

Welcome to the web based questionnaire for Strategic Research Environment! Before you start reporting, make sure to read the instruction and prepare the Excel files that has been attached in a previous e-mail.

FRÅGA 1

This report concerns the research environment named Biodiversity and Ecosystem services in a Changing Climate - BECC (akronym: EfnatLu). If you have more than one environment to report, please be sure that you fill in the information in the relevant report!

FRÅGA 2

Q. QUESTIONS FROM THE GOVERNMENT

FRÅGA 3

Q1. Please state the main priorities within the environment in 2012.

Biodiversity and Ecosystem Services in a Changing Climate (BECC) is a research programme within the Strategic Research Area (SRA) "Effekter på naturresurser, ekosystemtjänster och biologisk mångfald".

Our vision is to create a world-leading interdisciplinary research programme on climate- ecosystem-biodiversity relationships at multiple scales, bringing together ecological modelling with empirical studies and linking this with policy and governance for the sustainable management of ecosystems and biodiversity in a rapidly changing world. To this end the main priorities during 2012 have been:

* To increase long-term scientific interactions between empiricists and modellers as well as between social and natural scientists, by establishing so called action groups explicitly focusing on research development and synthesis. These cross-disciplinary groups are led by young researchers, forming the next generation of research leaders in BECC.

* To recruit young researchers to projects spanning across departments and disciplines, and within the framework of a research school develop a curriculum for our PhD students that includes interdisciplinary education and synthesis.

* To facilitate research by identifying needs for and supporting research infrastructure in the areas of climate and biodiversity research, including making use of new research facilities at Lund University.

* To systematically develop our interactions with stakeholders, both to inform us about their needs for research as a basis for decision-making, and as a channel for the dissemination of results. BECC increasingly focuses on synthesising research results relating to pressing societal issues.

Since BECC is a large and growing research environment, comprising 140 researchers and 80 PhD-students across disciplines, an important priority during the past year has been the further development of a strong and effective management and support to researchers and efficient outreach.

FRÅGA 4

**Q2. Please describe the major activities within the environment in 2012.**

During 2012, coinciding with the stabilisation of the central targeted SRA funding at the full long-term level, BECC entered a more mature phase. New projects have been proposed and initiated both in Lund and Gothenburg, with most of the funding for 2010-2014 now allocated to projects and other activities.

The joint BECC-MERGE (Modelling the Regional and Global Earth System) research school ClimBEco continued to develop, a second cohort of PhD students being recruited and a mentoring programme for a selection of PhD students from the first round being initiated. ClimBEco is offering an expanded selection of courses and other activities for PhD students with relevance to BECC.

A new element of the BECC programme initiated in 2012 was the identification and financial support of so called Action Groups (AGs). The temporary AG:s consist of limited number of scientists (5-10). The groups arrange seminars and workshops, write synthesis papers, reports, policy briefs and prepare funding applications. Thirteen AG's have been established so far, most led by early-career scientists. We expect the AG:s to become very important in the interaction with stakeholders.

The annual workshop at Örenäs outside Landskrona was very successful. Oral and poster presentations as well as lively discussion inspired several participants—including a member of the scientific advisory board—to express the perception that the meeting represented a landmark in BECC's development into a mature forum for transdisciplinary, applied environmental science integrating Lund University and the University of Gothenburg.

The six research clusters of BECC continued to organize meetings and contribute to the initiation of new BECC projects. They are still very important for the internal structure of BECC.

A stakeholder meeting in March and the establishment of a stakeholder reference group, which also held its first meeting, were other important activities during 2012.

FRÅGA 5

**Q3. Please describe the major results within the environment in 2012.**

The year 2012 has seen a consolidation of and return on BECC's investment in ecosystem modelling covering topics such as ecosystem consequences of wind and insect disturbances in Swedish forests, implications of climate-driven vegetation shifts for protected areas, and impacts of climate change projections on global and regional carbon stocks and sinks.

Extensive work has shown that bird communities in Sweden have changed their geographical distribution in response to recent climate change and at multiple geographic scales. We have assessed the role of land use and climate dynamics for the historical, present distribution, and potential future climate-driven shifts of important North European tree species.

BECC research relating to ecosystem services and biodiversity, relevant to stakeholder interests, has developed ways for valuing soil as natural capital for farmers and for mitigating environmental problems such as eutrophication or climate change. We show that agricultural yields can be increased and less fertilizers need to be used as a result of practices that promote ecosystem services. We have developed tools that will enable landscape-wide benefits of management or policy, such as cooperation among farmers.

Participatory observation and interviews with policymakers and stakeholders in conjunction with major international summit meetings has led to insights on the roles and influence of actors such as the European Union in international climate and environmental negotiations.

A number of syntheses have been carried out in order to approach current environmental problems that have been identified by researchers and stakeholders. These can serve as basis for the current scientific knowledge within areas such as carbon storage in soils, effects of ozone on crop yields, and climate change on tundra vegetation.

The international standing of BECC research is reflected in a continued high citation rate, the involvement of BECC researchers in new externally funded international, projects and funding applications, especially from the EU. During 2012, BECC has hosted guest researchers from fourteen countries. BECC has hosted or contributed to numerous workshops and conferences, most of them attracting international attendees. A collaboration between BECC researchers and the distinguished Professor in Geography Harriet Bulkeley from the University of Durham has culminated in Professor Bulkeley's nomination and appointment to the King Carl XVI Gustaf's professorship in Environmental Science for 2013.

