. It was confirmed during the interview that the LCCC Board endorses major decisions, such as adding the domain “Energy” to the collaboration map.

The successful new development around the project eLLIIT has brought hope for additional synergy for recruiting, but has involved postponing strategic decisions as regards recruitment of new scientific staff. Whether this had a positive effect on the LCCC dynamics is not clear.

Teaching is being organised by the departments, and subsequently “bought” by the programs.

Co-operation

The creation of LCCC has had a synergetic effect on the creation of the strategic research area of eLLITT (joint proposal of Lund and Linköping) following a substantial grant from the government. No mention was however made in the report nor during the presentation to potential collaboration with CADICS (the Linnaeus centre at Linköping University) through eLLIIT.

The impact of LCCC on the academic activity is high: six new postdocs coming from international backgrounds, 14 PhD students (both from high numbers of candidates, which is good sign), one new assistant professor; a new master course, a vibrant visitor program. The Theme Semester (visitor programme) is thriving, having attracted 140 visitors. A large number of seminars were organised, and a partnership with Caltech PhD program has been initiated. This seems to be a very ambitious and successful program.

Each PhD student has two supervisors, but before becoming a formal PhD students, the selected candidate must spend 6 to 12 months talking and meeting among the different groups, in order to guarantee that he or she is exposed to different perspective before choosing the subject; it also gives the

possibility to PI to “snap up” the best candidate for their project, basing their decision on observing/measuring the student interest or capacity.

LCCC has an annual general meeting bringing everybody together: It has not been possible to evaluate the effect of such events on the spirit of the internal collaboration.

Leadership

When asked about the process for appointing a new coordinator – something that the project may be faced before its termination – the answer was clear: there is no such plan and it has not been thought about so far. The question of the turnover of the leadership has to be brought up. The positive point, however, is that there is a deputy coordinator; the rest of the leadership appears to be too much centred on the present coordinator. He was for example, often mixing roles in his oral presentation, by quoting that “we will hire professors”, meaning the “department of Automatic Control will hire professors”.

The mentoring effort, targeted for female scientists or for new talent did not seem to be a top priority. While the gender profile of the steering committee remains unclear (2 women out of 10 of the PI's are women, but the LCCC has 11 members), the Board is male exclusively. Roughly one third of the PhD students (7/28) and none of the postdocs are women. The Scientific Advisory Board consists of five men, and it would be advisable to consider adding a couple of members while keeping the gender profile less out of balance. Two out of three of the invited professors (in the Theme Semester program) were women. It was mentioned that twenty years ago there were no female student in the department; therefore some progress has been made with the more balance ratio among PhD (1/3).

The outreach and preparation of uptake by external partners is insufficient as documented. The interface with industry is not formalized, at least not yet. For a project with such a broad spectrum, the potential segments, from technology transfer to dissemination of good practices, are many. Some of the PIs are involved in large standardization consortia, already a valuable channel. Events and seminars have attracted a large public from the industrial world, therefore developing an industrial liaison program, or even setting up an Industry Reference Group, would seem appropriate, in order to leverage all the potential synergies with this category of stakeholders.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

This organisation has some flaws, which need attention. It appears that the leadership of the present coordinator is strong; however insufficient attention has been given to a number of features, typical of an expanding project, such as leadership turnover, unclear processes for decision making leaving too much room for interpretation, expanding collaborations needing prioritization of important actions such as recruitment, mentoring and dissemination plan.

Recommendation: The panel recommends decreased funding.

Thinking in Time: Cognition, Communication and learning, CCL

Organisation

At University level, the Deputy Vice Chancellor (VC) for Research has been appointed by the VC as responsible for the project and there has been a continuous dialogue between the group, Heads of Departments/Centres, Faculties and the University. The Deputy VC for Research has held an individual meeting annually with representatives from the environment and it is envisaged that such meetings will continue. A Coordinator/Director has been appointed for CCL.

However, technically in terms of this project, the Coordinator/Director is over the Deputy Vice Chancellor for Research in his capacity as PI of one of the sub-projects. Such a structure raises conflict of interest and ultimately ethical issues. These were recognised at the meeting and it was suggested that they could be overcome by passing those decisions which raised such conflict of interest issues to the VC. This was not seen by the panel as a credible strategy. Thus, for example, decisions as regards the extent of the co-funding of the project by the University, although taken by the VC, would be influenced by the case made by the Deputy VC for Research, who, in his capacity as Deputy VC for research, would be very aware of the way the argument could be most effectively phrased and, of course, as PI he would have a far more intimate knowledge of this project than he would have of other projects.

The Steering Committee has weekly one hour meetings followed by weekly research seminars. The tasks of the steering committee are clearly identified. Twice a term there are joint meetings of all of those involved in the project (including affiliates) to discuss developments and to plan ahead.

The Steering Committee is headed by the coordinator/director who, with the administrative coordinator, is responsible for reporting to the Dean of the Joint Faculties of Humanities and Theology and to the Head of the Department of Philosophy. It reports on research activities and budget issues to the Deputy Vice Chancellor for Research (who as a PI is a member of the Steering Committee which reports to him). The same confusion around power was evident in the discussion about the replacement of the Coordinator during his sabbatical semester in 2011. There were no procedures as regards such a replacement: the Coordinator saying that the Steering Committee was starting discussions about it, and that the Deputy VC for Research would decide – while the Deputy VC for Research said that it would be the VC's decision.

Much was made in the presentation to the panel of the strategic importance of the Humanities Lab. The Deputy VC, prior to his appointment as Deputy VC for Research had been head of this area, and as such was a member of the Steering Committee. He had been replaced by a female professor who was not a full member of the Steering Committee. This arrangement was said to reflect the decision of the Deputy VC for Research (and was not to be reconsidered until the end of 2010). The panel found this difficult to understand.

The Steering Committee consists of the PIs in the original application who run six different sub-projects (with Deputy project leaders also being identified). One of the PIs is head of two sub-projects. It is surprising that the opportunity has not been taken to allocate one of these to a young scholar to reduce the reliance on the original group, and to provide such a person with experience of project management at Steering Committee level. Reference was made to a colleague taking on more of the work of this PI but little consideration seemed to have been given to allocating to him responsibility for project leadership, and hence membership of the Steering Committee.

Reference is made in the text to the fact that decision making and processes for multidisciplinary projects within Lund University were not transparent at least to summer 2009. It was suggested during the meeting that although this had improved there were still no procedures in place in this context.

It is suggested in the document that Lund's gender policy is implemented in all aspects of the work. PhD students and Associate Professors are balanced in gender terms. There is a lack of diversity on the Steering Committee in terms of gender: four of the five of those on the Steering Committee are men (four out of six if/when the Director of the Humanities Lab is included). It was recognised that this lack of diversity also existed amongst those who were Deputy Project Leaders. It is even more acute at Professorial level, where all are men. It is not clear how the implementation of the University's gender policy will impact on such patterns.

Co-operation

Much was made of the fact that this project involved five disciplines across three Faculties with members from the Dept of Philosophy; the Centre for Languages and Literature; the Dept of Psychology; the Dept of Experimental Medical Science and the Dept of Clinical Sciences, and that the Linnaeus grant had encouraged collaboration between them.

It appeared that resourcing both at an administrative level and ultimately at the level of posts currently came from and seemed likely to continue to come from the Faculty of Humanities, which was seen as the prime host. The CCL is administered by the Dept of Philosophy where the Coordinator/Director is located. There were references to difficulties arising from the different administrative arrangements of the three faculties but no evidence was presented of the ways in which it is proposed to solve such problems or who might do so.

Reference was made to projects where collaboration has been initiated with other departments in Lund. Outside Lund, reference was made to collaboration with other Swedish Universities – including for example, in PhD student courses and shared PhD supervision (with the Linnaeus Centre HEAD at Linköping University; with the University of Gothenburg; Karolinska Institutet etc). There are also references to a range of international collaborations. Some of these seem to be at the level of PhD or faculty exchanges. In addition reference was made to collaborations which may have industrial spin-offs.

There was a strong suggestion that the Linnaeus project has added value by creating synergy and new collaborations at the research level, and it was stressed at the presentation that these collaborations had built on the earlier relationships and shared backgrounds amongst the five PIs.

Leadership

The Coordinator/Director is supported by a Steering Committee consisting of the PIs of the individual research projects. Some PIs will reach retirement age in the project period, and replacements are likely to be chosen from the Deputy leaders, although no specific procedure is in place – and the actual decision making process for identifying future leaders is compromised by the conflicts of interests of those within the decision making structures.

There is an Advisory Board of six people – broadly gender balanced and including mainly international figures. The panel found it difficult to understand why two of the six are from the same Dept of Psychology in the University of Chicago. The frequency with which either face-to-face or video conference meetings will occur was not clear.

It appears that there are currently 13 PhD students (with three others to be recruited). Responsibility for PhD recruitment is seen to reside at PI level with PhDs being allocated to each sub-project, possibly a reflection of a rather unprioritised approach. Reference was made to discussions about the creation of a research school attached to CCL, although it appeared that this had very little substantive reality – and was in any case seen as impossible because of the absence of funding

There is relatively little gender diversity in leadership either at PI or Deputy PI level. There are a number of Associate Professors who are women but (with one exception) these are neither identified as

PIs or Deputy PIs. The fact that the (female) Head of the Humanities Lab has been appointed an Adjunct rather than a full member of the Steering Committee is less than impressive, particularly given the strategic importance of the Humanities Lab.

There is a surprising absence of any reference to mentoring in the text. Its availability at University level was referred to in the meeting. It appeared that outreach activities were delegated to PIs – with e.g. the web pages being revised by the PIs once per term. Individual members of CCL are active in presenting their research in a broad range of contexts and targeted at different stakeholders (including the public, teachers as well as scientific colleagues).

This project asked for 20 percent increase in funding. No budget had been prepared and only the most general discussion had occurred at the Steering Committee about what the extra money might be spent on. The Coordinator suggested that it would be 'mainly used for new PhD students' (with reference being made to the fact that co-financing would be available from the University). It was clear that these PhDs would be allocated on the same basis as the original allocation (i.e. one per sub-project without any attempt at prioritizing). Under further questioning it was suggested that small amounts would also be made available for equipment and new projects.

No resources have been moved from one project to another. It was suggested that 'some new projects will start and some of the existing ones may merge'. However it was envisaged that no change would occur in the overall shape of the project as regards sub-projects or PIs. It was not clear what the process for the prioritizing of particular areas was.

