

# **FAS centres of excellence - First evaluation**

**by**

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## Introduction and summary reflections

The decision to fund ten FAS centres of excellence was made in April 2007 (see Appendix 1). FAS has decided to carry out evaluations of its centres at three occasions: the first one two years after approval of funding, the second after five years and the third one after the entire period of funding, which is 10 years. This evaluation has been carried out by a panel appointed by FAS board: Professor Eira Viikari-Juntura, Finnish Institute of Occupational Health; Professor Kjeld Møller-Pedersen, Institute of Public Health, University of Southern Denmark and Professor Rune Åberg, former Secretary General of FAS<sup>1</sup>. The latter has acted as chairperson of the panel. Research secretary Kerstin Carsjö has assisted in the panel's work.

In April 2007 the centres were thus informed about the decisions and, if their application was approved, the amount of money they would receive. Some were well prepared and could make an early start from mid 2007 while others were not able to start until January 2008. All received full funding for the full years of 2007 and 2008. The evaluation panel had access to the applications and the original reviewers' assessment of them. The evaluations were, firstly, based on a report by each FAS centre following a disposition given to them (see Appendix 2). The report covered activities from the start to the end of 2008. Secondly, site-visits were made to each FAS centre during April 2009 in which the Vice-Chancellors of the universities also participated.

This evaluation of the FAS centre grants is thus the first one in a series of three. The focus of this first evaluation is of course not on research results but rather on organisation, leadership, research activities, co-funding and other economic aspects. The overall purpose is to see if the centres have started in a way that one can expect a successful future development.

Of great importance for a successful evaluation against these criteria seems to be if the centre is built on an already ongoing, well-functioning physically integrated structure - as an institute or a single department - or if it is a newly established network without common physical location. Centres belonging to the first category are ARC, CHESS, SOFI and SoRAD. Seminar activities are well developed and informal communication naturally takes place at the coffee-machine or at some other place during the daily work. The organisation is already there and the leadership established. However, for SoRAD the process to go from the "old" centre to the "new" one seems not to have been continuous. Even if there were some understandable worries about future funding of the centre a couple of years prior to the decision of FAS centres, it is difficult to understand why it took so long to restart the centre. It is also difficult to understand why SoRAD has chosen to treat the FAS centre (ExIn) as a separate organisational unit within the greater centre organisation SoRAD. CHESS did initially the same thing but now seems to regard the FAS centre as an integrated part of the larger centre CHESS. The FAS centre at SOFI is also separated from the rest of the institute. The borders are not so clear but, no doubt, the centre is embedded in a supportive environment. To keep the FAS centre as a separate unit is in the case of SOFI understandable, and even in the interests of FAS, as SOFI is a large institute with other research groups involved in research quite different from what the FAS centre was meant to support.

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<sup>1</sup> Erland Hjelmquist participated in the evaluation of the Global Health centre in Umeå or the Fas centre at SOFI instead of Rune Åberg due to conflict of interest. Eira Viikari-Juntura did not participate in the evaluation of EpiLife for the same reason.

Among centres that are not established centres or institutes but nevertheless closely integrated and rather “institute-like” are the Umeå Global Health and METALUND centres. Global Health is the youngest centre that got its present form due to the FAS grant but it is based on research and PhD training at a department that already had a focus on global health. METALUND is also based on a well developed research tradition primarily at two departments. The centre is a continuation of already ongoing research which through the FAS grant got a more long-term and solid financial base.

Centres with the most dispersed structure are REMESO, Epilife, CASE and Research on Hearing Disabilities in Working Life and Society (HDW). REMESO was created out of the FAS contribution and the former “Theme ethnicity”. The activities did not start until 2008 when the new organisation was in place. REMESO has a potential to become a well integrated institute. The formal organisation is in place but many of the senior researchers have their main activities located at other departments in places other than Norrköping. The centre has resources to recruit more senior researchers (one recruitment is ongoing) which seems to be of importance for the creation of a stronger local research environment. Epilife, CASE and HDW are research networks consisting of researchers from different faculties and departments at the university. In Epilife the researchers involved had co-operated before the centre was established. That was also the case, although to lesser extent, for CASE, but very little so for HDW. Among these network centres, Epilife and CASE, seem to have set up well designed formal organisations, but in the case of HDW the leadership by the steering group seems to have been more of an ad hoc character and the relation between the FAS centre and the Centre for Hearing and Communication Disability is unclear. The leadership in Epilife and CASE, on the other hand, seems to have been very active in order to make the network into a well functioning and integrated research unit.

The research activities at the centres as indicated by publications, ongoing projects and newly started projects and other, earlier initiated projects, seem to be at a satisfactory level. However, many external reviewers were uncertain about the added value of a centre grant, especially for the centres of a network character. A centre grant is expected to add more than additional single projects. The intellectual environment of the centre should bring with it an added value that leads to new research questions and other ways to carry out research projects than otherwise would have been the case. The question of added value has been raised in this evaluation and every centre think of themselves as giving added value, but this should be assessed in relation to the research results they produce and should therefore be an important aspect to focus on in later evaluations.

Among the factors that seem to contribute to an integrated research centre is first of all an active leadership. In some of the centres the leaders of the centre will leave within the next five years. The succession of leadership is strategically very important and at Global Health and CHESS there is already a plan for this. In REMESO there are still some years until the present leader will retire, but the centre has resources for new recruitments at senior level which will broaden the base of potential leaders. A second factor which usually has a unifying effect on a research network or centre is a common and well developed methodological platform. Such platforms are well developed in many centres and on the way to be developed in others such as REMESO. Thirdly, the existence of a research school seems to be important for the centre to formulate the theoretical as well as the methodological core of the centre’s research profile. It also contributes to recruitment of future researchers to the field. The research schools that have been established are all very well functioning and contribute to a fruitful cooperation between researchers outside the centre and in one case to cooperation between two

centres - ARC and CASE. One centre, EpiLife, does not have an organised research school but would probably benefit from having one.

Co-funding by the host universities was an important condition for obtaining a FAS grant. The requirement was that the university should contribute with a minimum of fifty percent of the amount contributed by FAS. Co-funding could be contributions in kind as well as contributions in direct funds. Most universities had lived up to this requirement but it is clear that a university that contributes with new money makes a stronger commitment than a university that simply lets the salaries of already employed researchers or PhD students constitute the co-funding. KI's contribution to HDW is of the latter character as the total costs of an existing service organisation, which also serves other units, is counted as co-funding. SU's contribution to the FAS centre within SOFI is only re-budgeting of the existing basic funding for SOFI and has not meant anything extra as a result of the FAS grant. On the other extreme we find strong co-funding commitments from LiU as the university has closed "Theme ethnicity" and added these resources, or at least a major part of them, to REMESO. UmU has also transferred an amount of extra money to Global Health as a consequence of its program to reallocate money to research environments proven to be competitive.

### ***Conclusions and recommendations***

*In the instructions to the centres it was stated that contributions from FAS could increase or decrease by maximum 20 percent as a result of this evaluation. The evaluation panel has considered this option for recommendations and has come to the conclusion not to suggest any changes at this stage. Some centres have argued for increased support due to cost increases but all centres have that problem and it is not for the evaluation panel to suggest compensation for this. Some want increased funding for special purposes but the panel is not convinced of the arguments for that. The only reason for increasing the contribution would be exceptional progress of the centre but such judgments should be based more on evaluation of research results rather than on factors focused on in this evaluation. Neither does the panel suggest any reductions of the FAS grant. However, this was discussed in relation to HDW which have some improvements to make in order to qualify as a centre of excellence. But, the suggestion of the panel is to leave the grant level unchanged and give the centre a chance to make necessary changes before the next evaluation takes place.*

## **GOTHENBURG UNIVERSITY: Göteborg Centre for Epidemiologic Studies on Mental and Physical Health Interacting over the Lifecourse (EpiLife)**

### **1. Organisation and leadership**

This centre is a network centre with collaboration between researchers located at various departments within the University of Gothenburg. When EpiLife was established the vision of the Vice-Chancellor was to bring together strong research groups within the School of Public Health and Community Medicine, the Department of Cardiovascular and Emergency Medicine, the Department of Psychiatry in the Institute of Neurosciences, and the Department of Psychology in the Faculty of Social Sciences. Research activities at EpiLife are clustered in four work areas. One of them is located at the Department of Psychology at the Faculty of Social Sciences and the other three are located at the other abovementioned departments at the Sahlgrenska Academy. No doubt, it is a challenge to make a coherent research environment

out of this locally as well as disciplinarily dispersed structure of research. One basic condition for reaching this goal successfully is a properly designed and well functioning organisation and leadership.

The central person and scientific leader for the centre is Lauren Lissner. She is also a leader of one the work areas. The scientific leader together with the leaders of each one of the other three work areas plus a chief administrator constitutes the Steering Group. But, different from other network centres, the Steering group is chaired by an external chairperson not involved in the research process but with experience from research as well as university administration. This construction is an indication of the awareness of potential conflicts of interest in a research structure like this one. It seems to have functioned very well with an external chairperson as reported to the evaluation panel during the site visit. The Steering Group meets four times a year and its meetings are open for other PI:s from the core areas. A General Assembly, open for all involved researchers, will be held each year. EpiLife has also an International Scientific Advisory group. The Scientific coordinator and the Chairperson for the Steering Committee have met regularly with the Dean of the Sahlgrenska Academy and the Vice-Chancellor. Thereby they have continuous information about activities at EpiLife. So far, the organisation and leadership seems to be active and well designed for this network centre.