FRÅGA 6



A. GENERAL QUESTIONS

Only changes during 2012 are to be stated.

FRÅGA 7



A1. What effect has the strategic research initiative(s) had on your university?

The strategic research initiatives have significantly promoted cross-disciplinary research and discourse at Lund University. They have enhanced research and they have created added values for the university – and potentially for the national level. BECC has arranged workshops, seminars and research initiatives that have resulted in increased cross-disciplinary interactions among researchers from disciplines ranging from the biological and physical sciences to economics and political science. In particular, BECC has significantly strengthened the organized scientific collaboration between Lund University and University of Gothenburg, creating synergies and added value to climate impact research.

The strategic initiatives mean a challenge not the least in terms of leadership and management. Lund University responded by launching a two-year leadership program for the coordinators and deputy coordinators of the initiatives, which is now completed. A corresponding program tailored to the next generation research leaders was launched last year and comprises ninety participants.

The strategic research initiatives also help power up the knowledge triangle. In addition to generating scientific breakthroughs, they help create educational arenas with contents at the scientific frontier of the themes represented by the respective initiatives. Thus they play a decisive role in implementing the university's goal to provide research based education of the highest quality. During 2012 BECC has, together with the SRA MERGE, significantly strengthened the curriculum of the cross-disciplinary research school ClimBEco. BECC has contributed significantly to the advancement of research infrastructure. The activities of the research school and the infrastructure are also accessible to researchers outside the strategic initiatives.

The strategic research initiatives are also active on the innovation front and new patents are under way as are deepened collaborations with industry and the public sector. BECC has significantly contributed to policy development regarding climate change and ecosystem services through collaboration with Swedish and European authorities.

Several of the initiatives have come a long way with implementing very promising developmental dynamics by recruiting young researchers who contribute different expertise and different angles to the research challenge and by empowering them to develop their own line of thinking. BECC has promoted the development of young researchers by funding so called "action groups" that focus on cross-disciplinary synthesis and are led by young researchers. The BECC environment has also contributed to the coordination, strengthening and visibility of climate impact research at Lund University, through the development of the Centre for Climate and Environmental Research (CEC) as a hub for cross-disciplinary research interactions and outreach activities. BECC has also launched a guest researcher program strengthening international collaboration. Yet another bonus effect is that the strategic initiatives have made possible strategic recruitments.

The research environments created by virtue of the strategic initiatives mean a very valuable resource for the future. A greater variety of attractive research environments are available on both a university and a national level providing options for talented researchers, in a starting phase as well as in a truly advanced phase of their careers.

FRÅGA 8


A2. Describe the model according to which the resources have been allocated.

Of the Government strategic research funding of 24 000 000 SEK to BECC, 22 % has been allocated to the co-applicant Higher education institution University of Gothenburg in the same way as previous year, which is according to the distribution given in the application and decision by the Government.

The allocation of funding within BECC for 2012 has been decided by the BECC Board, which consists of representatives from Lund University and the University of Gothenburg. The final decision has been taken within each university according to internal rulings.

Of the funding (SEK 18 720 000) allocated for use within Lund University, 5 % has been used for actions benefitting all twelve SRA:s within Lund University to enhance strategic planning and quality assurance. The actions include two leadership programmes, common administrative support and coordination, senior advisor in strategic research questions, coordinated profiling and communication and internal follow up. The rest of the funding to Lund University has in the same way as previous year been allocated to the LU-internal board of BECC for further distribution according to the suggestions given by the collaboration board.

These activities comprise management, infrastructure, research projects and outreach according to the challenges defined in 2010. Proposals from BECC researchers, generated by discussions in research groups were discussed in meetings within thematic research clusters and formed a further detailed work plan on which the 2012 budget decision was based. The main criteria used for allocating resources to research was the contribution to the central aims of BECC, e.g. fostering links between empirical ecology and modelling and between natural and social science. Similarly, in Gothenburg resources have been allocated using the same principles as in 2010. The basic difference is that allocation of resources follows a research plan accepted by University of Gothenburg, resulting in substantial co-funding. The research plan is closely linked to the overall strategy for BECC as decided by the BECC board.

FRÅGA 9


A. GENERAL QUESTIONS

Only changes during 2012 are to be stated.

FRÅGA 10


A3. What effect has the strategic research initiative(s) had on the co-applicant university/universities (if any)?

During 2012 the University of Gothenburg has decided on a new vision and long term strategy up until year 2020. It includes the principle of Strong Civic Responsibility, i.e. engagement in close cooperation with the surrounding society and for sustainable development. Emphasis is put on complete academic environments which are based on interaction between research, education and cooperation with the society. The SRA BECC fits well into the vision and will support its implementation. Thus the University has prolonged the co-funding (50% of the means directly from the Government) for the coming years and the appointment of the coordinator.

During 2012 the BECC programme has entered a mature phase compared to the preceding two years. Most of the planned activities have been started and decided recruitments have been made, with the exception of one position as lecturer to be appointed in 2013. The collaboration between Lund and Gothenburg Universities has deepened in several ways. There are several research projects involving staff from both universities, combining different skills and competences. The joint research school ClimBEco (Lund University and University of Gothenburg, BECC and MERGE) had its second round of acceptance of PhD students in 2012. Its mentoring programme for the first round of PhD students has developed well during 2012, with activities in both Lund and Gothenburg. To stimulate research synthesis and collaboration with the rest of Lund University and with MERGE, a call for project proposals with these aims was made in the autumn of 2012 based on 2 MSEK, which were not allocated at the start of the SRA. This will result in new projects during 2013, of which several projects represent collaboration with Lund University. Furthermore, the collaboration between different parts of BECC at the University of Gothenburg, as well as with MERGE, has intensified during 2012. A number of external projects by BECC researchers received funding in 2012. Generally, the research activity and output within the BECC community at the University of Gothenburg has been high during 2012 and on several occasions BECC researchers at the University received strong attention in media.