Conclusions and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

The structure in which the Coordinator/Director of the Linnaeus Project was reporting to the Deputy VC of Research, and yet was the line manager of him in his capacity as a PI, was seen by the Panel as very unsatisfactory. It raised conflict of interest and ultimately ethical issues and the panel were not convinced that these could be satisfactorily dealt with by passing what were seen as 'relevant' decisions to the VC. In addition, there were no specific procedures in place for the replacement of the Coordinator/Director, for the sustainability of the Steering Committee, or for its gender balance. Thus despite the fact that the some PIs would reach retirement age during the project, and that it was recognized that the project had been built on shared backgrounds and earlier relationships amongst the five PIs, there was no reference to mentoring in the text. An opportunity to improve the gender balance of the Steering Committee by continuing the representation of the Head of the Humanities Lab on it had been effectively ignored. It was not clear what the processes were for the prioritizing of particular research areas. However the panel saw the most serious problem as the fundamentally flawed nature of the structure and the ethical issues that it raised

Recommendation: The panel strongly recommends decreased funding.

Linnaeus Centre on Social Social Policy and Family Dynamics in Europe – SPaDE

Organisation

The Linnaeus Centre for Social Policy and Family Dynamics in Europe – SPaDE- is in the Demography Unit within the Department of Sociology in Stockholm University. It is seen as of strategic importance by Stockholm University.

At University level, the Vice Chancellor (VC) is responsible for SPaDE. However authority is delegated to a Centre Coordinator who reports directly to the VC on issues related to its research mission, accomplishments and relationship with the larger society. The Coordinator also reports to the Department Chair and through her to the Dean of the Faculty of Social Sciences about day-to-day fiscal, employment and budgetary matters in a relationship of negotiation. The Department of Sociology provides administrative support. The relationship between the Faculty, Dept and Centre, although potentially structurally problematic, works well from the perspective of all those involved.

A steering committee exists to oversee the total structure with representatives from the constituent units. The Steering Committee consists of the Coordinator; Associate Coordinator and a representative of the Swedish Institute for Social Research and of the Dept of Human Geography. It meets once a month and takes decisions about centre membership and affiliation, major budget allocations, and centre policies. It also reviews and decides about candidates for Centre-funded positions.

University gender policies are identified and it is suggested that SPaDE exceeds the University and Departments achievements and goals. The Coordinator and associate Coordinator are gender balanced (a woman and a man). Of those at Professorial level, two are men and one a woman and the overall researcher group includes five men and seven women (the PhD students are all women). Sustainability has been considered and a number of possible future coordinators and associate coordinators have been identified – including women, although the procedure for the identification of the Coordinator is not clear. There are two people identified as responsible for concrete gender strategies (including one at Professorial level), which is impressive. There is also evidence of specific activities to contribute to a gender friendly environment (including seminars on creating a scholarly track record) as well as practices for facilitating work-life balance.

SPaDE supports new research initiatives through a strategy of competitive funding for proposed research by members and affiliates. SPaDE members and affiliates meet three times each year for updates on research progress and plans and to discuss organisational or scientific issues relevant to the Center as a whole.

Co-operation

SPaDE is part of a collaborative structure involving a demography unit in the Dept of Sociology in Stockholm University (SUDA); the Swedish Institute for Social Research (SOFI) and the Dept of Human Geography. Although SPaDE is strongly linked to the Demography Unit (SUDA) it has its own activities.

There are some synergistic connections between SPaDE and Stockholm's Centre for Integration Studies (SULCIS), although a formal meeting has not yet occurred between these two structures. A number of other helpful relationships were identified between SPaDE and other structures within Stockholm University.

A number of other collaborations are referred to both in Sweden and outside it (Norway; Spain; Germany; Italy; Finland; US; Belgium etc). Collaboration is through strategic hires that allow for new linkages within the group and new international collaborations via linkages to those new researchers. The international collaborations seem to be formed in the same way e.g with the University of Wisconsin.

One new collaboration (initiated by SUDA, not SPaDE) is with the European Population Partnership, oriented toward outreach, dissemination of research to policy-makers and the public. SPaDE should be encouraged to invest more in such new initiatives.

There is clear evidence that the Linnaeus Grant has created synergies by facilitating new research collaborations and leveraging grants

Leadership

An overall coordinator and associate coordinator are identified. Although the Coordinator is likely to retire before the end of the grant, there are no procedures in place as regards replacement. There are also no policies as regards faculty mentoring. The panel saw this as an area for future development – particularly in a context where affiliated researchers seemed to be predominantly emeritus

The Steering Committee was seen as the structure which would decide how accumulated funds would be spread over the life time of the project. It was clear from the presentation that if there was a need to close down an existing project, that decision would be taken by the coordinator, albeit after extensive discussion with the Steering Committee.

There are four Doctoral Students affiliated with SPaDE. Reference is made to a new two year Masters degree from Stockholm university in demography as a source of PhD students (this Master's Degree preceded SPaDE). SPaDE sees itself as benefitting from the longstanding higher profile of SUDA. However, raising the profile of SPaDE by attributing research and conference papers to SPaDE could increase PhD recruitment.

SPaDE has appointed a Scientific Advisory Board (SAB) with nearly all international members. It has met once with the Centre members in the context of a workshop with international collaborators. The SAB's primary role is to review, comment on, and suggest changes in the Centre's organisation and overall strategies for research and dissemination. However, beginning in 2010 it is proposed that the SAB will review applications for research support from Centre members and affiliates.

There are strategies for a clear flow of information within SPaDE through workshops, day and half day meetings to provide updates on research and to discuss organisational and research related issues. There is also a web site and a separate working paper series; involvement in the European Population Partnership and seminars oriented to policy audiences and the public are being planned. The external visibility of SPaDE, as a separate entity in its own right could usefully be further strengthened.

The SPaDE structure is relatively flat and flexible with regard to both research opportunity and administrative requirements, enabling SPaDE to recruit scientists who will continue to generate resources for research on social policy and family dynamics in Europe well after the Linnaeus Centre funding has ended.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

This is a worthwhile project which could be usefully enhanced by a clarification of the relationship between SUDA and SPaDE; and by the development of procedures as regards mentoring and the replacement of key personnel.

Recommendation: The panel recommends maintained funding.

Oskar Klein Centre for Cosmoparticle Physics (OKC)

Organisation

OKC is a formally independent centre, attached to Faculty of Science, with twin rooting in Physics and Astronomy. Processes in place are similar to those of the higher bodies of the Faculty. OKC is historically tied to the AlbaNova University Center, and is the extension and continuation of a previous effort in High Energy Astrophysics and Cosmology (HEAC). Therefore it was well positioned to benefit from the outcome of this earlier four-year project at start up. OKC also collaborates with departments and HEAC on graduate education, developing new PhD courses.

The centre is lead by a director reporting to the Science Faculty. The management of the centre itself is relatively flat, comprised of a Steering Group (SG) formed by the 10 scientific leaders of the groups. The 10 original principal investigators form the SG. Three bodies report to the SG: the research groups, the outreach groups and the Forum. The SG decides about strategic orientations, establishes priorities and reallocates funding if needed. An International Advisory Board (IAB) formed of seven members, including five internationals, advises the SG. The SG's formal organisation is lean, but convincing: by laws, regular meetings, minutes are being kept.

Under the recommendation of the IAB, an executive body has been established since the writing of the report and was presented during the interview. This new body is comprised of three persons and includes the coordinator and deputy coordinator and one of the PI's, all present during the interview. Mandates for the SG and the Executive Board are for three years. The SG decide on financial matters, and delegates to the Executive Board for implementation.

The dedicated effort of the critical staff to OKC is of 50 percent for the chair and 75 percent for the co-chair, which is a satisfactory amount.

Co-operation

In order to undertake the study of dark matter and astro particles, OKC is well positioned in terms of access to research infrastructure, such as satellites (for example Fermi) and other large instruments (i.e. the ATLAS detector at the LHC). In addition, the scientific leaders have a high international profile and are involved in relevant collaborations, with potential synergistic effects for the centre. The scientific embedding of OKC is strong at the international level – very little detail is given about the national collaborations.

Scientifically, it is clear that OKC has a strong profile and the high number of internationally competitive applicants received (300) for the first 10 postdoctoral positions offered, confirms it. The strategy of OKC is that the postdoc can choose the group they want to work when joining the centre, a bold dynamic that guarantees highly motivated staff, according to the chair of the SG.

PhD students paid by the Linnaeus grant are very few, but there are about 15 working on the projects, paid for by other funds. The “opportunistic” decision to devote the Linnaeus funds to postdocs was made because of the absence of satisfactory alternative funding possibilities for personnel at this rank. In addition, there seem to have been a “brain drain” in recent years with young PhDs leaving Sweden; there was the hope to attract some of the best postdocs from abroad and that seems to be the case. This strategy of having a pool of postdocs was also seen as very much needed for obtaining permanent professor positions.

Mentoring (junior à senior) is quite strong in that each PhD student, in addition to having two supervisors, is being mentored by a postdoc. This is needed for grooming and training and is a promising strategy.

The effect of OKC on the PhD education curriculum is modest judging by the level of information supplied and from the website: only one course is mentioned in the VC report. This is congruent with the effort of the Linnaeus grant being put on postdocs and visitor's program.

A yearly event is assembling all the participants to the centre (around 90) in order to build team spirit. The Linnaeus grant was essential as catalyst for having Physics and Astronomy working closer, and the group seems to have been quite successful at leveraging new funding and collaborative research from this possibility.

Leadership

The age pyramid of the professors in OKC may require a strategy for the recruitment of young talents who can develop to take leadership position in the future, but little information is given about this beyond the three-year term at the SG. It would be advisable to open a competition for a junior or associate professor and not to rely exclusively on the recently hired postdoc potential, as currently seems to be the case.

The Vice-Chancellor points to a deficit of women in leadership/senior positions in Physics and Astronomy worldwide. OKC has made concrete steps to improve the situation by recruiting 40 percent female postdocs.

The funding situation for 2009 reveals strong support from the University and pooling additional resources has complemented the Linnaeus grant significantly. It is however unclear how this additional funding will evolve for the forthcoming years. OKC has access to two new experiments and may enter into the Cherenkov Telescope Array; extension of new activities come with a cost tag, and the process for setting priorities and phasing out obsolete ones are in place.