## **2. Budget and financing**

The centre had at the time when the report was written used approximately half of the money they had received from FAS but, after the initial formative period, the activity level is now so high that all resources will soon be used up. Five new postdoc positions have been filled. The co-funding by the university is also at a level that was required for FAS centre funding, although a major part of these contributions are (contrary to what was reported in Appendix B) contributions in kind covering wages for already employed professors and other senior researchers. The participating researchers of the centre have also been successful in obtaining external research funding of a substantial amount from FAS, VR, EU Commission and VINNOVA to mention the sources of the largest contributions. The trend in external funding seems to be increasing.

## **3. Research activities**

Research at the centre is organised into four work areas. Areas 1 and 3 were presented together during the site visit and so were also work areas 2 and 4. The reason for that is of course that areas that were presented together are close to one another, while the distance between the two groups of work areas is greater. Areas 1 and 3 are focused on research on cardiovascular disease susceptibility and obesity; 2 and 4 on mental health and ageing and cognitive functioning and ageing. Natural questions for a reviewer to ask are to what extent these research areas cross-fertilize each other and what the unifying mechanisms are that bind, at least to some extent, all research activities within these work areas together. One answer, as formulated by the area leaders, is that it is the life course and epidemiological approach as well as the ambition to focus on the mental and physical health at various stages in the life-cycle. This is a good answer and it gains credibility by the way the centre is organised. A common resource for all researchers in the centre is a core area "Data management and statistics" led by the scientific coordinator. This methodological platform is probably very important for creating the empirical base for much of the research at the centre. Several longitudinal data bases are available at the centre and the methodological competence is good. Knowledge of methods and data will be shared by most of the researchers which may contribute to a constructive seminar culture. The regular seminars are an important part of activities at the centre.

It should also be mentioned that it is a policy that “each work area is required to develop joint activities with other work areas”. An example is a project studying if, and if so to what extent obesity is related to dementia. In the list of published and submitted articles one can also find researchers from two or more work areas as co-authors.

The research at work areas 2 and 4 has many connections with the research at ARC. The data sources are different but many research questions are similar. This could be an excellent base for cooperation and/or fruitful competition.

#### **4. Communication and dissemination**

The centre has taken communication seriously and defined it as a special function in their organisational plan. One of the core areas is “Communications and transfer”. This function is closely related to the core area “Administration”, headed by the scientific coordinator. A communication strategy has been developed. This strategy identifies three levels at which communication takes different forms. These levels are traditional academic publication and communication, information to health services within the region, and information to the public through press, media, speeches at conferences etc. EpiLife has a website.

#### **5. Conclusions and recommendations**

The FAS centre grant has made it possible to create a centre that has brought together researchers within the field of epidemiological research. This type of research has a long tradition at the university and the Sahlgrenska Academy and several valuable longitudinal data bases have been created. But, the distribution of these research groups over several departments and with different focuses in their research makes it a difficult task to bring them together into a coherent research centre. As mentioned above, the leadership, the organisation and activities like seminars and common core activities seem to be steps in the right direction.

However, when FAS made its call for “forskarskolor” directed towards the earlier funded centres, EpiLife was not prepared to apply for one, and a program for graduate training has not been developed. Instead EpiLife has started a network for young researchers. About 50 young researchers (not so well defined) are in this network, the ambition of which is to “stimulate interactions and new ideas”. This is probably a good idea but it is not a substitute for an organised PhD education. For a network centre like EpiLife a PhD program could be valuable as it may stimulate the senior researchers to formulate the core theoretical and methodological ideas on which the centre is built and embed them into a PhD training program.

## **LINKÖPING UNIVERSITY: Centre for Research on Migration, Ethnicity, and Society, REMESO**

### **1. Organisation and leadership**

The university strongly supports the FAS centre. REMESO is central to the Linköping university’s efforts to develop Ethnic and Migration studies as a prioritized research area. A new centre has been established, namely REMESO, and ‘Tema Etnicitet’ that was founded in 1999 has been closed and its faculty budget transferred to the new centre.

The FAS application was originally a joint application from researchers at Linköping university and the National Centre for Working Life in Norrköping. However, the latter was closed in 2007. On a non-tenured basis a number of positions were made available at Lin-

köping university for researchers from the National Centre for Working Life. It appears that this change of plans has had no visible effect on the start-up of REMESO. An unexpected advantage of the closure has been that experienced researchers have been available for the centre's research.

The organisational and governance structure of REMESO is in place, but to an outsider appears almost 'overdone' and undoubtedly requires quite a bit of time of the persons involved.

There are bi-annual meetings between the centre director, the Vice-Chancellor and the Dean of the faculty with discussion on among other things strategies and financial issues. In addition a representative for the Vice-Chancellor meets monthly with centre director. Hence, the university and the faculty are in continuous dialogue with the centre.

REMESO has a steering board with an external chairperson. On the board are representatives from several of the university's departments along with representatives from other Swedish centres. The board meets four times a year. The recommendations from the board are important input to the decisions of the Faculty of the Social Sciences.

The steering group for research coordination is responsible for monitoring and reporting on the REMESO-FAS research program. The steering group is headed by the director assisted by the co-director. Members are the scientifically responsible and coordinators for the various sub-programmes.

A team of three researchers are responsible for the development of each of the three sub-programs. The director is overall responsible for REMESO assisted by a co-director and a secretariat staffed with an information officer and a secretary. The secretariat organises among other things monthly staff meetings, where plans and ideas to be taken up by the steering group are discussed. An international advisory board has been appointed and advises the board, the director and the steering groups on research and education.

Two leading staff members, one of them the director, retire within five to seven years. REMESO has submitted a long-term plan to the faculty addressing replacement issues.

## **2. Budget and financing**

The spending level for 2008 is in line with the FAS funding and university co-funding (in kind and direct funds) is in place. The centre has considerable external funding from VR and the European Social Fund apart from several other FAS projects.

## **3. Research activities**

The research agenda is strongly interdisciplinarily/transdisciplinarily organised within three sub-programs: 1. International migration, changing welfare regimes and political economy, 2. Ethnic divisions, social exclusion/inclusion and the reconstitution of normative and legal frameworks, and 3. Post-national strategies for growth, inclusion and diversity. Across the three subprograms more than 40 projects (work packages) are planned. To an outsider this seems to be too many, and it is somewhat difficult to see a coherent theoretical and empirical framework that ties the activities of the centre together. In view of one of the declared aims of the REMESO in the FAS application: development of theoretical frameworks and comparative empirical research this is somewhat worrisome and ought to be addressed fairly quickly, i.e., if there is a common framework then make it visible and if not start working on it.

Even though there are many work packages their status is basically that all of them are on-going or have been initiated. Only two are in the planning stage.

A common data infrastructure is being established: a survey-based longitudinal database and a qualitative database. REMESO researchers are predominantly qualitatively oriented and in order to take advantage of the survey database it is probably necessary to recruit for instance an econometrician or a sociologist with a strong quantitative background.

Recruitment for 2008-2009 is ongoing: a professor in labour studies and three postdoc or junior researchers. For 2010-2012 a fourth REMESO professor will be recruited to strengthen the global perspective. An additional five doctoral students will also be recruited.

The publication level is fairly high both for articles, books, book chapters and various reports. REMESO is developing a peer-reviewed journal on migration and labor studies in cooperation with the electronic press of Linköping university.

With the caveat about an apparently lacking or visible theoretical framework research seems to be progressing according to plans.

#### **4. Communication and dissemination**

An information officer is part of the secretariat and is responsible for developing an effective communication and strategy, including a dynamic website. REMESO also benefits from support from the university's External Relations Department.

Parallel publication of research in Swedish through academic and more popular media is considered important in order to meet e.g. policy relevant research.

#### **5. REMESO Graduate Research School in Migration, Ethnicity and Society**

The REMESO graduate school is up and running. Several courses have already been offered with good attendance both of Swedish and foreign doctoral students. The courses have received good evaluations. Both a core and supplementary curriculum have been developed. Teaching staff comes mainly from REMESO but several foreign professors have been teaching part of the courses.

The school is managed by the REMESO Steering Group for Education which organises regular planning and monitoring meetings with teaching staff.

#### **6. Conclusions and recommendations**

The centre has been well established organisationally, management and research wise. However, it may be worthwhile to consider slimming the management structure which seems somewhat excessive and certainly must be rather time consuming. In view of one of the aims of the centre it seems important to clarify the theoretical framework(s) underlying the various subprograms and work packages. Finally, even though it seems to work, it may be worthwhile to consider whether there are too large a number of work packages and instead focus on a smaller subset, in which the size, scope and duration can be increased.

# **LUND UNIVERSITY: Centre for Medicine and Technology for Work Life and Society at Lund University (METALUND)**

## **1. Organisation and leadership**

The centre builds on collaboration between two divisions from two faculties at Lund university: the Division of Occupational and Environmental Medicine (OEM) within the Department of Laboratory Medicine, Faculty of Medicine, and the Division of Ergonomics and Aerosol Technology (EAT) within the Department of Design Sciences, Faculty of Engineering. The centre has two administrative bodies: 1) the General Assembly (GA), consisting of the coordinator, the deputy coordinator, heads of OEM and EAT, and the project group leaders. This group makes strategic decisions about research, discusses budget allocations, proposals to funding bodies, and co-operation with research groups outside the centre. They also suggest members of the Scientific Advisory Board. The GA meets approximately twice a year. The Centre Management Committee (CMC) consists of the coordinator, deputy coordinator and the heads of the OEM and EAT. The CMC is responsible for the overall centre management, including financial, personnel and management matters, and appointment of project leaders. The CMC meets quarterly. The Coordinator is chairing both the GA and CMC. She also has the overall responsibility of the activities of the centre, communication of the centre and reporting. The centre organises weekly seminars in which the senior and junior researchers meet regularly. These seminars are also open to outside partners.