FRÅGA 11



A4. Will the university monitor and assure the development within the strategic research environment(s)? Please state how and why.

Cross-disciplinary research is at the core of the research strategy of Lund University and we therefore carefully monitor and assure the development of the strategic research initiatives.

During 2011 Lund University conducted an internal assurance process of its strategic research initiatives as part and parcel of the project "Fronesis/crossdisciplinary research and education". This process included a visit by a group of "critical friends" (Craig Heller, Stanford University, Anne Cutler, Max-Planck Institute for Psycholinguistics, and David Price, University College of London). The group made site visits and interviews, held a concluding workshop and produced a report. They wrote:

"We bring to this review process the firm conviction that cross-disciplinary and interdisciplinary research and education must be a major feature of any university that aspires to be world class. Many of the greatest challenges and opportunities that we face cannot be addressed simply within the confines of the classical disciplines. Progress depends on combining the expertise of individuals coming from diverse disciplines, and thus the modern university has to facilitate these cross disciplinary connections and collaborations if it is to remain at the cutting edge of human knowledge and innovation. The funding that supports the Strategic Research Areas is an effective catalyst for cross and interdisciplinary initiatives at Lund. That benefit has been realized clearly in all of the SRA projects we had the pleasure of visiting."

During 2012 the Assistant Vice-chancellor of research has conducted follow-up and planning talks with all SRA:s, focussing on long-term development. Also, an international seminar on the same theme was arranged in May 2012. Based on these activities, a report will be presented to the Vice-chancellor and an action plan for the SRA:s will be launched in 2013.

Further, Lund University has decided to implement a new assessment procedure, replacing the previously planned follow-up of RQ08, "the so-called RQ14". Instead, we will create a continuous process where the main responsibility lies with the individual faculties working on goals, strategies, evaluation and benchmarking. Cross-disciplinary aspects of this process are planned to be strengthened with a special cross-disciplinary committee.

FRÅGA 12



B. DESIGN

FRÅGA 13



B1. Strategic research programme

Only changes during 2012 are to be stated.

FRÅGA 14



a. List and describe the major challenges of the strategic research programme.

No changes since 2011.

FRÅGA 15

**b. Describe the initiatives taken to meet these challenges.**

The six thematic research clusters have met at least twice (spring and autumn) during 2012. During 2012 we have also initiated the formation of 13 temporary Action Groups (AG) that focus on a specific problem area, which is a central part of the BECC programme. The AG:s consist of limited number of scientists (5-10), they arrange seminars and workshops, write synthesis papers, reports, policy briefs and prepare funding applications.

The BECC Annual Workshop (October 22-23) gathered 67 principal investigators (PI:s), postdocs and PhD students from Lund and Gothenburg. The workshop was organized by younger researchers and postdocs. The main activities included presentations and discussions about the newly formed AG:s and poster presentations of BECC funded projects. Ways to promote stakeholder interactions were discussed with invited stakeholders. The BECC board had a meeting with the participating member (Paula Harrison, UK) of the Scientific Advisory Board (SAB).

Following a call for proposals to all the BECC PI:s in early autumn 2012 and discussions in the research clusters, the BECC board decided in December 10 on the funding of 12 further projects for the years 2013-2014. The funding included new projects as well as the continuation of several projects initiated during 2010-2011. Priority has been given to projects that contribute to the fulfillment of the central aims of the BECC proposal, that are of highest scientific quality, produce additional value to ongoing climate impact research at Lund University and the University of Gothenburg and foster interactions between BECC researchers and stakeholders.

During 2012, BECC has organized 4 conferences/workshops with international contributors: "Microbial control of biogeochemical cycles" (August 18-19), "Applications of stable isotopes in environmental research" (November 12), "Human impact and climate change as inferred from palaeo records of aquatic ecosystems (December 5), "The biogeochemistry and microbial ecology of soil desiccation and rewetting" (December 10). BECC researchers also contributed to organizing the Lund Conference on Earth System Governance: Towards just and legitimate earth system governance – addressing inequalities (April 18-20), the 14th International behavioral ecology congress (August 12-17), and the 4th Swedish meeting on mathematics in biology (December 11-12). BECC has also organized three one day-seminars and a number of shorter seminars on a variety of different topics (c.f D1e). These activities have taken place both in Lund and Gothenburg. Several guest researchers have been working in the BECC environment during 2012 (c.f. D1e).

Interactions with stakeholders have been promoted by organizing specific meetings, and by participating in conferences and expert panels (c.f. B2, B6, D2f, D2g). In addition, the BECC board has together with MERGE formed a reference group of stakeholder representatives (B6).

The PhD research school ClimBEco has during 2012 organized a number of courses and workshops on cross-disciplinary research areas related to climate, earth system and society in a changing world (c.f. B5).

FRÅGA 16

**c. Are there any major changes in the research programme introduced in 2012? Please, describe and motivate. This information is important in order to monitor the development of the strategic research environment.**

There are no major changes in the research programme compared to the plan given in the application.

FRÅGA 17

**B2. Strategy and plan for process of knowledge transfer and utilization of research findings**

Only changes during 2012 are to be stated.