The outreach and communication activities of OKC are somewhat modest at present, but were identified in the interview as an area of future growth. It was confirmed to us that a new web site is being deployed, with much more information for "outsiders". The present Web site informs about science, but does little in terms of transfer of best practices; technology achievements etc. The participation in the yearly "Science festival" is a good strategy, and further occasions may need to be pursued. This is helped by the development of an identity for OKC on its own, which is well under way, and by the promised expanded website.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

The group made a case that the Linnaeus grant is being put at optimal usage for generating a new collaborative approach. The innovative strategy to concentrate the efforts on developing a new interdisciplinary culture by attracting young postdocs to work in a unique environment in Sweden by federating the topics (particle physics, astrophysics, and theoretical physics) is very sensible. This project has already achieved a solid record in the area of organisation, co-operation and leadership, proving its capacity to reform itself, and therefore holds a strong potential. Some improvements could not be totally evaluated by the panel, such as the effect of newly formed executive body or the outreach effort.

Recommendation: The panel recommends increased funding.

ADOPT – The Linnaeus Centre for Advanced Optics and Photonics

Organisation

The Linnaeus Centre for Advanced Optics and Photonics (ADOPT) is hosted by the School of Information and Communication Technology within Kungliga Tekniska Högskolan (KTH). Physically, ADOPT is geographically divided between two locations, Kista and Alba Nova, and also between two schools within KTH and a department at Stockholm University (SU). These divisions present challenges for collaboration and require considerable travel for the Coordinator on a weekly basis. The Centre has initiated a discussion at KTH to consolidate resources and personnel at a single site to remove these barriers.

The Centre has four major research groups: Functional Optical Materials, Near Field Optics, NanoPhotonic Devices and Quantum information and Communication engaging about 75 members – 12 professors, 14 Associate Professors, 8 Researchers, 5 postdocs, and hosts 32 PhD students enrolled in other departments at SU. All ADOPT members meet yearly at ADOPT Days. Additionally, the Centre sponsors a Winter School, offering courses on special topics to PhD students. This provides an opportunity for international visibility: for example in 2009, five international speakers took part. The Graduate Curriculum at ADOPT is an element of strength, as is the effort to address needs of international students.

Administration of ADOPT is conducted by a board whose Chairman is the Vice President of KTH and coordinator for the centre, ensuring smooth coordination between the two entities. The Board consists of three project representatives from different research areas, an independent ICT-school representative, and two independent external representatives from outside SU. The board is mandated to decide on research direction and oversee Centre finances, while maintaining KTH as the legal body. The centre coordinator reports directly to the executive board and oversees the day-to-day operations of the centre. A deputy coordinator who serves as Board Secretary assists the coordinator. A group of coordinators representing each of the four research areas manages the centre, directing research in each area. This management group meets once each semester to set research and budget priorities. This budget group submits a proposed budget to the board. Recruiting new strategic hires to enhance ADOPT expertise has been slow. The coordinator suggests delays are due to difficulties in navigating University employment procedures, but leadership of a Centre should have such knowledge/skills in hand. Similarly, ADOPT has not yet appointed an external Scientific Advisory Committee (SAC), and is only beginning to identify possible candidates to serve as members. A plan for assembling the SAC is in place and considers gender balance along with scientific expertise as criteria for the selection process. The SAC will function to help set scientific and outreach priorities.

ADOPT has taken two steps to work toward gender equality: creating professional development workshops and seminars and starting a mentoring program. These are good first steps for retention and recruitment but no substitute for pro-active hiring and promotion policies. The ratio of women to men at senior levels is not acceptable (1:12). At the Associate level it is no better (1:8). And little improvement is shown at more junior ranks. Including more female speakers in seminar series would be an easy but helpful step toward moving the culture to embrace gender balance. Female speakers were responsible for only one of ten winter school talks. KTH does have a strategic plan to correct for gender imbalance, though this is not tailored specifically to the nuances/disciplinary context of ADOPT. For PhD students a new course includes material on culture clashes and research ethics, geared primarily to foreign students. Expanding access to this material to all students would be helpful in promoting cross cultural tolerance.

Co-operation

Within ADOPT, the Linnaeus Grant has led to collaboration between the Optics, Photonics, and Laser physics research groups at KTH and between KTH and the Quantum Optics Group at Stockholm University. Collaborations at this level mainly focus on PhD education. The ADOPT centre researchers also engage in collaboration with colleagues at several other centres of excellence including: Kista Photonics Research Centre, IMAGIC, Aereo Fiber Optic Centre and the Electrum Laboratory. Four areas of synergy have been identified: Functional optical materials, Quantum information and communication, Near-field optics, and Nanophotonic devices. The vision for collaboration with additional national players is not totally clear.

ADOPT encourages collaboration with industry partners by sponsoring Optopubs, workshops and outreach activities including professional development for best physics teaching practices in high schools. Optopubs involve top industrial companies with presence in Sweden and attract 50–60 participants regularly. Collaborative research links ADOPT with centres of excellence internationally including a new EU network of excellence in nanophotonics, and leading groups in photonics in South Korea and Japan. Individual ADOPT researchers have ties to colleagues at Max Planck (Germany), in Prague, at UNAM (Mexico) and Finland among other international partners. ADOPT is initiating industrial collaborations in Sweden engaging Stockholm Photonics and promising start-ups in the Photovoltaic realm. The Winter School also attracted a number of students from other universities in Sweden.

Leadership

Researchers in ADOPT have national and international visibility. ADOPT scientists have been interviewed in the press, have co-sponsored scientific workshops, and have arranged or co-arranged several events in conjunction with the 2009 Nobel Prize in Physics. The Centre is seen as a gateway for public dissemination of knowledge about photonics and optics. It plans on an expanding role as a resource for expanding green industry in Sweden. State of the art scientific advances have been initiated in the first 18 months promising great potential for the future. Nonetheless, ADOPT leadership does not view the centre as a brand. No logotype has been developed; instead international visibility relates to KTH. The coordinator emphasized that funding through Linnaeus is a small fraction of the total budget in Optics and Photonics research. Its major impact has been on facilitating interdisciplinary coordination and collaboration, rather than transforming the visibility of Physics at KTH. ADOPT has an easily navigated website, though its outreach impact could be enhanced.

All ADOPT managers are experienced in leading national and international research projects/programmes, platforms and/or departments. While there is no clear plan for succession of leadership or engaging new more junior scientists in the strategic planning process, none of the leading managers are due to retire within the period of the Linnaeus grant. One member of the board is at the Assistant Professor level indicating that strategic efforts are being made to bring younger scientists into the leadership team. The newly instated mentoring program may offer another mechanism for building sustainability.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

ADOPT has taken some promising steps toward catalyzing collaboration across related disciplines in Physics and in integrating strengths currently separated between KTH and Stockholm University. Impressive international collaborations are ongoing and efforts are in place to enhance relationships with industry. The pace of recruitment at ADOPT has been unnecessarily slow. The Centre's identity and visibility do not appear to be a high priority for members or hosting institutions.

Recommendation: The panel recommends maintained funding.

Umeå Centre for Microbial Research Linnaeus Program, UCMR

Organisation

The Vice-Chancellor is the university responsible authority. The centre has a Board with responsibility for budget allocations. This board has external members (three year appointments) and the Deputy Vice-Chancellor is the Deputy Chair of the Board. The board also has the responsibility of The Nordic EMBL Partnership for Molecular Medicine (MIMS) and “Molecules for the future” (Tromsø collaboration). The members of the Management Group (program management, financial matters, etc) are also members of the Board. Appointments to the Board and Management posts are made by the Umeå University Vice-Chancellor.

The Centre has a Science Advisory Board (3 year terms) that reports to Board and to the coordinator. The Centre has a coordinator and two deputy coordinators and a scientific secretary. The Centre is affiliated with the faculties of Medicine and of Science and Technology. Scientists (PIs and others) are formally employed through departments and Research Centres.

Essential infrastructure is provided through collaboration with other university centres.

UCMR is establishing its own graduate school. The Graduate School program is supported by the Swedish Research Council. The graduate school courses attract students from other countries. UCMR has a postdoc program that helps recruit candidates in collaboration with advice from SAB. Importantly, UCMR also makes use of group leaders (five + four year contracts). A Mentoring program for PhDs will be formalised. In principle it follows the EMBL model as inspired by the EMBL partnership. Each student has/will have two mentors from different groups.

Cooperation

The Linnaeus grant has helped attract new funding. An example was a large new grant from the K. and A. Wallenberg foundation. Additionally, a strategic new initiative has been undertaken to strengthen links to clinical research and promote translational research efforts. To this end, a Clinical Research Fellows Program has been put into action within the environment. This will allow clinical researchers, appointed partly by UCMR (as research fellows with up to 50 percent positions) to work together with the research groups within the environment. There is also a very strong collaboration with MIMS, the “Molecules for the future” and in the field of chemical biology in Sweden and EU activities.

For the recruitment of PhD students and postdocs, UCMR uses the impact and visibility that comes with the collaboration via MIMS.

Leadership

The coordinator and deputies are expected to function throughout the granting period. The leadership team is all very experienced professors, including the scientific secretary. The Board meets twice a year, the Management group meets weekly, and the research groups on a monthly basis.

Strategic matters are discussed first in the Management group and then proposals for action are presented to the Board for final decision. The Management group will have authority to terminate activities.

The budget is relatively fixed for the first five years but adjustments will be handled according to strategic importance.

Gender balance in leadership positions (Board Members and Management Group) is even, however all members of the Scientific Advisory Board are male, representing a missed opportunity for support of female scientists in the centre.

The Centre provides dedicated support to female group leaders to help them achieve professor level qualifications. Three female associate professors receive two year grants of 1 MSEK. New calls will be made based on renewal of money from the university,

UCMR has employed a professional Information and Public Relations Officer who is working in the Management Group and in close contact with the research groups. A well organised and informative Website has also been established. The outreach is aimed at the general public, the medical profession and policy makers.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

This is a well organised centre with a strong leadership structure which seems to be working well. The centre is visible and strong both at the national and international level. Especially, the link between EMBL and UCMR is noteworthy. The gender issue is appreciated, but the Science Advisory Board has only male members. A better gender balance should be implemented. The panel appreciates that strengthening the collaboration and active participation of medical doctors in the research activities is very important. Therefore, funding used for this purpose would strengthen the visibility and success of the centre.