A Scientific Advisory Board has been appointed, consisting of six internationally renowned scientists from Denmark, Germany, the Netherlands, and Italy. This group had a two-day meeting in 2007, and a second meeting has been scheduled for the near future. Moreover, a stakeholder group is currently being formed.

Research results are reported to the Dean and further to the Vice-Chancellor of Lund university (LU).

The research programme consists of the work of 7 project groups. In most projects, a senior researcher from both OEM and EAT are involved as project group leaders. The research work follows largely the earlier plan.

## **2. Budget and financing**

By the end of 2008, the centre had used funding from FAS for a total of 7.9 million SEK, of which the majority (5.4 million SEK) was used for salaries. Other costs accounted for 0.7 million SEK, and overhead costs were 1.8 million SEK. Contribution of LU in kind was 2.8 million SEK and in direct funds 9.4 million SEK. Other external contributions mounted to 34.6 million SEK, those of FORMAS, VINNOVA, FAS and the EU being most significant contributors.

During the two coming years (2009-10) expected contributions from external sources are about 50 million SEK, and direct funds from Lund university are estimated at 11.6 and in kind at 2.8 million SEK. There seems to be a stable funding situation.

## **3. Research activities**

The work of the majority of the seven project groups is a continuation of the previous work of the respective group. FAS funding has been used especially to expand the research in molecular biology and epigenetics, and to focus on methodological development and also statis-

tical methods. Furthermore, the planning of the implementation and risk management part during the latter half of the FAS centre programme has already been started.

The work of the centre is characterised by the use of advanced methods to assess the relevant exposures and – for observational studies – typically the use of region- or countrywide registers to assess the outcome. Statistical expertise of high level exists at the centre. Experimental studies are carried out in a range of laboratories, in which subjects are exposed to single exposures or a combination of exposures. A novel example of the latter is a series of studies assessing the effects of various airborne particles and noise on parameters of cardiovascular and respiratory physiological functions. In the area of research on musculoskeletal disorders, long-term collaboration between OEM and EAT has been going on in the development of methods to measure postures and movement velocities of especially the neck and the upper extremities. The development of methods has been very successful, and the current set of methods is among the most advanced internationally. So far, these methods have been applied among various occupational groups that have responded to questions on symptoms and been clinically examined. Although the database has been accumulated to encompass up to thousands of subjects, the information for risk assessment will be limited, due to the studied groups likely being highly selected and inadequate control for individual factors.

In total, 87 peer-reviewed papers have been published or accepted so far, and 26 papers have been submitted for publication. The papers represent relevant topics for the centre and some have been published in very highly ranked journals. One licentiate thesis and five doctoral theses have been defended.

#### **4. Communication and dissemination**

The major channel for dissemination of information is via peer-reviewed original communications. In addition to peer-reviewed papers, 82 conference contributions have been given. Moreover, 13 books or book chapters have been written by the researchers of the centre. Among them can be mentioned an extensive textbook for technology students "Work and Technology on Human Terms", in which the centre researchers have acted both as editors and authors. The researchers have also actively appeared in the media.

#### **5. METALUND Research School**

The METALUND Research School is led by a Board, consisting of the two coordinators of the centre having the scientific responsibility, and the director of studies from both OEM and EAT having the operational responsibility, as well as two PhD students. During its first year of existence in 2008, 25 PhD students were registered in the network of the school, representing a broad range of scientific disciplines. The research school aims at having regular network meetings, courses, including two courses on methods annually, and seminars. The course on biostatistics and epidemiology given in 2008 was well-rated. The aim is to develop a course program of high quality and thereby increase the number of PhD students. A rich pool of students is seen as vital for the future research in the area of expertise of the centre.

#### **6. Conclusions and recommendations**

The activities of the centre have been carried out as planned. There is a clear organisational structure. The centre is very well equipped with laboratory facilities, and all projects are characterised by methodologically advanced exposure assessment. The centre has high-level statistical expertise. In observational epidemiology, the measurement results are associated with outcomes obtained from registers or other representative sources of data. In musculoskeletal research, occupational groups with different exposure profiles have been studied. The

productivity of the participating scientists of the centre has been and continues to be high, and some project groups have been able to publish their results in very highly ranked journals. Of special value of the work of the centre is the close collaboration and contacts with workplaces and authorities. The research questions have high practical value for workplace design and prevention at workplaces as well as for environmental considerations.

The work of the centre is of central importance in the area of occupational health, especially in the current situation, when the National Institute of Working Life no longer exists in Sweden. Many of the laboratories involved with the centre are unique nationally and internationally, and some, e.g. the thermophysiology laboratory, are the only one in the country.

The centre is recommended to continue its good and productive work and to proceed also to risk management in the future. In the musculoskeletal area, the research aiming at modelling the relationships between musculoskeletal outcomes and physical and psychosocial exposures might benefit from the utilisation of a large, representative, prospective database rich in information of also individual and socio-economical factors. Such data could be gathered either by researchers of the centre or in collaboration with some other major research group. It might be possible to utilise the group's extensive information of job exposures for this purpose e.g. by building a job exposure matrix. The work of the Research School as the only one in its kind in the country is encouraged to be continued according to plans.

## **LUND UNIVERSITY: Centre for Ageing and Supportive Environments (CASE)**

### **1. Organisation and leadership**

The centre builds on collaboration of three faculties: the Faculty of Medicine, the Faculty of Engineering, and the Faculty of Social Sciences. CASE is hosted by the Department of Health Sciences within the Medical Faculty. From its beginning in July 2007 until the end of March 2009, it was led by a Steering Committee, consisting of the principal investigator Susanne Iwarsson, the co-principal investigator Agneta Ståhl, director of studies Ulla Melin Emilsson, and professor Jan Lexell. Associate professor Torbjörn Svensson was appointed as an administrative manager of the centre since the beginning of 2009. From the beginning of April 2009 onwards, the steering bodies have been reorganised. The new executive body is the Board of CASE, consisting of the Director, the Assistant Director and at least three senior researchers, PhD student representative and stakeholder/user representative. The Board decides on strategic development, budget allocations, collaborative activities and the recruitments of researchers. Once a year, the Director will assemble the representatives of the three participating faculties to deliver an annual report and discuss the future strategy. All staff has information and discussion meetings about once a month.

A Scientific Advisory Board, consisting of internationally renowned scientists from Germany, Finland, the US and Sweden, provides external advice and quality development. This group has met twice at a three-day meeting. Some of its members have also provided assistance in recruiting senior lecturers to the centre as well as in teaching activities. Research results are reported to the Dean and further to the Vice-Chancellor of Lund university (LU).

Physically, about half of the 40 researchers of the centre are located in the Health Sciences centre, and the rest of the researchers are at their home departments, some of them located at a

relatively long distance. Some of those whose home department is at a distance have an office also at the Health Sciences building.

The research work of the centre is multidisciplinary, involving three major thematic areas: A) Functioning, disability & health, B) Technical and planning perspectives and C) Social and psychological perspectives. The original plan of six thematic areas was modified due to having obtained only half of the applied grant and based on advice from the scientific advisory board. The thematic areas are led by a senior scientist. Additionally there is an assistant senior lecturer in thematic areas A and B, whereas the assistant senior lecturer for thematic area C has not yet been recruited. In principle, the two senior scientists within a thematic area represent different disciplinary backgrounds to increase transdisciplinarity. In future recruitments, the centre plans to engage researchers from the social science disciplines, economics and architecture.

## **2. Budget and financing**

By the end of 2008, the centre had used funding from FAS for a total of 3.7 million SEK, of which the majority (2.6 million SEK) was used for overhead costs. A total of 0.9 million SEK was used for salaries, and 0.2 million SEK for infrastructure and other costs. A substantial part of funding has been transferred to the years 2009-10 and will be used for new recruitments. Contribution of LU in kind was 4.5 million SEK, and contribution of LU in direct funds 0.9 million SEK. Other external contributions amounted to 22.9 million SEK, those of the Ministry of Health and Social Affairs, Skåne Region, and the Swedish Road Administration (Skåne Region) making up more than half of the contributions.

During the two coming years (2009-10) expected contributions from external sources amount to 28.9 million SEK, and direct funds from Lund university to 2.3 and in kind to 5.0 million SEK. There seems to be a stable funding situation.

## **3. Research activities**

The report of the centre lists a total of 31 projects, of which 20 are currently on-going. The projects are funded by a variety of organisations, including FAS, the Swedish Research Council, Ministry of Health and Social Affairs, Region Skåne, and the Swedish Road Administration. Some projects have funding from Denmark, Finland and the European Union. Three research programmes have been planned, of which one has been submitted to FAS as an application for funding. In total, 26 peer-reviewed papers were published in 2007 and 35 in 2008, and 18 papers have been submitted for publication. The papers represent relevant topics for the centre and have been published in a number of different journals. Two licentiate theses and one doctoral thesis were defended in 2008.

### *Thematic Area A. Functioning, Disability and Health*

Within this thematic area, the third follow-up was completed during 2008 for the Swedish part of the cross-national ENABLE-AGE project, involving 155 subjects. Analyses will be carried out from 2009 onwards. As part of the National Study on Ageing and Care (SNAC), re-examinations will continue for the Good Ageing in Skåne study (GÅS), with next data collection taking place in 2010. The centre plans for an additional, more complete data collection of the younger subcohorts, into which core variables of housing aspects from the ENABLE-AGE study will be included. A PhD student will be recruited to work with the new data in the GÅS project.