FRÅGA 18



a. Describe the major challenges concerning knowledge transfer and utilization of research findings.

The challenges were described in the 2010 and 2011 reports. No new challenges have arisen during 2012.

FRÅGA 19



b. Describe the initiatives taken to meet these challenges.

During 2012 we have established a joint stakeholder reference group with the SRA MERGE comprising eight representatives of key stakeholder groups for our research including the agricultural, forestry, energy, nature conservation/environmental management and spatial planning sectors, as well as the coordinators of BECC and MERGE and the CEC communication officer. Most of the stakeholder participants in the reference group are chosen for their status as leaders in their respective organisations, their extensive networks within and across sectors and their strong interest and knowledge in environmental change issues and science needs. It is expected that the reference group will be a key node for the transfer and dissemination of BECC findings to the wider stakeholder community and society at large.

BECC researchers have been actively engaged in government efforts toward the science-based management of ecosystems and biodiversity, as well as the public debate on these issues. BECC coordinator Henrik Smith provided scientific expert support in a Swedish Environmental Protection Agency (EPA)-convened working group on ecosystem services in Sweden commissioned by the government (www.naturvardsverket.se/upload/20-om-naturvardsverket/Regeringsuppdrag/2012/ekosystemtjanster-information/ru-est-slutlig-rapport-1101.pdf). In a widely publicised debate, Anders Lindroth and four other BECC researchers have argued for increased research on the climate mitigation potential of alternative management strategies for Swedish forests (www.dn.se/debatt/landsbygdsministern-har-fel--kalhyggen-inte-klimatsmarta). One outcome of this debate has been a Riksdag committee symposium on the issue in the Swedish Parliament.

FRÅGA 20



c. Have there been any major changes in the planned activities during 2012? Please, describe and motivate. This information is important in order to monitor the development of the strategic research environment.

No major changes during 2012.

FRÅGA 21



B3. Collaboration/strategic alliance partners in 2012

FRÅGA 22



Please upload the excel file B 3 Collaboration/strategic alliance partners, in which you have listed the collaboration/strategic alliance partners in 2012, in relation to the strategic research environment. Define the extent of the collaboration according to the scale below.

Extent of collaboration

3: Collaboration/strategic alliance partner that is part of the core of the environment. The collaboration/strategic alliance partner is contributing with long-lasting resources to the environment.

2: Collaboration/strategic alliance partner which supports and participates in subprojects in the environment.

1: Collaboration/strategic alliance partner that participate in open activities without contributing with resources to the environment.

Antal bifogade filer: 1. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 23

**B4. Recruitment**

Only changes during 2012 are to be stated.

FRÅGA 24



a. Describe the strategies for recruitment to the strategic research environment.

Based on the need to strengthen the long-term competence in conservation biology, a Senior University Lecturer in this area has been appointed during 2012. To recruit younger researchers in BECC, nine post-doctoral researchers have been enrolled in the BECC environment in Lund and Gothenburg during 2012. Five of these positions were supported financially by BECC. The recruitment strategy has an international scope, which has been successful since eight of the nine postdocs recruited during 2012 have a foreign PhD degree.

Recruitment of PhD students is an important part of BECC, linking cutting edge science to post graduate education. Thirteen PhD students have started in the BECC environment during 2012, four of them funded by BECC.

To strengthen and complement BECC:s scientific competence, 18 scientists have been active as guest researchers in the BECC environment during 2012 (see D1e).

Recruitments within the administration to support BECC and CEC at Lund University have been made (see C1b).

FRÅGA 25



b. Describe career opportunities offered by the strategic research environment to young researchers.

To support the careers of young scientists, the BECC board has during 2012 taken the following initiatives:

- * Co-funded 14 positions for young researchers and an associate senior university lecturer. Five of them are women. In several cases, this funding has contributed to the funding of positions during the critical period occurring between post-doctoral positions and more permanent positions at the university.
- * Promoted the involvement of early-career scientists in the leading of BECC activities including Action Groups, the annual workshop, and the ClimBEco research school.
- * Seven of the young researchers (5 women and 2 men) have been or are participating in the Lund University leadership programme.
- * BECC has organized several meetings for young scientist on writing research proposals.

Based on the decisions taken in 2012, BECC-Lund has initiated the recruitment of four new postdoctoral positions. They are intended for candidates who have completed their degree not more than three years before the last day of application. At the University of Gothenburg, BECC supported two younger scientists during 2011, one as a postdoctoral research fellow ("forskarassistent") and one Associate Senior University lecturer.

FRÅGA 26



c. Describe the strategy/plan for staff mobility between the university (universities) and business or public sector (e.g. staff exchange program).

BECC has not developed a specific strategy for staff mobility beyond academia (a guest researcher programme primarily targets internationalisation and exchange among academic researchers within the thematic scope of BECC). However, several BECC researchers have collaboration and links with non-university research organisations and institutes.

BECC researcher Ben Smith has spent 2 months as a visiting scientist at Commonwealth Scientific and Industrial Research Organization (CSIRO), Canberra, Australia, supporting the development of carbon accounting modeling in Australia. BECC post-doc Paul Caplat has also been on a month long research visit to CSIRO. BECC researcher Thomas Sterner leads the economics team in close collaboration with leads the economic team of Environmental Defense Fund (<http://www.edf.org/>). Three ClimBEco participants have been awarded financial support from the research stay grant programme for research visits to foreign institutes. One of the visits will commence in January 2013.