Recommendation: The panel recommends maintained funding

The Linnaeus Centre for Marine Evolutionary Biology (CeMEB)

Organisation

The Centre for Marine Evolutionary Biology (CeMEB) is hosted by the Department of Marine Ecology at the Faculty of Science at Gothenburg. The Centre was initiated by an earlier Linnaeus project, ACME (Adaptations to Changing Marine Environments). The centre is hosted by the Department of Marine Ecology at the Faculty of Science. CeMEB brings together scholars from three departments in the Faculty of Science at University of Gothenburg. These scholars represent 10 different research themes promoting collaboration across departmental lines. The ten research groups are distributed among three sites: the marine research laboratories at Tjärnö and Kristineberg and the departments at the University of Gothenburg. Geographic separation poses no barrier to collaboration, as the Centre has been cognizant of this issue and encouraged networking among researchers to avoid possible problems. In fact, CeMEB itself is an effective mechanism for preventing this isolation within the distributed Department of Marine Ecology. CeMEB addresses most of the challenges (communication, travel, virtual presence, etc.) of collaborating between geographically distributed groups. Research groups are formed informally and by bottom-up processes from research collaborations directed by the thematic topics of the CeMEB programme. This strategy ensures flexibility in exploiting new research opportunities and allows the full community to engage in the planning process. Group formation is reported to a Steering Committee charged with governance of the Centre. CeMEB is aware that more structure is needed for their plans to accommodate new research group formation and to manage, as necessary research group dissolution. Currently, these responsibilities fall on the Coordinator with advice from the Steering Committee.

At Gothenburg, CeMEB works closely with researchers in four research platforms: Theoretical Biology, Integrative Physiology, Ecotoxicology, and Marine Chemical Ecology. Administration of CeMEB is conducted by a coordinator who chairs a Steering Committee of 10 CeMEB researchers. The CeMEB coordinator reports to the Dean of Faculty and Vice chancellor. The coordinator along with the Steering Committee appoints a Scientific Advisory Board, whose mission it is to advise and assess plans and progress for CeMEB activities. The Advisory Board consists of three internationally acclaimed scientists, two from overseas. Plans are in place to expand this to a total of five members, bringing in new expertise in physiology and theory. Lines of communication to faculty and to institutional leadership are ensured by reports of the Steering Committee to the Faculty Board and Vice chancellor. The Scientific Advisory Board meets 2–4 times yearly and reports to the Steering Committee and the Faculty Board. One of its meetings is coordinated with a CeMEB Assembly. The CeMEB decision making structure seems well integrated with the hosting Department and University: for example, the planned recruitment for theoretical competence was solved by Centre/Department cooperation with the Platform in Theoretical Biology providing a faculty position and CeMEB supporting a postdoc and a PhD student.

The CeMEB Steering Committee meets 6–8 times per year and maintains a home page that serves as a virtual meeting space. The Steering Committee is tasked with promotion of a creative and open atmosphere through meetings, seminars and workshops within CeMEB. The Steering Committee also makes decisions about budgeting and invites new researchers along with their PhD students and post-docs to join CeMEB as associate members. Young researchers have the opportunity to replace present Steering Committee members over time, bringing them into the management and decision making

process at all levels. For personnel decisions and financial concerns the coordinator meets weekly with a Research Officer (management team). Currently CeMEB includes 10 Senior Scientists, 14 postdocs, 10 PhD students, 5 technical and administrative staff, and 4 associated senior researchers.

CeMEB has a gender equality plan in place and at present has within a 40:60 gender balance at all levels that is well aligned with the gender equality plan of Gothenburg University. CeMEB is noteworthy as a Linnaeus Centre with a woman Coordinator. Also noteworthy in this regard is development of a Career Support Program for all PhD students and junior researchers. CeMEB recruitment has been somewhat female biased, but overall, the Marine Ecology Department from which CeMEB draws has an even gender ratio. CeMEB is exemplary among Centres in having policies that appear favorable to ethnic and cultural diversity, and a strong non-discrimination policy. Age structure at CeMEB is favorable, enabling a smooth succession and providing a long-term viable environment: 75 percent of CeMEB scientists are early or mid-career.

Co-operation

Collaboration and partnership are the lifeblood of CeMEB strengthening the program organisationally and scientifically. CeMEB includes a highly multidisciplinary array of scientific disciplines with Research Themes integrating broad subsets of these. To promote collaboration, workshops are offered during its twice yearly assemblies that encourage open discussion on topics of interest to students and senior scientists alike spanning a range of priorities within the Centre: research instrumentation and resource acquisition, Centre allocation to outreach and development of best practices in research. Three new collaborations have already been launched in the Centre's first two years. The CeMEB management team plays an important role in promoting these linkages through a creative and an open atmosphere at meetings, seminars and workshops. To strengthen its outreach mission and especially the link between CeMEB science and policy there are plans to link research within CeMEB with social and economical sciences in coming collaborative research. Concrete steps to build competence in translation of research results in to management routines and policy documents are under way, including recruiting of new personnel at senior levels. Similarly, CeMEB is exploring collaboration with industry partners and is taking steps to recruit a senior researcher having a close contact and collaboration with the University of Gothenburg Innovation support system. CeMEB participates in outreach with school children in Marine Biology camps engaging schools in Sweden, Estonia and (with Stanford University) in California.

Other mechanisms for promoting collaboration target junior scientists: e.g., involvement of CeMEB research students in a postgraduate education programme in Sustainable Marine Ecosystems through the Faculty of Science at Gothenburg University and a research school in genomic ecology at the Lund University (GENECO). CeMEB has several innovative elements in its education program to ensure collaboration from the ground up. For example, several "twinning" PhD students and postdocs from different disciplines work closely together. PhD students also have multiple supervisors from more than one research group.

Globally, CeMEB is also evidencing commitment-to strong collaboration, working with the Wenner-Gren Foundation to enhance its visibility and create new opportunities for international research by hosting a high-profile symposium entitled "Evolution, Marine Ecosystems and Climate Change: Prospects and Challenges" in 2012 to which 20 internationally leading scientists in the field of marine evolutionary biology will be invited. Existing international collaborations include projects with scientists at six leading universities, in Europe and the USA.

Leadership

All members of the Steering Committee are internationally recognized researchers, experienced in leading national and international research projects/programmes, platforms and/or departments. The coordinator who formally heads up the Centre and other members of the Steering Committee partici-

pate in an extensive leadership programme offered by Gothenburg University. The Steering Committee is gender balanced and committed to providing opportunities for junior scientists to participate in management and decision-making, allowing professional development of leadership skills. CeMEB also facilitates leadership development in PhD students by funding their travel to international meetings.

CeMEB's domestic leadership in resource management and ocean policy should be enhanced by its extension into outreach. At an international scale, CeMEB is providing resources and expertise on issues related to climate change and ocean acidification. CeMEB is using the Linnaeus grant to leverage funding for development of genomics capacity. Having these facilities on hand will keep CeMEB science at the front line of evolutionary biology. CeMEB deals with issues having substantial socio-economic impact, and is working with policy makers and planning on hiring a communications expert to enhance and manage communication with the public.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

The Panel was impressed with CeMEB's organisation, collaboration and leadership. CeMEB has developed an impressive array of collaborations in the Department of Marine Ecology, nationally and internationally. By innovative mechanisms such as the twinning of PhDs and postdocs and the team-building involved in their Ambassadors program, CeMEB is providing excellent mentoring and professional development opportunities. CeMEB is cognizant of organisational challenges and has plans in place to address these effectively. The panel's recommendation is in light of these accomplishments and their implications for future excellence.

Recommendation: The panel recommends increased funding.

Report on the Impact of Religion: Challenges for Society, Law and Democracy, IMPACT

Organisation

This Linnaeus environment is organised as an interdisciplinary, ten-year research program within Uppsala University, by decree of the Vice Chancellor, giving it a life beyond the current Linnaeus Grant. It is one of the five strategic research priorities of Uppsala University.

The financial administration of the Linnaeus grant is delegated to the Department of Theology, providing a stable fiscal home for the Centre. IMPACT draws researchers and PhD students from the Departments of Law, Theology, Government and Public Health within Uppsala University. In all there are 22 disciplines within the Centre, located in nine departments and across six faculties.

To encourage interdisciplinary collaboration, IMPACT is built upon six thematic research areas, each of them conducting a number of research projects (in 30 different work packages) and aligned with an interdisciplinary group of researchers. Some themes have two theme leaders, so that there are a total of 11 theme leaders. These theme leaders constitute the Programme's Scientific Research Board. Within each theme, the researchers meet four to six times per year and are responsible for coordinating research in their respective themes. IMPACT administrative staff (director, assistants, secretaries, etc) meets weekly. The Steering Group consists of the Programme Director and Deputy Director and three research co-ordinators and meets once a month. The academic members of the Steering Group were appointed by the Faculty.

Decisions as regards funding are taken by the Steering Committee and the Scientific Board – with proposals being made by the Steering Committee for the approval of the Scientific Board. The system for prioritising the over 30 projects across the six themes was not clear. The financial administration of the grant is done by the Department of Theology, where IMPACT is located. The whole research group (42 members) has met so far twice a term for a common research seminar or discussion of methodology (and twice a year is seen as a minimal frequency).

The gender profile of each of these structures is clearly delineated. Both the Steering Committee and the Scientific Board are in the 60/40 range, as are the total number of those involved in the project and younger researchers associated with it. Four of the 11 theme leaders are women. Gender balance is also monitored for the PhD students (two thirds of whom are women). There did not seem to be any clear strategy as regards maintaining or improving the gender profile. However according to the appendix list of personnel there is still a disproportionate number of men (13/16) among the senior rank members.

Co-operation

The main consequences of the Linnaeus Grant were seen as the facilitation of collaborations between Law and Theology; between it and other parts of the University and to a lesser extent between it and other higher educational institutions in Sweden and at international level. At Uppsala University outside of IMPACT, one collaboration was referred to i.e. with faculty in Economics. This probably reflects the fact that IMPACT itself is so pluralistic that most possible collaborators are already represented in the research themes.

Internationally there is engagement with other Nordic countries in NOREL. The organisation of an International (EU) colloquium on interdisciplinary research programmes in religion and society in

Uppsala seems promising and it will be interesting to hear about its success in generating new international synergies for IMPACT. Reference was also made to networks in the UK, Germany, Holland and Switzerland with collaboration in these contexts being at a more preliminary stage.