There was some discussion of the content of the centre's mission to provide "...evidence based, practical strategies for creating supportive environments in different societal arenas", especially the content of "evidence based" in this context. It was clarified that the tools that are used for accessibility and usability have been extensively tested for reliability and validity. The evaluation panel commented that the testing of the strategies for efficacy and effectiveness would add important components to the evidence base.

#### *Thematic Area B. Technical & Planning Perspectives*

In a project carried out in a region of Skåne ("Let's go for a walk"), the aim was to improve accessibility and safety with integrating older people in the planning of the interventions. Despite an increase in perceived accessibility and safety, there was no increase in the frequency of mobility of the older people between 2002 and 2006. The results will be compared with an external group from the same region assessed at the same time. Moreover, a continuation is planned to this project, including rehabilitation targeted at outdoor activities, social implications of interventions, and individual perspective. A PhD student has been recruited for this project. Other future plans concern new analyses of the SNAC data.

#### *Thematic Area C. Social and psychological perspectives*

Within this area, a project entity will be planned, focussing around the relocation process when old people move from their own houses to various special housing. This was originally named in the application as "The Ribbing Project", due to the specific change in housing in Lund, but will be extended to similar changes in locations elsewhere. A PhD student has been recruited to this area. Due to the centre having obtained less funding from FAS than applied for, one project, "the CASE Panel" will not be carried out.

#### **4. Communication and dissemination**

The major channel for dissemination of information is via peer-reviewed original communications. In addition to 61 peer-reviewed papers during 2007-08, 28 book chapters, popular articles or reports were published. From 2009 onwards, a journalist will be working part-time for the centre. Additional funding for communication projects has been applied from VINNOVA and FORMAS, but not yet obtained. In one of the new research programmes a scientist in media and communication studies is planned to take part. In many of the CASE projects, workshops are arranged for the end-users as well as public events to communicate research findings. Finally, CASE has its own website with information of participating researchers, projects and activities. Currently, most material is in English, and increasing the content in Swedish is underway.

#### **5. CASE Graduate School**

Until the end of March 2009, the CASE Graduate School was led by the Coordinator (Susanne Iwarsson), Director of Research Study (Ulla Melin Emilsson) and the Steering Group. From April 2009 onwards, there is a Working Committee for the CASE Graduate School under the Board of CASE. This group consists of the Study Director, two CASE researchers and a PhD student representative. Regular contacts are kept between the Graduate School at the Aging Research Center including the joint development of a website for course information. A long-term goal is to establish a National Graduate School of Aging, including several universities and research institutes. At present, 18 students are registered within the CASE Graduate School, of which 15 work within the centre. Of the latter, 4 have been registered during 2008. All senior staff of the centre is involved in teaching. Of a total of 24 teachers, 16 come from Lund, and most of the remaining 8 lecturers come from other

countries than Sweden. The teaching program consists of seminars, journal clubs, workshops and regular courses, and has had a good start in 2008.

## **6. Conclusions and recommendations**

The activities of the centre have been started off fairly well. The administrative bodies of the centre and the Graduate School have been reorganised to clarify the roles of the different actors. The funds available for the centre have been only partly used during 2007-08, due to having obtained the information of funding as FAS centre relatively late. The saved funds will be used for new researcher recruitments during 2009-10. Rather much effort seems to be spent on applying for additional funding and to recruit competent research leaders in additional areas of expertise. The decision to establish a scientific advisory board seems to have been wise in order to better focus the research areas, to reach high transdisciplinarity, high scientific achievement and to make successful recruitments. A total of 40 persons work within the centre; however a small minority – in addition to some PhD students – work with a considerable percentage within the centre. The centre has had difficulties to find competent researchers with expertise in some research areas of the centre. Expertise is needed especially in additional areas of social science disciplines, economics and architecture. The centre plans to widen the recruitment base of the PhD students, and contact has been established with the Department of Sociology in this regard.

The centre has good collaboration with other universities and public institutions, as well as some contacts with user organisations and private enterprises. Project collaboration involves contacts with municipalities, regional authorities and sometimes national authorities, e.g. the Swedish Road Administration.

The evaluation panel recommends the centre to continue its transdisciplinary work in this very important area of research. The centre is recommended to search for a good balance between quantitative and qualitative research approaches. Quantitative approaches, e.g. in following trends in health and the environment, will help in the prioritisation of research. Such approaches could also be used to assess the effectiveness of various interventions. Qualitative approaches are vital to the understanding of various phenomena and hypothesis generation. Good collaboration within the centre with geriatric hospital departments with their hospital records would allow possibilities to assess the effects of also larger intervention studies. Collaboration with the Aging Research Center in Stockholm in research – in addition to the Graduate School activities – might benefit both centres and enhance the recruitment possibilities of competent researchers.

## **KAROLINSKA INSTITUTE AND STOCKHOLM UNIVERSITY: Aging Research Center (ARC)**

### **1. Organisation and leadership**

The centre has been built on a former centre that was established in 2000 with funding from FAS.

Karolinska Institute and Stockholm university share the responsibility for ARC, but ARC is administratively located within Karolinska Institute (KI), Department of Neurobiology, Caring Sciences and Society (NVS). It is led by a Governing board, including representatives from KI, Stockholm university (SU), Äldrecentrum (ÄC), other Swedish universities and the

society. Scientific, organisational and economical decisions are made by the Steering Committee, consisting of the director and co-director of the centre, director of the Äldrecentrum and 5 senior scientists of the centre. The Steering Committee meets once a month. Decisions regarding daily activities, personnel and the work environment are made by the Executive Committee, meeting on a weekly basis. This committee consists of the scientific director (L. Fratiglioni) appointed by the Board of Research at KI, the division head (M. Parker), appointed by the NVS Department and the ÄC-ARC coordinator (E von Strauss, currently on leave). Research results are reported annually to the Board of Research at KI and SU. The organisation is well-structured and effective, allowing quick decisions on daily matters and a wide basis for more long-term planning and decisions.

Physically the centre is located on four floors of one building in the vicinity of KI and SU.

The research work of the centre is multidisciplinary, involving three major disciplines: medicine, psychology and social gerontology. In total, 10 senior researchers, 5 research scientists, 12 postdoc researchers, 15 PhD students and 6 research assistants work in the centre, making up a total of 16 project groups. The database group consists of 2 database managers and a half-time statistician. In addition, 2.5 persons are involved in the data collection in the SNAC-K Study. The centre has an administrative group of 2 persons. The age structure of the researchers is in good balance, i.e. there is a strong group of senior researchers and enough postdoc researchers and PhD students with a good environment to build up their seniority.

## **2. Budget and financing**

By the end of 2008, the centre had used funding from FAS for a total of 18.5 million SEK, of which the majority (13.6 million SEK) was used for salaries, and 3.0 million SEK for overhead costs. Contribution of KI and SU in kind was 1.5 million SEK, and contribution of KI in direct funds 7.2 million SEK and of SU 2.7 million SEK. Other external contributions (mainly from FAS and the Swedish Research Council) amounted to 28.3 million SEK.

During the two coming years (2009-10) expected contributions from external sources amount to 34.7 million SEK, and direct funds from the universities to 13.1 and in kind to 1.0 million SEK. There seems to be a stable funding situation.

There has been an increase in salaries and in the costs of premises that are not currently covered with the FAS funding. The centre wishes to recruit a research scientist to work to better integrate the three disciplines. The ambition to improve integration is to be commended, but the evaluation panel was not convinced that the suggested strategy is the best one.

## **3. Research activities**

According to the plan a total of 13 projects were expected to be started. These projects are distributed into three research areas as the following:

### *A. Social and public health aspects of human aging*

Within this area, five projects were planned, of which four are on-going. The fifth project, economic aspects related to prevention, treatment and care of the elderly has not yet been started, due to unavailability of one key person.

The research area has been very productive, with 46 papers published or in press during 2007-08. Nine PhD students are involved in the projects. New data collection is on-going in SNAC-K, CAIDE and SWEOLD, contributing to three projects. Research findings suggest that mul-

timorbidity and polypharmacy are the major public health issues in the elderly. Within informal care, family support forms an essential part.

#### *B. Health differentials between groups and over times*

Of three planned projects all are on-going. Results have been reported in 17 papers. Four PhD students are involved in the projects. New data collection is on-going in SNAC-K, SWEOLD and BETULA, contributing to all three projects. Results show that there has been a change over time characterised by an increase in disease, but improvement of people's ability to cope with daily activities.

#### *C. Brain aging*

Of five planned projects all are on-going. This research area has been very productive, resulting in 94 papers that have been published or are in press. Five PhD students are involved in the projects. The projects include observational epidemiological studies of cognitive functions during aging and also assess associated pathomechanical processes. The results suggest that lifestyle factors in midlife affect the risk of dementia in late life. The individual susceptibility for dementia may be modulated by psychosocial factors during the life span. In addition to observational studies, intervention studies have been carried out in cognitive training methods using randomised designs. An intervention study (Finnish Geriatric Intervention Study to prevent Cognitive Impairment & Disability, FINGER), aimed to affect both risk factors and protective factors, carried out in collaboration with the Finnish Institute of Health and Welfare, is at a starting phase. New data collection is on-going in SNAC-K and BETULA, contributing to three projects.