FRÅGA 27



B5. Education

Only changes during 2012 are to be stated.

FRÅGA 28



The integration of education, research and innovation needs to be strengthened (knowledge triangle). Describe how curricula, teaching and examination, at all levels of education including doctoral level, are developed in relation to the strategic research environment.

During 2011-2012, one senior lecturer in conservation biology and one associate senior lecturer in political sciences have been recruited. These positions will strengthen the long term development of the undergraduate education in environmental science, biology and political science by integrating research activities from the BECC focus area into the curriculum of the different study programs. Within the BECC research environment another two permanent positions as lecturers are currently being recruited that will further strengthen cross disciplinary science activities in teaching as well as research activities within BECC.

A formal bilateral agreement between Cottbus University (Germany) and Lund University has been signed to reinforce international exchange between undergraduate students and teachers in environmental economics.

The graduate research school ClimBEco (www.climbeco.lu.se) is a collaboration between the BECC and MERGE environments at Lund University. ClimBEco promotes PhD students to engage in cross-disciplinary research on climate/Earth system, climate impacts on ecosystems and ecosystem management and linking this with policy and governance research. The research school has admitted another 30 PhD students to a two-year program that includes two annual meetings and the possibility to apply for participation in a mentor programme aiming to strengthen personal development and career planning skills. During 2012, seven PhD courses and a career planning day were organised and the two annual meetings focused on 'Interactions and feedbacks within the Earth system' and 'A critical appraisal of ecosystem services'. A research stay grant programme has been initiated that has awarded three PhD students research visits to foreign institutes.

FRÅGA 29



B6. Industrial and Societal problems addressed.

Only changes during 2012 are to be stated.

FRÅGA 30



a. Describe industrial and/or societal problems and needs that are addressed.

Interaction with stakeholders and the society has intensified within BECC during 2012. Together with the SRA MERGE, a stakeholder meeting was organized in Jönköping on 13 March 2012. The meeting was attended by 18 stakeholders, 20 representatives of the two SRA:s and one external, invited discussion leader. The meeting was structured around the identification of important problems where research within BECC and MERGE could support decision making in the society and of the means to efficiently communicate between researchers and stakeholders and to intensify further communication.

In 2012, partly based on the outcome of the Jönköping meeting, a stakeholder reference group was established. It had its first meeting on 19 December, which was attended by six stakeholders. We expect the reference group to become very important in the design of the interactions between BECC and societal actors and stakeholders, and for dissemination of scientific results. The reference group is shared with the SRA MERGE.

Example of important BECC activities during 2012 directed towards societal problems include:

* Investigation of the possibility to define, estimate and report emissions and uptake of greenhouse gases to the Kyoto Protocol from draining, construction and restoration of wetlands. It shows that drained wetlands are very important sources of greenhouse gases, which are insufficiently considered in current modelling and mapping activities. (Å Kasimir Klemedtsson)

* BECC researchers were actively involved in a debate on the effects of clear cutting on the environment, in particular carbon storage in the forest ecosystem (A Lindroth, B Smith, M Sykes, H Wallander, P Vestin). In this discussion, BECC researchers have argued for increased research on the climate mitigation potential of alternative management strategies for Swedish forests. One outcome of this debate has been a select committee symposium on the issue at the Swedish Parliament.

* BECC has provided scientific expert support in a Swedish EPA-convened working group on definition and mapping of ecosystem services in Sweden during 2012. (H Smith)

* In response to suggestion from stakeholders at the meeting in Jönköping in March 2012, a BECC Action Group was initiated to communicate on and implement scientific knowledge on strategies in conservation, in particular the land sharing vs. land sparing dilemma. (J Ekroos)

* BECC's coordinator is a member of "Miljöforskningsberedningen", an arena for communication between the Swedish Ministry of the Environment and the scientific community. (H Smith)

* BECC's coordinator is a member of the executive committee of Mistra Council for Evidence-Based Environmental Management MISTRA-EviEM (hosted at the Royal Academy of Sciences), working for environmental management to be placed on a scientific foundation. (H Smith)

FRÅGA 32



C. PRECONDITIONS

FRÅGA 33



C1. Organization and leadership of the strategic research environment in 2012

FRÅGA 34



a. Describe how the strategic research environment is organized, including the set-up with co-applicant Higher education institutions (if any), and collaborating research institutes (if any) Specify the main bodies in the environment with an organization chart (please upload the organization chart below).

BECC is headed by a joint board consisting of six members, five from Lund University and one from the University of Gothenburg. The board is headed by the coordinator, Prof. Henrik Smith. Within Lund University, BECC forms one of the cornerstones of the new Centre for Environmental and Climate Research (CEC) at the Faculty of Science. CEC is led by a board comprising 13 delegates from various faculties at Lund University. Prof. Smith is the manager of CEC and chair of the board. CEC organizes activities jointly for the BECC and MERGE environments, such as a common research school and a communication office.

At the University of Gothenburg, BECC and MERGE are managed by a common steering committee, consisting of the Gothenburg coordinators for the two SRAs, the main coordinators of BECC and MERGE from Lund University and two scientists from the University of Gothenburg representing the two faculties involved. This arrangement will ensure that priorities set at the University of Gothenburg will be in line with the overall priorities of BECC and MERGE. The steering committee in Gothenburg reports yearly to the University of Gothenburg and makes a revised budget plan to fulfil the commitments associated with the 50% co-funding of the SRAs by the university.