It was clear that the Linnaeus grant had enabled IMPACT to leverage funding from the University for postdocs. It was also hoped that the provision of a new physical site in the future will enable more of the IMPACT members to be spatially co-located, thus further facilitating improved collaboration among members.

The flow of information is facilitated by the fact that within each theme, researchers meet 4–6 times a year – with representatives from other themes as appropriate. There is a strong feeling that much of the collaboration is driven by individual theme leaders. Furthermore the collective identity of IMPACT did not seem to be very salient – with the main mechanism for facilitating collaboration across the themes being the interdisciplinary theme seminars that were held five–six times a year. However again these were centred on a particular theme.

There is little evidence of cross institutional supervision of PhD students or faculty exchanges. However four new interdisciplinary courses are being taught by collaboration between departments as a result of the Centre's activities.

Leadership

There is a Director and Associate Director. The current Director who is a Professor of Religion, will retire in the next year and a proposal was made by the Steering Committee and accepted by the Scientific Board (consisting of the 11 theme leaders) that the post should be filled on an acting basis until the existing co-ordinator's post as Professor of Religion is filled. It was indicated at the meeting that a (male) Associate Professor will be appointed as Acting Director in the meantime. It was not clear why the Deputy Coordinator was not seen as appropriate for the Acting Director position.

The nature of the Director's responsibilities were not clearly articulated and it appeared that the current Director deferred very much to the Steering Committee and ultimately to the Scientific Board. This likely will evolve as the position is filled by a new senior hire. The panel recommends strongly that women of quality have priority consideration for this position. Currently, decisions as regards the reallocation of resources were seen as being recommended by the Steering Group to the Scientific Board with the International Advisory Board being involved as needed – or alternatively such decisions were taken at theme level.

Given the size of the project, involving more than 40 researchers, it is a little surprising that there are only nine PhD students. PhD students are largely attracted by individual theme leaders. There is some co-supervision of PhD students but it is very much on an ad hoc basis.

It is recognised that dissemination activities have not been fully developed although a number of specific activities were identified: including an attractive web-site, media related activities; special faculty days etc. IMPACT hope to employ someone to undertake outreach activities but in the meantime they rely mainly on their own individual contacts – which in some cases include state agencies as stakeholders. Given the important outreach mission of IMPACT, the panel regards this goal as a priority.

An International Advisory Group consisting of nine internationally recognized researchers advises the Centre. Each member of that group is attached to one of the six research themes (with two advisors being provided to some themes). The group has two important functions: a) to serve as external experts and advisors and b) as an “added resource” in their respective themes, for example, as guest lecturers or as examiners of ongoing research. The Scientific Board will meet together and with the theme leaders later this year. The panel considered that the corporate existence of the International Advisory Board was important and that it should be encouraged to adopt that role rather than having individual members of it relating to individual themes.

There is no reference whatsoever in the report to mentoring. In the interview, the role of the external adviser as a post graduate mentor was stressed. It was also noted that mentoring programmes were provided at Faculty level from time to-time. There was no perceived need for IMPACT to provide any

kind of mentoring experience. Within the context of the distinctive experience and structure provided by IMPACT, the panel recommended that mentoring mechanisms be developed by the Centre for distribution to participating units as a mechanism for facilitating best practice.

Wherever possible, the aim is to involve younger researchers in management functions – as theme leaders and in other organisational tasks. However it was not clear how more junior faculty could move on to become members of the Scientific Board and/or how the membership of the Steering Committee could be refreshed.

A request was made for an additional 250.000 SEK per year for 2011–2013 in total 750.000 SEK to compensate for extra salary costs. It was suggested that if this application was successful, a core work package on secularisation would be developed. The resources necessary for this were thought to be at Professorial and postdoc level (with Doctoral student being funded by the faculty). However in view of the importance of this area, it was suggested that even if additional funds were not forthcoming, this topic would be included in IMPACT's work programme. The panel did not consider that the case for additional resources within the overall context of the application was a compelling one.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

IMPACT is a very ambitious project which is seen by the University of Uppsala as of strategic importance. The sheer span of co-operation involved is very impressive- embracing 42 researchers, across 22 disciplines, nine Departments and six Faculties. The panel makes a number of recommendations about the ways in which it can be strengthened so as to deliver to its optimum level.

Recommendation: The panel recommends maintained funding.

UPMARC – Uppsala Programming for Multicore Architectures Research Centre

Organisation

UPMARC is attached to the Dept of IT at the Faculty of Science and Engineering. It is linked to the Vice Chancellor (VC) of the University through standard report of the faculty. It is rooted in a fertile environment as the University of Uppsala hosts activities of Computer Science and Information Technology research and education, such as eSSENCE, with a good critical mass and on a broad range of applications.

The UPMARC Board, nominated by the Faculty, is the top executive body for matters regarding strategic decision, budget, monitoring and reporting; it meets with a good frequency of four to five times per year. Its interesting composition reflects the stakeholders, with the group leaders, and representatives of the faculty, PhD students and industries.

Administration and operations are the responsibilities of the Executive Committee, chaired by a coordinator, meeting twice per month and supported by the administration of the faculty for Finances and HR. Membership is through being a PI of the proposal (10), four of which have been chosen to be theme leaders. The Faculty appointed the director and the scientific coordinator for the initial period of the grant. The director is considering having a deputy.

The international Science Advisory Board (SAB) (five members) and two thematic groups complement it: the Industry Reference Group (IRG) (three members) and the Education Task force (five). This is a strong organisation, with good mechanisms in place and clear distinction of responsibilities. The director would expect that the SAB could point to possible improvements. The IRG is however limited with two members, but highly effective, therefore it will keep its membership and does not plan further expansion.

Co-operation

The internal communication system seems to be very effective and good instruments of different nature (from seminars to annual retreat) are in place. This project assembles 11 faculty members and a total of 38 persons.

UPMARC is covering the whole range, from PhD, postdocs and Junior professors, reaching the required amount effort by pooling resources from other, mostly individual groups, funds. The first call for candidates PhD, and received a very good response of over 300 applications from a large international background. Nine have been selected and have started last year. Each student has at least two supervisors.

The education program has clearly benefitted from the Linnaeus grant, and there is the vision and the willingness to develop into a national graduate school for Computer Science. Part of the funding is devoted to travel and tuition cost for the students, to ensure they can participate in courses at other universities and/or in the summer school. UPMARC has the vision of its impact at the national level and the capacity and flexibility to implement the related synergies.

National collaborations have unfolded in a reasonable manner: as an example, the connection with SNIC (Swedish Network for Information and Communication) through the PI of Scientific Computing is crucial: this will provide access to large scale computing Infrastructure, a must for the validation

and uptake of the methods developed. For other areas (such as verification and scheduling), valuable collaborations have been selected at international level and will be instrumental for reaching this goal.

Leadership

There are flexible funding schemes to help support the strategic areas of the program. The UPMARC Board makes the final decisions. There is the clear message that young talents will be sought and promoted for the turnover at the Executive Committee.

The communication is based on making the Vision and the Mission of UPMARC well known. The Vision is definitely state-of-the-art as it proposes a change of paradigm in using and evaluating IT platforms based on new concepts related to usage efficiency. The UPMARC site is still a bit dull though and does not reflect yet these “marketing and outreach” concepts. It could be further developed, and there is confidence that this will be achieved.

The gender plan is conscious of the chronic under representation of female researchers in this area (IT) and has set up realistic goals. The targeted proportion may seem low (20–25 percent) but in relative terms this corresponds to almost a doubling of the present proportion, so the effort is significant. A revision of such targets on the higher end after four to five years may be something to consider. The University has a support program for female lecturers, and UPMARC makes use of it. One woman out of five is in the SAB: this proportion is still too modest; efforts can be deployed to improve this.

The spending pattern has been relatively slow for personnel, and this may be due to the clever way other source of internal funding have been mobilised. The ambitious plans of UPMARC have already reserved all the available funds and UPMARC will make an efficient use of them as the phases unfold.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

Excellent management team, good organisation, dedicated staff working around a common, clear vision. This project has the potential to establish or participate in larger international collaborations, and should consider moving more boldly in this direction.

Recommendation: The panel recommends maintained funding.

The Uppsala Centre for Evolution and Genomics, UCEG

Organisation

The Uppsala Centre for Evolution and Genomics (UCEG) is hosted by the Department of Evolution, Genomics and Systematics at the Faculty of Science and Technology at Uppsala. Physically, UCEG is located at the Uppsala University Evolutionary Biology Centre (EBC), UCEG integrates research groups from three departments at EBC within the areas of genomics and evolution. The Centre consists of six full members along with their research groups of 5–10 PhD students and postdoctoral fellows. All UCEG members meet weekly at a seminar series allowing members and associated members to share research progress. To date, UCEG has identified 13 younger group leaders who share a common interest in genomics at EBC and who have been affiliated as associated members. Funds are allocated for engagement of affiliated group leaders who may broaden the disciplinary scope of UCEG. Close relationships between UCEG and administration of EBC may create opportunities to coordinate recruitment of new faculty/members. However, there are no formal mechanisms in place for recruiting new Centre members from affiliates or for replacing Centre members if their service is terminated. These responsibilities would fall to the Faculty Board who are not experts in the UCEG research domain.

The Centre hosts an associated graduate school taught mainly by international scientists, providing unique training opportunities at the PhD level. In addition to courses focused on methods and special topics, the Graduate School provides training in several aspects of professional development. Because UCEG is not authorized to accept PhD students, it depends on close coordination with Departments at EBC to recruit PhD students to its Graduate School.

Administration of UCEG is conducted by a Director along with a Board of five professors appointed by the Faculty of Science and Technology and charged with formulating the Centre mission and instructions. The Board reports to the Faculty Board ensuring close lines of communication between the Centre, hosting Faculty and institutional leadership. Four board members have appointments outside the Departments to which UCEG members are affiliated. The fifth is the Centre's Director. UCEG also has an external Scientific Advisory Committee (SAC) comprised of internationally prominent scientists from the UK and USA. The SAC provides advice for future directions and will review proposals for funding through UCEG to encourage new collaborative research beginning at its first meeting with Centre personnel, May 2010.