With the new funding as a FAS centre of excellence, new elements include the assessments of genetic factors in the previously collected population samples. Genome-wide assessments are being carried out in the Harmony, SNAC-K and BETULA databases. This will allow assessments of genetic interactions on the effects of lifestyle factors. Pooling of data from the different databases can at least partly help problems with small sample sizes for the analyses of such interactions. The new approaches will also be more demanding with regard to the data analysis methods. Help in more advanced statistical methods will be available both within the centre and via international collaboration. There was some discussion concerning the balance between observational and experimental epidemiology, and it was agreed that there will still be a major need for observational studies for a long time to come.

#### **4. Communication and dissemination**

The major channel for dissemination of information is via peer-reviewed original communications and reviews. With more than 130 published or accepted papers mostly in highly ranked journals the scientific activity can be considered very high. In addition, three books and 27 book chapters have been published. The researchers also do commissioned work on request from the "Socialstyrelsen" and participate e.g. in preparing the "Public Health Report". The Äldrecentrum and the Swedish Dementia Center are active collaborators in the dissemination of information. The centre has well-kept web pages and well-structured annual reports that can be downloaded from the web pages.

#### **5. National Graduate School for Aging Research**

The National Graduate School for Aging Research is a doctoral school run in collaboration between ARC, CASE in Lund, the Department of Sociology at Umeå university, the Division of Occupational Therapy at NVS in KI, and the Alzheimer Disease Center at NVS, KI. The director of the Aging Research Center Laura Fratiglioni is also director of the Graduate

School. About 50 doctoral students have been registered, of which 22 are at ARC. In 2008, the Graduate School arranged 22 weekly seminars, some journal clubs, brain-storming meetings, 5 international fora, and 4 courses of which 2 were held at ARC. Eleven PhD theses and one MSc thesis were defended during 2008-09. The Graduate School has had a good start and is actively contributing to the education of PhD students in Sweden. Future plans include increasing communication and collaboration at the national level, providing economical support for the students to participate in courses and to strengthen the educational program of the School.

## **6. Conclusions and recommendations**

The Aging Research Center has a well-structured and effective organisation. The research agenda is focused on areas of high societal relevance and productivity is high. Data collection is carried out on a continuous basis with both national and international collaboration. The age structure of the research groups is in good balance with a high number of doctoral students. The projects are well funded by external grants and matching funding from the KI and SU.

Of a total of 13 projects planned to be carried out with the new funding, 12 are on-going and one has not been started due to unavailability of the scientist with the necessary expertise. The centre is expanding data collection and analyses to the area of genetic epidemiology and has identified the necessary national and international collaborators for such analyses.

The centre has good channels for dissemination of information, with Äldrecentrum and the Swedish Dementia Centre as central actors.

The centre participates actively in the work of the National Graduate School for Aging Research, with the director of the centre as the director of the Graduate School, and hosting a large group of PhD students of the School.

Overall, the centre has had a good start and is expected to fulfil its goals. ARC belongs clearly to the group of centres with very high achievement.

The evaluation panel, however, is doubtful about the suggested strategy to enhance the integration of the disciplines by the recruitment of a researcher specifically for this purpose. Increasing salary costs or costs of premises can not be compensated by additional funding.

## **KAROLINSKA INSTITUTE: Centre for Research on Hearing Disabilities in Working Life and Society (HDW)**

### **1. Organisation and leadership**

The centre has been largely built on the former Centre for Hearing and Communication Research within the Karolinska Institute (KI). With the new funding from FAS, the former centre has obtained more funding and has been able to expand the primarily experimental research more into clinical and practical implications.

The new centre utilises the organisational structure of the previous centre. The aim is to broaden the steering group with members who have the necessary contacts with society and the interest in the substance area of hearing loss. So far it has been difficult to find such people, and the new steering group is still under formation. Overall, the steering group has

met infrequently and irregularly and has not developed e.g. an action plan. The research work is reported to the Board of Research at KI and to the President of KI.

Physically the centre is scattered in different areas within the KI, and it will not be practically possible to bring the different project groups closely together.

The work of the centre is based on project collaboration of eight senior researchers, and the first focus has been targeted to intensify this collaboration. So far, the collaboration between the different projects is not well-established. The new centre has increased collaboration with Professor Nancy Pedersen, a genetic epidemiologist, and with Professor Töres Theorell, a stress researcher. There has been an attempt to recruit a junior research position in epidemiology, but there were no applicants. Also one recruited postdoc person left before even starting.

## **2. Budget and financing**

The activities of the centre started in July 2007. However, most persons that have been directly paid by funds from FAS did not start until the fall of 2008.

By the end of 2008, the centre had used funding from FAS for a total of 3.17 million SEK, i.e. considerably less than has been available. This funding has been used for the salaries of 2 postdoc researchers (7 months in total) and one PhD student (12 months), some equipment, overhead costs (more than 2 million SEK) and other costs (mostly for the Hearing Awareness Week). No funds have been allocated for collaboration with external partners.

University contribution in kind has been 2.50 million SEK. University contribution in direct funds has been 4.18 million SEK, and other external contributions have amounted to 3.90 million SEK. The university contribution in direct funds has been targeted to cover the department that develops and maintains the technical equipment and is thereby closely involved in the project collaboration within the centre. During the site visit there was discussion of the nature of this funding, whether this funding is a proper form of matching financing of the university specifically targeted at the FAS centre.

## **3. Research activities**

The projects have been grouped into 3 areas:

### *A. The work environment*

A major research area is audiological epidemiology, where some highly exposed worker groups, such as air force pilots and musicians, have been studied already before the onset of the work of the centre. More recent target groups are teachers and preschool teachers, among whom a new project has been started in collaboration with Professor in psychology Gunnel Backlund. In collaboration with Dr Skjönsberg and Professor Pedersen, repeated data collection has been started in 2008 for a male twin cohort established in 1998 with existing audiometric data. A new PhD student has been recruited for this project.

A planned study in collaboration with Professor Kristina Alexanderson on the role of hearing loss in sickness absence and disability retirement has proven more complicated than expected to carry out, although the specific material in Östergötland provides all diagnoses for disability retirement certificates and not only the main ones. This study was expected to give information about the costs of hearing loss that are so far largely unknown. At present it is unclear whether the material will provide the necessary information.

Validations of subjectively reported hearing loss reported by questionnaires are on-going based on audiometric measurements.

### *B. Risk factors*

The platform for an internet-based screening audiometry has been established in order to screen hearing loss in industry. Validation of this instrument is underway.

The baseline questionnaire survey for a large prospective study (Swedish Longitudinal Occupational Survey of Health, SLOSH) among subjects at working age has been carried out, suggesting high prevalence of tinnitus, hearing loss, and especially the combination of the two. A postdoc financed by FAS is involved with this study. While the study will give updated information about the occurrence of hearing loss and its association with different types of industry, the analyses of these associations will require additional epidemiological expertise. Two scientific papers of this material are in progress.

Results from studies on symphony musicians suggest that long-term stress is a risk factor for hearing problems, and parasympathetic and anabolic activity a protective factor. These associations are planned to be further studied in the future.

The LifeGene Project, a nationwide prospective study on lifestyle and symptoms, directed by professor Nelson and carried out in collaboration by six Swedish universities, will soon be at a piloting stage. In addition to weight-related measurements and assessments of cardiovascular and respiratory function, audiometry will be performed. Blood samples will be drawn for the assessment of biomarkers and genes. With aimed sample size of 500.000, this study will provide unique opportunities for research into the occurrence, trends and risk factors of hearing problems. The recruitment of an epidemiologically oriented postdoc researcher is of vital importance to be better able to utilise this data resource.

### *C. Rehabilitation and protection strategies*

In this area, a prevention study on hearing loss with antioxidants is being carried out in collaboration with the University of Michigan and the Swedish Armed Forces. Technology-based projects are carried out in collaboration with the Hearing Link.

There was some discussion during the site visit about what the most effective methods are to prevent hearing loss. Hearing protection is effective, but the effectiveness in practice depends on the use of the protective equipment. An awareness increasing campaign is planned to be carried out with funding from AFA.

## **4. Communication and dissemination**

The FAS centre arranged in collaboration with the national union for the hearing disabled (Hörselskadades Riksförbund) a Hearing Awareness Week. This was an extensive programme carried out in various venues of the Stockholm region with different themes for the various days. Several popular presentations were given and a total of 1000 subjects were tested for hearing with the internet-based audiometry method.

## **5. Graduate School for Hearing Disabilities in Working Life**

The Graduate School for Hearing Disabilities in Working Life, coordinated by professor Barbara Canlon and with docent Ann-Christin Johnson as the director of studies, has the senior researchers of the FAS centre and the representative of KI in its steering group. A national

reference group is composed of representatives from four universities and the hearing-aid industry. It has a well-established course structure. Compulsory courses include relevant research methods, the biology of hearing and hearing disorders, audiology, and a course with focus on working life. Courses are also given in collaboration with KI, Stockholm university and Linköping university. A new annual international conference has been initiated, scheduled for the first time in November 2009 with the title "Hearing in a life-time perspective - a bio-psycho-social approach to hearing impairment and deafness at the beginning and end of life".

## **6. Conclusions and recommendations**

The work of the centre is so far largely at its starting phase, despite the fact that the FAS funding has been available for 1.5 years. The organisational structure is not yet well-established. The research plans are not well-developed, either. The planned analysis of sick leave and retirement data may not be able to answer the preliminary study questions. Apparently, the group is lacking epidemiological competence from a person who could devote enough time for research in the group.

The publication rate of the centre is still low, and the publication list includes mostly papers from previous work and some work unrelated to the activities of the centre.

The research school has started well off and seems to be actively involved with courses. The new annual international conference is likely to inspire research activities both in Sweden and internationally.

In order to meet its goals, the centre should develop a strong organisational infrastructure that can design and manage well-structured and collaborative research plans.