BECC has a Scientific Advisory Board consisting of Frank Biermann, Vrije Universiteit (NL), Claus Beier, Risö (DK), Paula Harrison, Oxford University (UK) and Kirsten Halsnaes, Risö (DK).

FRÅGA 35



Upload organization chart here

Antal bifogade filer: 1. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 36



b. Describe the leadership and management (the main strategic and operative bodies) of the strategic research environment, including number of men and women in the management team, the decision-making procedure, and who is in charge. Also upload the excel file "C1 b List of personnel in management" that was sent out together with the instructions for reporting. The excel file should include name of person, name of institution/organization, gender and role in management (refer to the organization bodies in the organizationchart) for those active within the management during 2012.

The leadership of BECC has had some minor changes during 2012. Deputy coordinator for BECC Karin Bäckstrand asked to leave her responsibility as deputy coordinator and board member due to new research possibilities from January 2012. Karin Bäckstrand is continuing to be active in BECC as a researcher.

The mandates for Henrik Smith and Benjamin Smith as coordinator and deputy coordinator for BECC have been prolonged by the Vice-Chancellor at LU from October 2012 to December 2014. Adjunct board member and acting cluster leader from January 2012 is Jessica Coria from the department of Economics at University of Gothenburg. Student representative in the board has changed from Georg Andersson to Lina Herbertsson as of July 2012.

CEC recruited in 2012 a research communicator for overall communication and a research administrator to work with the research school ClimBEco, among other areas.

FRÅGA 37



Upload excel file "C1b List of personnel in management" here

Antal bifogade filer: 1. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 38



C2. List of participating personnel in the strategic research environment in 2012

FRÅGA 39



a. Please upload the Excel-file "C2 a List of personnel" that was sent out together with the instruction for reporting. The Excel-file should include name of person, name of institution, gender, position, role in research environment etc for those participating more than 10 percent of full time in the environment during 2012.

Antal bifogade filer: 1. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 40



Please also state the number of relevant personnel (female and male) participating more than 10 % of full time in strategic research environment (regardless of financing) during 2012. The number should be the same as the number of personnel that has been listed in the excel-file C 2 a Number of personnel.

	Female	Male
Number of personnel	85	147

FRÅGA 41



b. If the principal investigators differ from 2011, please comment.

No changes during 2012.

FRÅGA 42



C3. Economic report for year 2012

FRÅGA 43



a. Specify the income during 2012 to the strategic research environment. Include "in-kind contributions" and specify such contributions in question D3 (other comments). Use the same delimitation of your strategic research environment as in the last follow-up years, when specifying incomes.

	Government strategic research funding	Co-funding from main applicant Higher education institution	Co-funding from co-applicant Higher education institutions	Funding from collaborating research institutes	Funding from other collaborators	Other external funding
Funding in SEK	24000000	28587875	3851000	0	0	78319221

FRÅGA 44



Please specify the types of funding sources included in "Other external funding" from the table above, together with a rough estimate of their relative contribution. (E.g. funding from public agencies, public research foundations, EU-framework programmes, other international funding, private non-profit organisations, or private companies). N.B an exhaustive list is not required.

Other external funding		
Largest financiers year 2012	Lund University	Gothenburg University
Swedish Research Council Formas	41 %	30 %
The Swedish Research Council (VR)	27 %	8 %
The European Union (EU)	9 %	0 %
Swedish International Development Cooperation Agency (Sida)	0 %	39 %
Other financiers	23 %	23 %

FRÅGA 45



b. Specify how the strategic research funding from the Government in 2012 (box one above) has been used. The use of funding shall include the use at co-applicant higher education institutions. "High cost equipment" is investments in infrastructure and shall be reported as purchase value or depreciations. Use the same model as in the last follow-up for years. "Infrastructure running costs" are costs for using infrastructure e.g. electricity, premises, rents and so on. "Other costs shall be specified in the box below.

	Personnel	Running costs	High cost equipment	Infrastructure running costs	Other costs
Costs in SEK	14558623	2304856	18676	15000	6868831

FRÅGA 46



Please specify the types of costs included in "Other costs" from the table above, together with a rough estimate of their relative size. N.B an exhaustive list is not required.

Other costs corresponds to the indirect costs according to the normal accounting systems at the universities involved.

FRÅGA 48



C3. Economic report for year 2012

FRÅGA 49



d. Specify the distribution of the Government funding 2012 to the strategic research environment.

	Share allocated to co-applicant Higher education institutions	Share allocated to collaborating research institutes	Share allocated to other collaborators
Share (in percent of Government funding)	22		

FRÅGA 50



e. If the share allocated 2012 to the co-applicant Higher education institutions (if any) do not correspond to the one given in the application, please comment.

FRÅGA 51



f. If collaboration with research institutes was intended in the application; does the share allocated or the amount of money spent on collaborative efforts 2012 correspond to the one given in the application? Please comment.

FRÅGA 52

**C4. Use of research infrastructure**

This question regards the use of research infrastructure within the environment in 2012. For more information see the document FAQ 2012.

FRÅGA 53



a. Please upload the Excel-file "C4 a Research infrastructure" that was sent out together with the instruction for reporting. The Excel-file should include the name of each infrastructure used within the environment 2012, what type of infrastructure (national/international), the objective for using the infrastructure (what the infrastructure is used for, free text, max 20 words), the extent of usage (alternatives: minor usage, some usage, extensive usage) and the relevance of the infrastructure for the environment (alternatives: for convenience, important, critical).