The Director of UCEG is responsible for organising the seminar series, maintaining the web page, and organising other day-to-day activities. It was not clear to the panel that other members of the Center actively participate in its administration. There is no formal mechanism for such participation since weekly meetings (the seminar series) leave only 20 min for Centre business. The Director has additional administrative responsibilities as Section Dean for the Biology Department, potentially restricting time he can devote to the Centre.

UCEG has a gender equality plan in place as a part of Uppsala University and presently has equal gender representation at the level of Full Members and on the SAC. This is not the case for affiliated members, but the Board states that it is working to remedy the under-representation of women affiliates by targeting promising female scientists. Two of three new affiliates are women. Women account for 35 percent of UCEG post-docs but 62 percent of PhD students. The Centre has an excellent incorporation of cultural and ethnic diversity with 15 different nationalities represented in its staff.

Co-operation

Three of the six UCEG full members are lead researchers at the Science for Life Laboratory Uppsala (SciLife-U) providing links to other areas of Uppsala University that exploit genomics tools. This integration could provide a basis for new collaborations aimed at exchanging research strategies and insights between evolutionary genomics, molecular and clinical medicine. UCEG also is closely tied to the Uppsala Multidisciplinary Centre for Advanced Computational Science (UPPMAX) facilitating data storage and high performance computing. UCEG is engaged in a series of cooperative hires with EBC that should extend its disciplinary focus and, if done strategically, open new collaborative opportunities among members.

As it stands, such collaboration is evident, but very modest, largely reflecting relationships that preceded Linnaeus funding. Targeted funding to affiliates may promote new collaboration with members.

UCEG does not appear to have a strategy in place for promoting cross-fertilization among its members (e.g., through workshops open to all ranks) but seems instead to depend mainly on PI to PI contacts. The Director described expansion of research within a PI's laboratory as an example of collaboration. Overall, collaboration within the Centre among groups appears to be only incrementally enhanced relative to its status prior to Linnaeus funding. Co-advising of graduate students may offer a mechanism to improve collaboration among labs. A yearly retreat is also planned as a mechanism to encourage exchange of ideas among members, affiliates and PhD students.

Members of UCEG collaborate modestly with researchers at other institutions of higher education in Sweden (e.g. at Lund University), but the primary strength of collaborations is international. Collaborative research ties UCEG members to leading researchers at Max Planck, Wageningen University, University of Zurich, University of Warwick, Helsinki University and the Santa Fe Institute among others. UCEG research is also branching into collaboration based on societal needs, including use of genomic approaches for monitoring endangered species. UCEG members personally are engaged in outreach activities; however these are largely similar to activities that preceded the Linnaeus grant.

Leadership

All members of the Board are internationally recognized researchers, experienced in leading national and international research projects/programmes, platforms and/or departments. The Scientific Advisory Committee is made up of four members who are internationally prominent Evolutionary Geneticists. However, there is no clear plan to build on Centre identity and indeed the Director sees the Centre as having a limited life span that should end with the termination of Linnaeus Funds. There is also no clear plan for succession of leadership or engaging new more junior scientists in the strategic planning process. Nor is a mentoring system in place for developing leadership capacity in affiliates or post-docs. The Uppsala administration does not appear to view UCEG as a high priority although they appreciate the Linnaeus funding.

Conclusion and recommendation

The Expert Panel reviewed 20 Linnaeus Environments for progress in three areas of administrative structure: organisation, co-operation and leadership. The panel made recommendations based on the extent to which progress in each of the three areas, along with specific indicators, was achieved due to the Linnaeus funding. Panellists also noted the extent to which each Linnaeus environment was sufficiently embedded within the University organisation and the extent to which each structure was innovative in their structure for sustaining interdisciplinary projects.

UCEG has little identity as a Centre and it is unclear that its formation has more than incrementally enhanced collaboration among members. Although individually members are excellent researchers engaged in outreach and international collaboration, most of these collaborations preceded UCEG and continue along with it. There are no clear administrative mechanisms for recruiting new members, mentoring, or replacing/terminating under-performing groups. The panel is not fully optimistic about the future impact or visibility of this Linnaeus Environment.

Recommendation: The panel strongly recommends decreased funding.

APPENDIX 1

Instructions for reports from the Universities which received Linnaeus Grants in 2008

It is now time for the first step of the evaluation of the 2008 Linnaeus grants. According to the conditions for the Linnaeus grants, evaluations will take place at three occasions: after 1.5 to 2 years; after 5 years; and after ending of the granting period. The first evaluation, including interviews conducted by an international evaluation panel, will take place during the spring of 2010. *The organisation, cooperation and leadership* for each Linnaeus environment are to be evaluated, in accordance with the agreements. Thus, the focus will be on these aspects rather than on the scientific achievements, which will be the focus of subsequent evaluations.

As a consequence of the evaluation, the support can either be continued at the same level; or increased or decreased up to a maximum of 20 percent of the grant for each Linnaeus environment. You should be aware of the fact that within the framework of the total budget for the Linnaeus programme, no increases can be made. Thus, possible increases in economic support for some Linnaeus environments will have to be balanced with corresponding decreases for other Linnaeus environments.

A panel of international scientific experts with complementary scientific expertise relevant to the 2008 Linnaeus programme, and with competence and experience in appraising the areas of organisation, cooperation and leadership, will be selected. The task of the panel will be to assess the reports from the Linnaeus environments and to undertake interviews. The work of the panel shall result in a report to the Swedish Research Council (VR) and the Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (Formas).

These instructions outline the content of the report required from each of the Linnaeus environments. The first question is to be answered by the Vice-chancellor of the University and the other questions by the Coordinator of the Linnaeus environment.

The report must be written in English and should not exceed 15 A4 pages, including appendices. The Times New Roman typeface, 12 points, should be used. The answers to questions nr 1a, 2a, 3c, 4 and 5 can be complemented by charts, lists or tables in accompanying appendices – but in such case, please remember that these should be included in the maximum 15 pages. The report including the appendices should be submitted by e-mail in PDF format to Maud Quist at the Swedish Research Council, Maud.Quist@vr.se, no later than February 1st of 2010.

Questions regarding these instructions can be directed to Maud.Quist@vr.se, Sten.Soderberg@vr.se or Margareta.Eliasson@vr.se.

Instructions for the report

Question to the Vice-chancellor of the University

1. Organisation, leadership and collaboration at University level

a) Describe how the Linnaeus environment has been organised within the University, including the management by the Vice-chancellor and the reporting to him/her by the Coordinator of the Linnaeus environment and the research groups. Optionally, you can as appendix 1 provide an organisation chart to illustrate how the Linnaeus environment is organised within your University and how it is related to other organisational parts of the University.

b) How does this Linnaeus environment interact with other research areas within your University, and to what extent does this contribute to the total capacity of research at the University? What synergistic effects has this Linnaeus grant had within your University so far? E.g.

- New collaborations between research groups and institutions?
- New projects?
- New or additional grants?
- Effects on PhD studies, courses, training?
- Effects on leadership?
- Other effects?

c) What University policies relevant to the gender profile of those involved in Linnaeus environment exist -particularly those related to its leadership? How have these policies been implemented?

Questions 2–7 should be answered by the Coordinator of the Linnaeus environment

2. Organisation and leadership of the Linnaeus environment

Describe the organisation and leadership of the environment. The following aspects are relevant:

a) Outline how the Linnaeus environment has been organised. Describe special features, strengths and weaknesses of the organisation of the Linnaeus environment. To what extent does the current organisation of the Linnaeus environment provide a long-term viable and stable environment? You can as appendix 2 provide an organisation chart to illustrate how the Linnaeus environment is organised.

b) Foreseen, planned or needed changes in organisational structure? When? Why?

c) To what extent is the Linnaeus environment a separate organisational structure within the University? Give examples, e.g: How often does the Linnaeus environment have its own separate “Linnaeus environment meetings”? Does the environment have its own PhD students? State website address (if any) of the Linnaeus environment and indicate how often the information on the website is updated; etc.

d) Leadership and management

- Account of leadership experience
- Plans for continuity of leadership over the full granting period
- Gender profile of leadership
- Management structure for dealing with issues related to personnel and financial matters
- Decision-making processes for budget allocations
- Is there a scientific advisory board? If yes, according to which principle(s) is it composed, what is its role and how often does it meet?

- e) Strategic decisions. Please describe and comment on the following:
- What provisions are taken for recruitment of PhD students and post docs?
 - Strategy for recruitment of researchers or research groups
 - Strategy for how to settle new groups or dissolve groups, if needed.
 - Strategies for gender equality: What provisions are taken to promote increased participation from the underrepresented gender? At the level of leadership and management? Post graduates? Staff? With what success to date?
 - Is there a communication strategy?
 - Other strategies that you would like to mention?

3. Brief description of the research performed so far

The evaluation panel will have access to the original call for applications, the application and the subsequent decision and conditions for your Linnaeus grant. Thus, we do not need a detailed or far-reaching description of the content of research and its results so far. This will be the focus of the mid-term evaluation after 5 years. In this report, we ask you to focus on the start-up period and the kind of scientific achievements that has been initiated or performed so far, in the light of the following questions:

- a) Are there any revisions of the long-term plans or goals given in the application? Why/why not?
- b) Start-up research activities. Have there been any delays? Have resources been moved from one research group to another during the granting period so far? If so, for what reasons? Comment especially on any unforeseen activities *apart from and beyond* the original objectives specified in the application.
- c) Give brief examples of scientific results achieved so far. To what extent have scientific results been internationally published in refereed journals? Optionally, you can as appendix 3 provide a list of selected publications – if there are any so far – chosen to illustrate the research of the Linnaeus environment since its start in 2008. (Note: We do not expect or need extensive or complete publication lists for this first evaluation).

4. Collaboration

Describe, when appropriate, the following aspects of *new kinds* of collaboration that have resulted *wholly or partly* from the research funded by the Linnaeus grant. No extensive list of collaboration projects is expected or needed, but please give illustrative and relevant examples of new kinds of collaboration. Examples include both bi-lateral cooperation and agreements to participate in a network, consortium, multi-centre study and other initiatives. Collaboration projects etc. that already existed before the Linnaeus grant was given should not be included here.

Identify new kinds of collaboration that have resulted *wholly or partly* from the research funded by the Linnaeus grant

- a) Within the Linnaeus environment,
- b) Between the Linnaeus environment and other parts of your University,
- c) National collaboration with researchers or research groups at other Higher Education Institutions in Sweden,
- d) International collaboration,
- e) Collaboration with industry and/or other parts of society.