Future research should be better coordinated and focussed. Preferably it should be based on an analysis of trends in hearing loss and environmental conditions as well as stakeholder needs. The competencies needed to fulfil those needs should then be assessed and the appropriate persons recruited. There is a pressing need to initiate and speed up the planned research projects.

Some existing study materials, especially the planned Life Gene Project, offer unique opportunities for excellent research. To be able to fully utilise these opportunities, the centre needs competent postdoc researchers in appropriate fields, especially epidemiology.

The centre would benefit from regularly held seminars internally and in collaboration with its partners.

## **STOCKHOLM UNIVERSITY: The FAS centre at the Swedish Institute for Social Research (SOFI): Social Change and Inequality across the Life Course: Sweden in Comparative Perspective**

### **1. Organisation and leadership**

The Vice-Chancellor of the University of Stockholm is head of the board of SOFI and in this capacity in principle also follows the development of the FAS centre. However, the board does not monitor the activities on a regular basis, but an annual report is submitted to the

university. Hence, the university in reality at best is applying an ‘arm-lengths’ approach to SOFI and the FAS centre. The university part of the self-evaluation material provided to the evaluators was very brief (1/3 of a page). During the visit the evaluators received a copy of the research strategy for Stockholm university (dated December 2007). It appears that the strategy process within the Faculty of Social Science has been moving forward fairly slowly.

The FAS centre has a steering committee of four SOFI professors representing SOFI’s main research areas. The group meets several times each semester and minutes are taken. The major tasks of the steering committee are discussion of research proposals, budget allocation, and research and budget follow-up. There is no formal director of the FAS centre. However, on the homepage of SOFI it is said that professor Anders Björklund is project manager, but this was not apparent during the site-visit. The research groups are fairly autonomous and a policy of even distribution of funds across groups is aimed for without considering an alternative approach like for instance a more strategy oriented approach.

The FAS centre makes up a considerable part of SOFI’s research, and the centre is seen – as witnessed by the governance structure – as an integrated part of SOFI. For instance, it is a deliberate decision not to distinguish between members and non-members of the centre. On SOFI’s home page the centre is only mentioned in passing.

No scientific board has been appointed and there is no plan to do so. Asked why not, the answer was that the peer-reviewing of submitted articles and visiting researchers are considered substitutes for a scientific board.

No research strategy for the FAS centre has been developed – or for that matter for SOFI – apart from the original application to FAS. It is argued that no long-run plans are needed because flexibility would be stifled. One reason for the lack of an explicit strategy may be due to apparently slow strategy process within the Faculty of Social Science.

## **2. Budget and financing**

The budget appears to be in order including university funding. However, spending in 2008 has been below the planned level. This in part is due to ‘savings’ in order to increase spending in 2009 for the Level of Living Survey and arrival of new researchers early in 2009.

## **3. Research activities**

Research is moving ahead according to plans. The projects described in the FAS application have all been initiated and are moving ahead as planned with no important deviations noted. For 2009-2010 a considerable part of the budget will be allocated to organising the next Level of Living Survey to be carried out in 2010.

Due to the FAS grant it has been possible to move forward with the filling of positions that will become vacant in a couple of years due to retirement. Furthermore, it has enabled recruitment of a new professor. In addition FAS funding has also been used to support young researchers until they get their own research grants, consolidation of skills to collect the Level of Living Survey, to recruit a new economist, lowering the teaching burden for some researchers, support of graduate students, and networking costs for senior SOFI researchers.

SOFI encourages interaction between the disciplines, but based on the principle that economists strive to be strong economists and sociologists strong sociologists. SOFI’s regular semi-

nar series are used for interaction across disciplinary boundaries. It is difficult to judge to what extent this creates synergistic activities.

#### **4. Communication and dissemination**

The Steering committee had discussed quite intensely whether an explicit communication strategy should be developed and had decided against it. The major reason provided was that there is no standard solution to the problem. Basically it is up to individual researchers to decide on how to report on research results to the public at large.

#### **5. Conclusions and recommendations**

The FAS centre is tightly integrated with SOFI and makes up a substantial part of SOFI's resources. The FAS centre is not very visible, neither internally or externally. Visibility as such is not a separate goal but may eventually make it difficult to identify what difference the FAS funding will or has made. SOFI is recommended to develop a website for the FAS centre activities.

SOFI is urged to develop a research strategy, appoint a scientific committee and reconsider the decision not to develop a strategy for communication and dissemination. The reasons provided for not having done these things so far do not appear convincing. SOFI is also urged to appoint at least a 'primus inter pares' in the collegiate Steering Committee and make the Committee more proactive compared to the apparent rather passive current role.

## **STOCKHOLM UNIVERSITY AND KAROLINSKA INSTITUTE: "Human society as a life long determinant of human health" at Centre for Health Equity Studies, CHES**

### **1. Organisation and leadership**

Stockholm university and Karolinska institute share the responsibility for CHES. The Vice-Chancellor of Stockholm university has delegated management responsibilities to the Faculty of Social Sciences. The Faculty provides the university with an annual progress report that is also sent to Karolinska Institute. In addition, the Faculty performs an annual budget follow up. Over all the relationship with the university and Karolinska Institute is kept at a formal minimum.

The FAS centre is an integral part of CHES – and the grant for the centre of excellence is seen as a continuation of earlier FAS grants. Hence, the governance of CHES and the FAS centre is one and the same thing. Given the history and FAS funding of CHES this seems natural.

The 10-person board of CHES oversees all strategic academic and economic decisions at CHES, including new appointments. A 'professorial college' which includes all senior researchers makes up the scientific leadership of CHES and hence also the FAS centre. The professorial college meets 2-3 times a year to discuss among other things issues pertaining to the long-term programme. Daily work was led in 2008 by the main applicant for the FAS centre. However, he is retiring and a new director was appointed effective as of January 1<sup>st</sup> 2009.

There are no formal subdivisions within CHES. Senior researchers have their own project funds with specific responsibilities and budgets. However, ensuring coherence across projects

is one of the major responsibilities of and challenges for the CHESS leadership. For instance, junior researchers are encouraged to be part of several projects. It is, however, difficult to gauge to what extent coherence is realized.

CHESS appears to be well-organised and has developed a seemingly effective governance structure where the FAS centre has been well embedded. Furthermore, in that the FAS funding for the centre of excellence is seen as a continuation of the earlier substantial FAS funding there has been no need to develop a special governance structure for the FAS centre.

## **2. Budget and financing**

After the FAS grant for a centre of excellence the University and Karolinska decided to make a substantial increase of the funding of CHESS.

The budget information covers both 2007 and 2008 making it impossible to distinguish between the two years. However, it seems that the FAS grant for the centre of excellence follows the planned. The university matching funds also seem to be in place.

## **3. Research activities**

The research activities have followed what was outlined in the original application. Status for the projects outlined in the application is either 'on-going' or 'on-going - extensions planned'. From the site visit one gets the feeling that a dynamic and proactive research environment is in place.

The FAS funding for the centre has guaranteed continued financing of some of the core staff at CHESS, and is of great importance in carrying out a long term research agenda.

## **4. Communication and dissemination**

CHESS does not have an explicit communication and dissemination strategy. However, most of the CHESS staff went through media training in 2008. It is planned to develop the website into a more interactive format. At CHESS it is felt that good research papers are the key to communication and that availability to the media based on this is important.

## **5. Graduate research school**

PhD student training is an integral part of research at CHESS although they have no formal PhD examination right (the granting of PhD degrees). The graduate research school should at one and the same time be seen as a complement to the PhD research environment, but also as a separate entity trying to reach PhD students outside of CHESS. The PhD school is more or less compulsory for all PhD students at CHESS.

The doctoral courses planned for the graduate research school have been developed according to what was outlined in the application. The program aims to provide courses that complements and bridge the existing supply of courses provide by the disciplinary departments. There is also focus on what is called academic craftsmanship, i.e., how to write, read, comment and publish academic articles. In addition there are also workshops on presentation skills and academic English.

## **6. Conclusions and recommendations**

CHESS is well-functioning and the FAS centre is an integral part of CHESS. The only recommendation is to develop a more systematic approach to dissemination, in particular the public at large and key policy makers.

# **STOCKHOLM UNIVERSITY: Exclusion and Inclusion in the Late Welfare State: the Case of Alcohol and Drugs (ExIn)**

## **1. Organisation and leadership**

ExIn is integrated with SoRAD (Centre for Social Research on Alcohol and Drugs) at the University of Stockholm. The start-up of the FAS centre of excellence was delayed for about 18 months – counting from the funding letter from FAS. Two, not particularly good, reasons have been provided.

In line with other centres of excellence ExIn received confirmation of funding from FAS in April 2007, and another FAS grant was accordingly phased out. However, the latter caused considerable problems because no long-term funding of SoRAD was in place at the time, i.e. it took some time before the university acted. Therefore it was decided to launch ExIn slowly. As a consequence it was not possible to recruit senior or junior researchers for ExIn. This was, according to information received, not possible until early 2008 and was not complete until midyear 2008. At present two senior researchers have been recruited and also two PhD students – all funded out of FAS funds. On the other hand, the delayed decision about the financial situation did not result in researchers leaving. Hence, ExIn considers the autumn term of 2008 as the starting point which means that it is rather difficult to evaluate ExIn at the present time.

The university plays a somewhat passive role vis-à-vis ExIn. The university follows the progress of the centre via the Faculty of Social Sciences that receives an annual progress report. The Faculty also performs an annual follow-up of the financial situation of the centre.