Antal bifogade filer: 0. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 56

**D. RESULTS FROM THE STRATEGIC RESEARCH ENVIRONMENT IN 2012**

FRÅGA 57

**D1 Scientific quality in international comparison**

FRÅGA 58



a. Describe the most important results during 2012, including development of new methods.

This year has seen a consolidation of and return on BECC's investment in ecosystem modelling, with 11 model-based journal publications covering topics such as ecosystem consequences of wind and insect disturbances in Swedish forests, implications of climate-driven vegetation shifts for reserve networks in Europe and impacts of the new 'IPCC' climate change projections on global and regional carbon stocks and sinks. Ongoing work linking modelling to monitoring and empirical studies includes the development of methodology for inferring invasive insect damage from satellite data, simulations of nitrous oxide emissions and nitrogen leaching from farm fields under alternative management, and quantification of the acidifying effects of forest practices in different parts of Sweden.

Extensive work has addressed recent distributional and community changes in Swedish birds from multiple perspectives. We have shown that bird community composition in Sweden has changed in direct response to recent climate change, at multiple geographic scales. Local species richness is generally increasing, but cold-loving species are declining. Tree species distributions in Europe reflect a long history of migration through the Holocene. We have made progress in bringing together species distribution modelling and palaeoecological data synthesis to assess the relative role of land use and climate dynamics for the migration history, present distribution, and potential future climate-driven shifts of important North European tree species such as beech and Norway spruce.

In work relating ecosystem and biodiversity monitoring and simulation to stakeholder interests, we have developed a general approach for valuing soil as natural capital based on agri-ecological production functions. We demonstrate our approach using data from European long-term agricultural experiments, and show that maximum attainable yield and fertilizer productivity decrease as a result of practices that degrade soil natural capital and attendant ecosystem services. In related work, we have developed an agent-based model to represent farmers' responses to changing levels of ecosystem services and assess how these responses influence landscape structure and farmers' economy. This tool will make it possible to quantify the landscape-wide potential benefits of a management or policy, such as cooperation among farmers. For application at a larger (national) scale, we have developed a theoretical model to evaluate the effects of multigovernance on environmental issues. In a case study, we have quantified the effects of multigovernance on climate and local pollution in Sweden.

Based on participatory observation and interviews with key policymakers and stakeholders, for example at the UN climate summit in Doha (December 2012), we have examined whether the European Union has regained its leadership in global climate politics, finding that the EU's role changed from leader to mediator among leaders.

Synthesis efforts have been carried out with regard to topics including the dependency of soil carbon storage on plant and microbial diversity in grasslands; synergetic and independent effects of rising CO₂ and ozone concentrations on grain quality in wheat; and on the impacts of rising temperatures on arctic and alpine tundra as revealed by ecosystem warming experiments worldwide.

FRÅGA 59



b. Describe briefly the development since the start and the standing of the strategic research in an international context (state of the art).

The development of BECC since its initiation was described in the 2010 and 2011 reports. This year has seen the establishment of AG:s — working groups focused on the attainment of synthesis and/or development of BECC research around a particular, typically cross-cutting, theme. Action group topics have been chosen in part following suggestions by the BECC community, in part on the initiative of the steering group inspired by discussions with stakeholders, to fill gaps relative to the original BECC proposal and objectives. Largely through the discussions and submissions of action groups, several new projects, synthesis efforts, and cross-cutting internal activities have been initiated. One example of the latter is the production by the Scenarios AG of a manual with advice and recommendations on the choice and retrieval of coherent data on climate and other drivers and socio-economic assumptions for future scenario studies within BECC. Related to this, an automated tool (DataGURU) to aid the retrieval of scenario data from multiple sources is being developed. This initiative is envisaged to promote synthesis within BECC by encouraging and facilitating the retrieval and use of coherent and therefore comparable scenario data in different projects within BECC.

The international standing of BECC research is reflected in a continued high citation rate, the involvement of BECC researchers in new externally funded international, especially EU, projects and funding applications. This year BECC has hosted guest researchers from fourteen countries. BECC has hosted or contributed to numerous workshops and conferences, most attracting international attendees. A collaboration between BECC researchers and the distinguished Professor in Geography Harriet Bulkeley of University of Durham has culminated in Professor Bulkeley's nomination and appointment to the King Carl XVI Gustaf's professorship in Environmental Science for 2013.

FRÅGA 60



D1. Scientific quality in an international comparison

FRÅGA 61



c. Please upload the Excel-file "D1 c List of degrees" that was sent out together with the instruction for reporting. The Excel-file should include name of person, gender, type of degree obtained in 2012.

Antal bifogade filer: 1. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 62



Please also state the number of obtained doctoral and licentiate degrees (male and female) during 2012, from the strategic research environment. The numbers in the boxes below should be the same as the number of degrees that have been listed in the excel-file D 1 c.

	Female	Male
Number of PhD degrees	5	6

FRÅGA 63



	Female	Male
Number of Lic degrees	0	0

FRÅGA 64



D.1 Scientific quality in an international comparison

FRÅGA 65



d. Publications 2012

Please only list articles published during 2012, not submitted papers or manuscripts. Please upload the Excel-file "D1 d i-iii List of publications" that was sent out together with the instruction for reporting. All sheets in the excel-file should be filled in with information on the following areas before uploading.

- i. Scientific peer-reviewed publications in refereed journals. Including: Authors, Title, Journal, Volume, Issue, Pages (x-y) and Year of Publication.
- ii. Peer-reviewed conference papers.
- iii. Other scientific publications (books, theses etc).