For each of these types of collaboration, describe as far as possible actual and/or potential synergy effects.

5. Participating personnel

Please use the table named appendix 4 (see end of this document) as a template for presenting the persons actively participating in the Linnaeus environment.

6. Budget and financing of the Linnaeus environment

This information should preferably be presented in one or more tables as appendix 5.

a) An economic report covering the period 2008-07-01 to 2009-12-31, including:

- Income/received contributions, in cash or in kind, the latter being stated in terms of its value in SEK, divided into – the Linnaeus grant -co-financing by the University -external contributions relevant to the Linnaeus environment.

- Costs
 - for personnel, including social-security contributions
 - for equipment
 - additional for research (running costs)
 - for knowledge dissemination – including conference organisation and participation
 - for premises
 - for University overhead
 - for administration and other costs – please specify

Is the result in agreement with the finance plan given in the application for this period? Please comment.

b) A finance plan covering the remaining period including costs and support from the University (in cash or in kind, the latter being stated in terms of its value in SEK) and all expected external contributions relevant to the Linnaeus environment

Does the finance plan for the same period correspond to the one given in the application? Please comment.

7. External communication/dissemination

What efforts have been made so far to disseminate information about the activities and results from the research funded by the Linnaeus grant to different target groups?

Please note that that this question does not seek to capture details of scientific presentations made to your peers in academia. Examples of communication/dissemination activities to include here are presentations made or planned to the public, policy makers, research agencies, etc.

Appendices

Note: If these appendices are used, they should be included in the maximum 15 pages of the report. If appendices are used, they should normally not be more than one (maximum two) A4 pages each.

Appendix 1 (optional). Organisation chart illustrating how the Linnaeus environment(s) is/are organised within the University and how it is related to other organisational parts of the University.

Appendix 2 (optional). Organisation chart illustrating how the Linnaeus environment is organised.

Appendix 3 (optional). List of selected publications chosen to illustrate the research of the Linnaeus environment since its start in 2008. (Note: We do not expect or need extensive publications lists for this first evaluation).

Appendix 4. Table for presenting the persons participating in the Linnaeus environment (see template).

Appendix 5. Economic report and finance plan of the Linnaeus environment (see question 6 for details).

APPENDIX 2

Schedule for interviews with representatives from the Linnaeus environments 11–16 April 2010

The interviews will take place at the Swedish Research Council (Vetenskapsrådet), Klarabergsviadukten 82, Stockholm. Room Valen.
Participating persons beyond the expert panel and the secretariat are listed in the schedule below.

Sunday 11 April

18.00–19.30 Preparation meeting at Sheraton Stockholm Hotel, Tegelbacken 6, Mäklarsalongen B.

Arne Johansson, Swedish Research Council
Bengt Ohlsson, Swedish Council for Environment, Agricultural Sciences and Spatial Planning (Formas)

19.30 Dinner

Monday 12 April

9.00–10.00 Internal panel meeting

10.15–11.00 **Stockholm University**
Linnaeus Centre on Social Policy and Family Dynamics in Europe (SPaDE)

Vice chancellor, Prof Kåre Bremer
Coordinator, Prof Elizabeth Thomson
Prof Gunnar Andersson
Prof Bo Malmberg
Researcher Marie Evertsson

11.30–12.15 **Chalmers University of Technology**
Centre for Bio-inspired Supramolecular Function and Design, SUPRA

Vice-chancellor Karin Markides
Coordinator Bengt Nordén
Björn Åkerman

12.45–13.45 Lunch

13.45–14.30 **University of Gothenburg**
The Linnaeus Centre for Marine Evolutionary Biology CeMEB

Coordinator Kerstin Johannesson
Research officer Eva Marie Rödström
Senior researcher and member of the steering committee Henrik Pavia
Post Doc David Kleinhans

- 15.00–15.45 ***Linköping University***
Control, Autonomy, and Decision-making in Complex Systems, CADICS
- Vice chancellor Mille Millnert
Coordinator Lennart Ljung
Patrick Doherty
Anders Ynnerman
Fredrik Gustafsson
- 16.15–17.00 ***Linköping University***
Linnaeus Centre for Research on Hearing and Deafness, HEAD: Excellence in the field of Cognitive Hearing Science
- Vice chancellor Mille Millnert
Coordinator Jerker Rönnberg
Mary Rudner
Ingrid Johnsrude
Bengt Westerberg
- 17.00–19.00 Report writing
- 19.30 Dinner

Tuesday 13 April

- 9.00–9.45 ***Lund University***
LUCID Lund University Centre of Excellence for integration of social and natural dimensions of sustainability
- Deputy vice-chancellor for research, prof Sven Strömqvist
Coordinator, prof Lennart Olsson, LUCSUS
Prof Alf Hornborg, Human ecology
- 10.15–11.00 ***Lund University***
Lund Centre for studies of Carbon Cycle and Climate Interaction, LUCCI
- Deputy vice-chancellor for research, prof Sven Strömqvist
Coordinator Anders Lindroth
Lena Ström
Svante Björck
Vivi Vajda
- 11.30–12.15 ***Lund University***
Centre for Animal Movement Research (CAAnMove)
- Deputy vice-chancellor for research, prof Sven Strömqvist
Coordinator, prof Susanne Åkesson
Prof Lars-Anders Hansson, steering committee
Dr Helena Westerdahl
Dr Johan Bäckman

- 12.45–13.45 Lunch
- 13.45–14.30 **Lund University**
 Bagadilico – a joint initiative for the development of novel therapies for basal ganglia disorders
- Deputy vice-chancellor for research, prof Sven Strömqvist
 Coordinator (shared) Patrik Brundin
 Coordinator (shared) Cecilia Lundberg
 Administrator Martha Escobar
 Researcher Elin Bommel
- 15.00–15.45 **Lund University**
 LCCC – Lund Center for Control of Complex Engineering Systems
- Deputy vice-chancellor for research, prof Sven Strömqvist
 Coordinator, prof Anders Rantzer
 Prof Rolf Johansson
 Lecturer Charlotta Johnsson
 Prof Karl-Erik Årzen
- 16.15–17.00 **Lund University**
 Thinking in Time: Cognition, Communication and learning, CCL
- Deputy vice-chancellor for research, prof Sven Strömqvist
 Coordinator Peter Gärdenfors
 Birgitta Sahlén
 Germund Hesslow
- 17.00–19.00 Report writing
- 19.30 Dinner

Wednesday 14 April

- 9.00–9.45 **The Royal Institute of Technology**
 ADOPT – the Linnaeus center for Advanced Optics and Photonics
- Vice-chancellor Peter Gudmundson
 Coordinator, prof Gunnar Björk
 Deputy coordinator, prof Fredrik Laurell,
 Prof Min Qiu, Board member and Scientific coordinator Nanophotonic devices
 Assoc prof Carlota Canalis, Board member
- 10.15–11.00 **Stockholm University**
 The Oskar Klein Centre for Cosmoparticle Physics (OKC)
- Vice chancellor, prof Kåre Bremer
 Coordinator, prof Lars Bergström
 Prof Claes Fransson
 Prof Sten Hellman

11.30–12.45 Lunch

12.45–13.30 **Umeå University**
Umeå Centre for Microbial Research Linnaeus Program, UMCR

Vice chancellor Göran Sandberg
Coordinator, prof Bernt Eric Uhlin
Assoc prof Debra Milton
Prof Mikael Elofsson
Prof Maria Fällman

13.45–14.30 **Karolinska institutet**
The Human Regenerative Map, THRM

Prorektor Jan Andersson
Director Jonas Frisén
Co-director Kirsty Spalding
Marta Paterlini
Mehran Salehpour

15.00–15.45 **Karolinska institutet**
Linné Centre for Prevention of Breast and Prostate Cancer: CrisP

Prorektor Jan Andersson
Director Henrik Grönberg
Co-director Kamila Czene
Yvonne Brandberg
Lars Egevad

16.15–17.00 **Karolinska institutet**
Center for Research on Inflammation and Cardiovascular Disease, CERIC

Director Göran Hansson
Co-director Marie Wahren-Herlenius
Mona Stähle
Jesper Haeggström

17.00–19.00 Report writing

19.30 Dinner

Thursday 15 April

9.00–9.45 **Uppsala University**
The impact of religion: Challenges for Society, Law and Democracy, IMPACT

Vice chancellor Anders Hallberg
Coordinator, prof Anders Bäckström
Prof, assistant director Maarit Jänterä-Jareborg
Assoc prof director Per Pettersson
Guest prof Grace Davie

10.15–11.00 **Uppsala University**
UPMARC – Uppsala Programming for Multicore Architectures Research Center

Deputy Vice chancellor Joseph Nordgren
Coordinator, prof director Bengt Jonsson
Ass director Roland Grönroos
Prof Erik Hagersten
Ass lecturer Elisabeth Larsson

11.30–12.15 **Uppsala University**
UCEG The Genomics of Phenotypic Diversity in Natural Populations

Vice chancellor Anders Hallberg
Deputy Vice chancellor Joseph Nordgren
Coordinator, prof, director Hans Ellegren

12.45–14.00 Lunch

14.00–20.00 Report writing

20.30 Dinner

Friday 16 April

9.00–11.30 Report writing

11.30–12.30 Lunch

12.30–15.00 Report writing

15.00 Closure of meeting

Expert panel:

Professor Pat O'Connor, University of Limerick, Ireland (Chair of the panel)
Professor Candace Galen, University of Missouri-Columbia, USA
Professor Johan R. Lillehaug, University of Bergen, Norway
Dr. Marie-Christine Sawley, ETH Zurich, Switzerland
Professor Kalervo Väänänen, University of Eastern Finland, Finland

Secretariat:

Margareta Eliasson, Swedish Research Council
Sten Söderberg, Swedish Research Council
Maud Quist, Swedish Research Council

APPENDIX 3

Short biographies of the panel members

Pat O'Connor

Professor Pat O'Connor Ph.D (University of London); M. Soc Sc (1st, UCD); B. Soc Sc (1st, UCD). Professor Pat O'Connor is a member of the Executive of the University of Limerick (Ireland) as Dean of the Faculty of Arts, Humanities and Social Sciences. A Professor of Sociology and Social Policy at that University since 1997, she was previously employed at Bedford and Royal Holloway College, University of London; the National Institute for Social Work, Tavistock Place, London; Waterford Institute of Technology; The Economic and Social Research Institute, Dublin. She has published five books; over 40 refereed journal articles; 15 chapters and roughly 30 other publications. Her research interests revolve around gender, and particularly its structural and cultural manifestations. She is currently involved in a cross-national study of Higher Education. She is a reviewer for the European Science Foundation; an invited member of NORFACE Think Tank; member of the Council of the Economic and Social Research Institute; member of a number of Advisory Boards and was previously a member of the Linnaeus International Expert Panel.