ExIn's director is also the director of SoRAD and SoRAD's board also acts as the board of ExIn. No scientific board has been established. We were informed that the board also was the scientific board - a somewhat unusual construction. Two senior researchers from ExIn's three research themes execute the daily scientific responsibilities. The senior researchers from the themes form a coordination group together with the director and the deputy director.

Overall it is rather difficult to distinguish ExIn from SoRAD, and the governance structure may need more focus.

## **2. Budget and financing**

Due to the delayed up-start the FAS funding for the first year has not been fully spent, leaving open the question of possible increased activities during the remaining years of the centre. However, at present this issue has not been addressed. The university's contribution in kind to SoRAD – mainly salary for professors – in 2008 was almost one million SEK higher than the FAS funds spent.

## **3. Research activities**

The three research themes are: 1. Consumption, problems, and norms, 2. Alcohol and drug policy and its implications, and 3. Addiction and dependence – societal reactions, treatment and recovery processes. A considerable part the activities in each of the themes at present are already existing projects within SoRAD that are being finalized or continued, i.e. monthly surveys. Only a limited number of new projects – i.e. 'genuine' ExIn-projects - have been initiated.

At present no research strategy has been developed for ExIn apart from the FAS application which as such is no strategy.

A publication list for 2007 and 2008 respectively was submitted as part of the background material for the site visit. However, 2007 is irrelevant for ExIn, and the list for 2008 most likely only has few publications related to ExIn due to the late up-start.

The researchers at ExIn/SORAD only have light teaching obligations. They are not very active in graduate research schools.

At present it is felt that it would be desirable to include more economists in the projects. The researchers mainly have a sociological background.

#### **4. Communication and dissemination**

In January 1<sup>st</sup> 2009 a new position as ‘research information officer’ has been filled in order to improve the dissemination process. The information officer is also responsible for the new web site – this site, however, is integrated in the SoRAD site. A visit to the site reveals that much of the information about ExIn is dated earlier than January 2009.

#### **5. Conclusions and recommendations**

The organisation and work of ExIn must be seen in relation to the delayed up-start. Nevertheless it is recommended that the organisational structure is evaluated critically. One alternative would be to make ExIn more visible and with a clearer independent governance structure. The leadership is now not particularly strong. Another alternative would be (like CHESS) a total integration between ExIn and SoRAD which seems to be more in line with the present situation. There is also a pressing need for a research strategy making clear how to catch up with the delay caused by the slow up-start. It is also recommended that a scientific panel should be appointed.

## **UMEÅ UNIVERSITY: The FAS centre on “Global Health Research”**

### **1. Organisation and leadership**

The centre produces an annual report on their activities and finances that is submitted to the Vice-Chancellor and the University board. The centre’s subject focus has been identified as one of the strategic research areas of the university.

The centre is led by a steering group of seven persons appointed among the senior researchers. The steering group has an operational role and a leading role in establishing research strategy. The group meets frequently – about once a month for 1 to 2 hours - and minutes from the meetings are available on the intranet – making decision-making and progress transparent to staff. The steering group meets regularly with theme leaders to discuss budget and recruitment issues. Theme leaders present plans and expected deliverables.

The principal investigator retires late in 2009 and plans for succession are in place. His successor has been appointed. A noted international scholar functions as an external advisor for an initial 3-year period.

All in all the centre seems to be well-organised and also well-integrated in Department of epidemiology and public health sciences.

## **2. Budget and financing**

The budget for 2007-2008 seems to be in place, including university co-funding.

University co-financing seems to be well in place and ample. Support for the centre to strengthen the internationalization process is guaranteed by the university board through an annual grant of SEK 750,000. In addition the centre has been awarded a tenure track system of SEK 550,000 annually for five years. The medical faculty has also added additional funds to the centre: a chair in global health (90% funding), co-funding of two PhD studentships – and funding of SEK 3.9 million for posts within the centre.

## **3. Research activities**

Research covers four themes: 1. the epidemiological transition, 2. life course perspective on interventions, 3. strengthening primary health care and 4. social inequality, gender and global public health.

Eight themes were outlined in the original FAS application, but based on dialogue with the external advisor four of the themes have been collapsed into one overarching called ‘a life course perspective on health interventions’. However, this theme is rather heterogeneous as the original themes basically have been retained, now just with a common heading. A new theme that was not part of the original application has been added: Climate change and health. It seems relevant and timely. It is assumed that financing of this comes out the university funds mentioned above.

Progress within the original themes seems to be according to what was outlined in the application with no delays of planned activities.

There is a strategy of trying to attract short term guest researchers. Since the centre’s inception 11 guest researchers have visited. It seems to work and may occasionally lead to full time employment at the university and most often to support for the local research environment. There is obviously an inherent danger in having too many guest researchers instead of tenured staff. However, in the case of Umeå university it may be a sensible strategy and the awareness of advantages and risks is high.

FAS funding of the centre of excellence has made an important difference first of all by providing a long term horizon with secure financing, including university co-financing. Secondly it has been possible to employ postdocs which has not been possible earlier. In general FAS funding has provided a window of opportunity that is clearly being exploited. For instance, it has been possible to attract funds from VR to set up a research school. The Vice-Chancellor has provided an initial sum of SEK 385,000 to support the start of an Open Access journal, Global Health Action.

The master program in public health and the VR supported research school in global health serve as major sources of recruitment and sustainable capacity building.

There are many PhD students – even though some of them are ‘sandwich students’, i.e., spending time both in Umeå and their own country. It seems that the senior supervisory capacity is overstretched.

#### **4. Communication and dissemination**

The centre has had a part time communication officer (20%) since late 2008 to implement and monitor the communication strategy. Funding for this has come out of the support for the new Open Access journal.

The centre has developed a communication strategy covering the first three years. The main idea is one of inclusiveness with the intention being for the centre's research and expertise to be accessible to the broadest possible audience. The communication strategy supports a key objective, namely to become a key collaborator and facilitator within the global health movement. At present much of the effort is aimed at communication with the academic community whereas the public at large is relegated a minor role.

#### **5. Conclusions and recommendations**

The Umeå Centre for Global Health Research is well-functioning with a sound governance structure and solid support from the university, both strategically and financially. The only recommendation is to have a critical look at senior supervisory capacity for the relatively many PhD students.

### **LINKÖPING UNIVERSITY: The NISAL Graduate School**

This is the only graduate school funded by FAS that is not affiliated with a FAS centre. However, NISAL was established as a centre for research on aging in 2000 with funding from FAS. FAS contribution to the basic funding of the centre ended in 2009 but, on the other hand, a six-year research programme grant, as well as a graduate school grant, was assigned to NISAL in 2008. It should also be mentioned that NISAL already had an ambitious PhD programme when they received the graduate school grant, a grant that made it possible to continue and develop the program. It also has contributed to cooperation with the Department of Social Work at Stockholm university where research on care in later life is also going on. Professor Eva Jeppson Grassman (NISAL) is, in consultation with Professor Marta Szebehely (Stockholm university), responsible for the scientific leadership of the school. Thus, the graduate school is connected to two research environments with ongoing research on care in later life and with competent leadership.

The organisation of the school with these two parties involved seems to function very well. A network of course coordinators has been created. Ten courses have so far been completed or planned and teachers have been assigned to them. International prominent researchers are also involved as guest lectures. The NISAL graduate school has formulated goals and a strategy for the school which among other things involves an ambition to base courses on the above-mentioned research program and rules for examinations.

The recruitment of students is done after open announcement in Sweden and other Nordic countries as well. About ten students participate at each course given so far, most of them affiliated with NISAL.

A general conclusion is that this graduate school is well organised and follows the plan as formulated in the application.

## Appendix 1

### List of FAS centers and research schools by university

#### **Gothenburg university (GU)**

**FAS centre: Göteborg Center for Epidemiologic Studies on Mental and Physical Health Interacting over the Lifecourse (EpiLife)(dnr 2006-1506)**

#### **Linköping university (LiU)**

**FAS-centre: Centre for Research on Migration, Ethnicity, and Society (REMESO) (dnr 2006-1524, 5 mill SEK/year) + Research school: REMESO Graduate School in Migration, Ethnicity and Society (dnr 2007-2027, 1 mill SEK/year)**

#### **Lund university (LU)**

**FAS-centre: Centre For Medicine and Technology for Working Life and Society at Lund University (Metalund) (dnr 2006-1514) +**

**Research school: Man, work, environment and health. Research school at FAS-centre: Metalund (dnr 2007-2153)**

**FAS-centre: Centre for Ageing and Supportive Environments (CASE) (dnr 2006-1613, 5 mill SEK/year) + Research school: CASE National Graduate School for Ageing Research (dnr 2007-2023, 1 mill SEK/year)**

#### **Karolinska institute (KI)**

**FAS-centre: Aging Research Center (ARC) (dnr 2006-1612, 10 mill SEK/year, also supported by SU) + Research school: ARC National Graduate School for Aging Research (dnr 2007-2105, 1 mill SEK/year)**

**FAS-centre: FAS Centre for Research on Hearing Disabilities in Working Life and Society (dnr 2006-1526, 5 mill SEK/year) + Research school: Graduate School for Hearing Disabilities in Working Life (dnr 2007-2084, 1 mill SEK/year)**

#### **Stockholm university (SU)**

**FAS-centre: Social Change and Inequality across the Life Course: Sweden in Comparative Perspective (at SOFI) (dnr 2006-1515)**

**FAS-centre: Human Society as a Life Long Determinant of Human Health (at CHESS) (dnr 2006-1518) (also supported by KI) +**

**Research school: Human Society as a Life Long Determinant of Health (dnr 2007-2081)**

**FAS-centre: Exclusion and Inclusion in the Late Welfare State: The Case of Alcohol and Drugs (ExIn at SoRAD) (dnr 2006-1523, 5 mill SEK/year)**

#### **Umeå university (UmU)**

**FAS-centre: Centre for Global Health Research (CGH) (dnr 2006-1512)**

**Linköping university, National Institute for the Study of Ageing and Later Life:**

**Research school: National Graduate School in Ageing, Later Life and Care (dnr 2007-1954)**

## Appendix 2



September 30, 2008

### First evaluation of FAS centres

Dear Professor ,

According to Research Bill 2004/05:80, in which the establishment of so-called Centres of Excellence was proposed, the centres should be subject to evaluation on several occasions. FAS has decided to carry out three evaluations: after 1,5 – 2 years, after 5 years and after the end of the 10-year grant period.

The main purpose of this first evaluation is to ensure that the centre has been successfully established with ongoing research activities and to determine if any deviations from the original plan have been made. Thus, focus will be on aspects like organisation, leadership, cooperation, preparation for public outreach and the role of the centre in the strategic plan of the university. Very important in this first evaluation is to get a clear picture of co-funding arrangements by the university.

The time has now come for the first step in this evaluation, which is the completion of a progress report from the centre. Enclosed with this letter you will find instructions for the completion of such a report. The report should be written in English and must not be longer than ten A4 pages (excluding appendices) and be delivered to FAS no later than **January 19, 2009**.

FAS approved funding for 10 FAS centres. Six of these also received funding for a research school. Funds for one research school was granted to a research programme (programstöd). The research schools will also be evaluated in connection with this first evaluation and you will find enclosed (if applicable) instructions for a report on the progress of the research school. This report should also be written in English, not exceed five A4 pages (excluding appendices) and be submitted to FAS by the same date as the report on the Centre.

A review panel has been appointed by the FAS board and its members are: Professor Kjeld Møller-Pedersen, Health Economics Unit, Department of Public Health, University of Southern Denmark (Odense); Professor Eira Viikari-Juntura, Finnish Institute of Occupational Health and Professor Rune Åberg, former Secretary-General of FAS and leader of the panel. The panel will assess the reports by the Centres and will then follow up by a site visit to each centre, which is planned for the month of April 2009.

The review panel will deliver a report to the board of FAS before its meeting in September 2009. As a result of the evaluation, the main options of the board are either to leave the Centre's grant level unchanged, or increase or decrease by a maximum of 20 percent, but he board can also come to other conclusions depending on the evaluations results.

As you will see the first three questions in Section 1 should be answered by the rector of your university. A letter will shortly be sent to the rector asking him/her to send these answers to you, so that you can include them in your report to us. This letter will also include all the information contained in this mail for his/her information.

As mentioned above, we are planning for the review panel to make a site visit at each centre during the month of April 2009 and we would like to invite the rector (or other representative) of the university to be present during the site visit. We will allocate about 2 hours for each site visit. In order for this planning to be successful, we would like to ask you already now to investigate possible dates for a site visit, given that the university rector as well as (senior) centre staff should be present.

The plans for the site visits are as follows: presentation by centre staff/rector during a maximum of one hour, a short break and then a discussion during approximately 45 minutes with the evaluators. Additional persons can be present during the presentation period but no more than five centre/university representatives should be present during the discussion period. Please let us know by **October 31, 2008** which times (mornings or afternoons) during the month of April 2009 that are *not suitable* for a site visit from the review panel.

The information on site visits as well as the reports should be sent in via e-mail to Kerstin Carsjö ([kerstin.carsjo@fas.se](mailto:kerstin.carsjo@fas.se)), who will be acting as secretary to the review panel. If you have any questions please contact Rune Åberg at ph: 090 786 5960 ([rune.aberg@soc.umu.se](mailto:rune.aberg@soc.umu.se)) or Kerstin Carsjö at the above e-mail address or ph: 08-775 40 89.

Best regards,

Erland Hjelmqvist, Professor  
Secretary-General, FAS

Attachments:

Instructions for report on FAS centre with appendices A and B  
Instructions for report on research school with appendix C



## **First evaluation of FAS Centres - Instructions for the report**

(Please note that the total length of the report including section 1 should not exceed 10 pages.)

### **1. Questions to the rector of the university**

- a) Please describe the role of the Centre in the overall research profile of the university. Describe the process and criteria used for selecting FAS Centre applicants at your university.
- b) Describe also the relation between the Centre and the rector regarding matters like reporting of activities of the Centre and financial arrangements.
- c) Has the FAS Centre had any effects so far on research and higher education at your university (strategic plans, collaborations between research groups, PhD studies or other influence)?

### **Questions to the project leader of the FAS Centre**

#### **2. Organisation and leadership of the FAS Centre**

- a) Describe the organisation of the Centre (sections, research groups or projects etc)
- b) Leadership and management
  - Describe how the leadership of the Centre has been carried out and your experiences of this so far
  - What are the plans for the continuity of leadership over the full project period?
  - What is the decision process for research activities, budget allocations and recruitments of researchers and PhD-students?
  - Is there a scientific board and, if so, what role does it have?
  - Are any changes concerning organisation and leadership planned in the coming years? Have any changes happened during the first 1-2 years of the functioning of the Centre?

#### **3. The research programme**

- a) Give a short description of the research, its results so far and future plans. Mention specifically new projects that have been initiated.
- b) Are there any revisions in the long term plans as formulated in the application for the Centre?
- c) Have there been any delays concerning start-up of research activities? If so, for what reason?

Please summarise the status of each project/work package and any deviations from the application plan in the table below::

Project/work package	Status	Comments
etc		

d) Describe your strategy for recruitment of researchers

**4. Collaboration**

- a) Describe the collaboration within and outside the university, nationally and internationally
- b) Have new collaboration projects been initiated since funding was received?
- c) Is there any collaboration with industry or other parts of society such as public authorities, unions etc?

**5. Participating persons**

List all persons participating in the Centres's activities (regardless of source of funding) in the table provided in Appendix A.

**6. Budget and financing of the Centre**

- a) Give an economic report since start up of the Centre and to the end of 2008 in tables 1 and 2 in Appendix B.
- b) Describe the financing plan for the next two years (2009-2010) in table 3 in Appendix B.

**7. Communication/dissemination of activities of the Centre and research results**

- a) Does the Centre have a communication strategy?
- b) How has the task to communicate the objectives of the Centre with surrounding society been organised?
- c) Have resources been allocated for planning, carrying out and monitoring the communication activities?
- d) What are the plans for development of a website? Does the Centre have its own website?

**8. Further information about the Centre**

If there is any other information you find important to communicate to the evaluators you can add them at the end of the report.



## First evaluation of FAS Centres

### Appendix B – Economic report and financing

**Table 1. Economic report covering the time period since the start of the Centre until end of 2008**

Type of cost	Grant from FAS- SEK	University contribution in kind – SEK**	University contribution in direct funds - SEK	Other external contributions*** SEK
Personnel* - Professors - Other academic - Doctoral students - Other research - Administrative				
Infrastructure (equipment etc)				
Other				
Overhead (incl premises)				
<b>Total</b>				

\* As listed in Table 1 of Appendix A

\*\* Approximate equivalent

\*\*\* The total in this column should be the same as the total in Table 2 below

**Table 2. Sources of external contributions received during the time period since the start of the Centre until end of 2008**

Funding organisation	Amount received during time period – SEK
E.g.: FAS program support 1 FAS program support 2 FAS project 1 VR project 1 ...	
<b>Total</b>	

**Table 3. Expected contributions from external sources and the university during the next two years (2009-2010)**

Funding organisation	Amount expected - SEK
E.g.: FAS program support 1 FAS project 1 University – direct funds University – in kind*	

\* Approximate equivalent



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## **First evaluation of FAS Centres**

### **Appendix D – Lists of publications submitted from centre from 2007 on**

**Name of centre:**

**Publications:**

(Note that Appendix D was requested later – in January 2009)



## Evaluation of FAS research schools - Instructions for the report

(Please note that the total length of the report should not exceed 5 pages.)

### 1. Organisation of the research school

Describe the organisation and leadership of the research school including the administrative and scientific qualifications of the director of studies, administrative and scientific tasks. Describe the role of the steering group, if any.

### 2. Goals and strategy for the research school

a) Describe how the objectives of the first year have been achieved (by filling in the table below).

Objective	Current status	Comments
etc		

b) Describe also the plan for continuing the school, how you plan to fulfill the aims of the school as described in the call:

- a structured programme with joint courses and seminars of high scientific and pedagogic quality
- clear organisation and leadership
- sufficient national basis of doctoral students
- clear rules for course examinations
- admission to research school courses through public announcements (öppen utlysning)

### 3. Doctoral courses of the research school

Describe:

- a) the strategy for development of courses and list the started/planned doctoral courses
- b) the strategy and organisation for inviting applications for enrolment of doctoral students for the courses
- c) the procedure and criteria for the selection of students to the courses
- d) number of positions that have been declared open, number of applicants per position (each position separately)

**4. Doctoral students of the research school**

List the doctoral students participating in the school in table 1 of Appendix C. Indicate whether the doctoral student is connected to the Centre or comes from outside the Centre.

**5. Teachers of the research school**

List the teachers engaged in giving courses at the research school in table 2 of Appendix C.

**6. Budget and financing of the research school**

- a) Give an economic report for 2008 including:
  1. costs for course development
  2. costs for the director of studies
  3. administrative costs
  
- b) Describe the financing plan for the school including all expected external contributions and support from the university, in cash or in kind, during the coming years (2009-2011).