Candace Galen

Candace Galen is a professor of Biological Sciences at the University of Missouri, Co-Director of the NSF-funded MU UMEB program, "Training Ecologist Doctors for the 21st Century" and an elected fellow of the American Association for the Advancement of Science. She received her PhD in Botany in 1983 from the University of Texas at Austin, spent two years at the University of Toronto as a Postdoctoral Fellow in the Zoology Department and joined the faculty at MU in 1990. In 1995–6 she served as a Program Officer for the National Science Foundation. Her research, funded by the National Science Foundation, addresses sensory ecology in plants with a focus on the roles of floral volatiles in plant-insect relationships and the role of light in plant-plant interactions. Professor Galen has served as an Associate Editor in Chief for Ecology, the flagship journal of the Ecological Society of America, from 2001–2010. She teaches undergraduate and graduate courses in evolutionary biology, ecology and science outreach. She has published more than 70 refereed articles in the past 30 years.

Johan Lillehaug

Johan R. Lillehaug is a Professor in Biotechnology at the Department of Molecular Biology, University of Bergen, Norway, and Chairman of that same Department since 2004. Lillehaug received his Ph. D. at the University of Bergen in 1978. He has been a research scholar and a visiting professor at the Comprehensive Cancer Research Center, University of Southern California, Los Angeles at three occasions, and twice a visiting professor at INSERM Unite 496, Centre G. Hayem, Hopital Saint Louis, Paris, France. Professor Lillehaug's main research interest is in the field of molecular mechanisms of signal transduction. He has been leading his own research group since 1983. Lillehaug was the Norwegian PI of the first complete bacterial genome project in Norway, "Sequencing of the *Methylococcus capsulatus* genome" (GABI). He is one of the founding members of The Locus for Experimental Cancer Research, Faculty of Medicine, University of Bergen (1997–2007). Lillehaug was the Norwegian government representative to the Council of European Molecular Biology Laboratory (EMBL)(1991–99). Lillehaug has been President of the Norwegian Biochemical Society 2004–2006 and a member of the Steering Committee for the Nordic Centres of Excellence in Molecular Medicine, 2005–2010. He has extensive teaching experience at all levels in general chemistry, organic chemistry, biochemistry and molecular biology. Johan Lillehaug has published 166 refereed research articles and reviews.

Marie-Christine Sawley

Marie-Christine Sawley graduated in physics and engineering at the Swiss Institute of Technology, Lausanne (EPFL) in 1980, and completed a PhD in plasma physics at the CRPP-EPFL in 1985 on analytical and numerical studies of the coupling phenomena between electromagnetic waves and magnetically confined plasmas.

She worked in 1987–1988 as a post doc at the University of Sydney in Australia. In 1988, she was appointed head of the User Consulting Group at the Scientific Computing Centre of the EPFL, to become in 1993 Support Team manager of the CRAY-EPFL Partnership program on Parallel Applications, and part of the SwissTX team. From January 2000 until mid-2003, she worked at the VP Research on a portfolio of strategic partnerships.

Dr. Sawley was nominated General Manager of CSCS, the Swiss Supercomputing centre on July 1, 2003 (15 millions CHF annual budget, 35 employees). Under her leadership, CSCS renovated significantly its HPC infrastructure (first centre in Europe to offer services on a CRAY XT₃), started deploying the Swiss Tier2 for LCG, and introduced operations under 4 year-performance mandate. Joined the ETHZ group at CERN in January 2008, working on the large computing requirements of the CMS collaboration.

As a specialist of all layers of the infrastructure for scientific computing for more than two decades, she has been active in a number of conference program committees, technology selection committees, white papers editor and as a speaker. She was one of the proponents and drivers for establishing the Vital-IT centre of the Swiss Institute for Bioinformatics in 2002. She has been also conducting some activities in the area of scientific and technology outreach (for the EPFL CRAY collaboration in 1994–1995, EPFL-Alinghi in 2002–2003, ETH Zurich and Swiss industries for building the CMS detector at CERN in 2008).

Kalervo Väänänen

Kalervo Väänänen got his M.D. 1977 and PhD 1980 at the University of Oulu, Finland. He got a license in clinical pathology in 1986 and was appointed to be a Professor of cell and developmental biology in 1989 to the University of Oulu. In 1996 he was appointed to be a Professor of medical cell biology in the University of Uppsala, Sweden. From 1998 to 2009 he worked as a Professor of cell biology in the University of Turku, and is presently Academic Rector of the University of Eastern Finland. Professor Väänänen has published about 300 original and review papers in scientific journals and holds a number of patents. He has obtained several awards, including Inno-Suomi Prize (presented by President of Finland) in 2001 and SalusAnsvar's Nordic Prize in Medicine and he was invited to be a Member of Finnish Academy of Sciences and Letters in 1998. Professor Väänänen has acted as a Chair of Health Research Council in the Academy of Finland from 2004 to 2009.

APPENDIX 4

Abbreviations and acronyms used in the report

AAAS	American Association for the Advancement of Science
ACME	Adaptations to Changing Marine Environments
ADOPT	The Linnaeus Centre for Advanced Optics and Photonics
B Soc Sc	Bachelor of Social Science
Bagadilico	A joint initiative for the development of novel therapies for basal ganglia disorders
CADICS	Control, Autonomy, and Decision-making in Complex Systems
CAnMove	Centre for Animal Movement Research
CCL	Thinking in Time: Cognition, Communication and Learning
CeMEB	The Linnaeus Centre for Marine Evolutionary Biology
CERIC	Center for Research on Inflammation and Cardiovascular Disease
CERN	European organisation for nuclear research
CHF	Swiss Franc
CIRCLE	Centre for Innovation research and Competence in the Learning Economy
CMB	Department of Cell and Molecular Biology
CMM	Department of Medicine
CMS	Compact Muon Solenoid
CRAY	US IT company specialized in Supercomputers
CRAY XT3	A supercomputer
CrisP	Linné Center for Prevention of Breast and Prostate Cancer
CRPP	Plasma Physics Research Centre
CRPP	Centre de Recherches en physique des Plasmas
CSCS	Swiss Supercomputing Centre
DBRM	Developmental Biology for Regenerative Medicine
EBC	Uppsala University Evolutionary Biology Centre
EMBL	European Molecular Biology Laboratory
ELLIIT	The Linköping – Lund Initiative on IT and Mobile communications
EPFL	Swiss Institute of Technology Lausanne
eSSENCE	An e-Science Collaboration
ETH	Swiss Federal Institute of Technology
Formas	The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning
FR7	EU's 7th Framework Programme
GABI	Sequencing of the <i>Methylococcus capsulatus</i> genome
GBIF	Global Biodiversity Information Facility
GENECO	Research school in genomic ecology at Lund University
HEAC	High Energy Astrophysics and Cosmology

HEAD	Linnaeus Centre for Research on Hearing and Deafness; Excellence in the field of Cognitive Hearing Science
HGS	HEAD Graduate School
IRG	Industry reference Group
IAB	International Advisory Board
IHDP	International Human Dimensions Programme on Global Environmental Change
IMAGIC	Imaging integrated components
IMPACT	The impact of religion: Challenges for Society, Law and Democracy
INSERM	National Institute of Health and Medical Research
KI	Karolinska Institutet
KTH	Kungliga Tekniska Högskolan
KVA	Swedish Royal Academy of Sciences
LCCC	Lund Center for Control of Complex Engineering Systems
LCG	LHC Computing Grid (the CERN Grid)
LCH	Linnaeus Centre Head
LEP	Legal Empowerment of the Poor
LHC	Large Hadron Collider
LUCCI	Lund Centre for studies of Carbon Cycle and Climate Interaction
LUCID	Lund University Centre of Excellence for integration of social and natural dimensions of sustainability
LUCSUS	Lund University Centre for Sustainability Studies
M Soc Sc	Master of Social Science
MBB	Department of Medical Biochemistry and Biophysics
MEB	Department of Medical Epidemiology and Biostatistics
MIMS	The Nordic EMBL Partnership for Molecular Medicine
MOVIII	Modelling, Visualization and Information Integration
MU	University of Missouri
NGIL	Next Generation Innovative Logistics
NOREL	The role of religion in the public sphere: A comparative study of the five Nordic countries
NORFACE	New Opportunities for Research Funding Agency Co-operation in Europe
NSF	National Science Foundation
OKC	The Oskar Klein Centre for Cosmoparticle Physics
PhD	Doctor of Philosophy
PI	principal investigator
SAB	Science Advisory Board
SAC	Scientific Advisory Committee
SAP	Scientific Advisory Panel
SciLifeLab	Science for Life Laboratory
SeRC	Swedish eScience research Centre
SEK	Swedish crown
SG	Steering Group
SIDR	Swedish Institute for Disability Research

SOFI	Swedish Institute for Social Research
SPaDE	Linnaeus Centre on Social Policy and Family Dynamics in Europe
SSF	Swedish Foundation for Strategic research
SU	Stockholm University
SUDA	Department of Sociology in Stockholm University
SULCIS	Stockholm Centre for Integration Studies
SUPRA	Centre for Bio-inspired Supramolecular Function and Design
Swiss TX	A supercomputer built at EPFL in service in 1996-2000
Swiss Tier2	The node for IT for particle physics in Switzerland
THRM	The Human Regenerative Map
TReC	Translational Research Centre
UCD	University College Dublin
UCEG	The Uppsala Centre for Evolution and Genomics
UCMR	Umeå Centre for Microbial research Linnaeus Program
UMEB	Undergraduate Mentoring in Environmental Biology
UN	United Nations
UPMARC	Uppsala Programming for Multicore Architectures Research Center
UPPMAX	Uppsala Multidisciplinary Centre for Advanced Computational Science
VC	Vice Chancellor
VINNOVA	Research and innovation for sustainable growth
VP	Vice President
WP	Work package