Antal bifogade filer: 1. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 66



Please also state the number of publications in 2012 from the strategic research environment. The number should be the same as the number of publications that has been listed in the excel-file D 1 d i-iii.

	Number of scientific peer-reviewed publications	Number of peer-reviewed conference papers	Number of other scientific publications (books, thesis etc.)
	218	11	38

FRÅGA 67



D.1 Scientific quality in an international comparison

FRÅGA 68



e. Conferences, research visits and visiting researchers in 2012

Please upload the Excel-file "D1 e i-iii List of conferences etc" that was sent out together with the instruction for reporting. All sheets in the excel-file should be filled in with information on the following areas before uploading:

- i Major conferences and seminars arranged.
- ii Visiting researchers (not included in C2a) and duration (more than 2 weeks). (Name, position, home university etc).
- iii Research visits by personnel in the strategic research environment (included in C2 a) and duration (more than 2 weeks). (Name, position, host university, department etc.).

Antal bifogade filer: 1. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 69



Please also state the number of conferences, visiting researchers and research visits during 2012. The number should be the same as the number that has been listed in the excel-file D1 e i-iii.

	Number of conferences	Number of visiting researchers	Number of research visits
	4	19	17

FRÅGA 70



D.2 Strategic importance for the business sector and society

It needs to be stressed that there is a significant time-lag between the production of results and their impact on the business sector and society.

FRÅGA 72



b. Innovation impact in 2012

Some research has an impact on industry and society e.g. concerning improved methods for treatment, improved effectiveness etc.

i. Please state names and business registration numbers (only for Swedish organizations) of the organizations that during 2012 have utilized results and competence from the strategic research environment in the development of improved methods etc.

Start by specifying the number organizations utilizing results and competence from the strategic research environment in the development of improved methods etc. Click on OK and the specified number of rows will be created. Fill in the created table by stating name of organization, business registration number and comments (if any).

Number of organizations

Name of organization	Business registration number	Comments (e.g. type of innovation)

FRÅGA 73



D2. Strategic importance for the business sector and society

FRÅGA 74



b. Innovation impact in 2012 (cont.)

Some research has an impact on industry and society e.g. through supporting the development of new goods, services or processes.

ii. Please state names and business registration numbers (only for Swedish organizations) of the organizations that during 2012 have utilized results and competence from the strategic research environment in the development of goods, services or processes.

Start by specifying the number of organizations utilizing results and competence from the strategic research environment in the development of goods, services or processes. Click on OK and the specified number of rows will be created. Fill in the created table by stating name of organization, business registration number and comments (if any).

Number of organizations

Name of organization	Business registration number	Comments (e.g. type of innovation)

FRÅGA 75



D2. Strategic importance for the business sector and society

FRÅGA 76



b. Innovation impact in 2012 (cont.)

iii. Have new or improved products/groups of products such as services or goods been utilized by public organizations during 2012?

Yes

No

FRÅGA 77



iv. Have new or improved products/groups of products such as services or goods been introduced in the market during 2012?

Yes

No

FRÅGA 78



D2.Strategic importance for the business sector and society

FRÅGA 79



b. Innovation impact in 2012 (cont.)

v. Were new private or public companies established during 2012 as a consequence of research and activities related to the strategic research environment?

Yes

No

FRÅGA 80



D2.Strategic importance for the business sector and society

FRÅGA 81



b. Innovation impact in 2012 (cont.)

vi. If new private or public companies were established during 2012 ("yes" on previous question). please list names and business registration numbers of the new companies in 2012.

Start by specifying the number of new private or public companies. Click on OK and the specified number of rows will be created. Fill in the created table by stating name of organization, business registration number (only for Swedish organizations) and comments (if any).

Number of new companies

Name of organization	Business registration number	Comments

FRÅGA 82



D2. Strategic importance for the business sector and society

FRÅGA 83



c. Immaterial property rights in 2012

i. Has there been any application for immaterial property rights (IPR) during 2012? (Immaterial property rights consist of patents, design patents and trade mark protection).

Yes

No

FRÅGA 84



D2. Strategic importance for the business sector and society

FRÅGA 85



c. Immaterial property rights in 2012

ii. If there has been any applications for immaterial property rights (IPR) during 2012 ("yes" on previous question), please list the applications below. Immaterial property rights consist of patents, design patents and trade mark protection.

Start by specifying the number of applications for immaterial property rights (IPR) during 2012. Click on OK and the specified number of rows will be created. Fill in the created table by stating patent/ID-number and type of IPR.

Number of immaterial property rights

Patent/ID-number

FRÅGA 86



D2. Strategic importance for the business sector and society

FRÅGA 87



d. Mobility in 2012

Please upload the Excel-file "D2 d i-iii Mobility" that was sent out together with the instruction for reporting. All sheets in the excel-file should be filled in before uploading. The Excel-file should include name of person, gender, name of organization etc in the following areas:

i. List of persons from industry who have been employed or engaged within the framework of the strategic research environment during 2012. (By employed we mean at least 10 percent of a full time employment. By engaged we mean e.g. in kind contributions. By industry we mean privately and publicly owned companies active in a market.)

ii. List of persons from organizations outside of academia other than industry, who have been employed or engaged within the framework of the strategic research environment during 2012. (By employed we mean at least 10 percent of a full time employment. By engaged we mean e.g. in kind contributions.)

iii. List of researchers from the strategic research environment who have been employed or engaged by industry or industrial research institutes during 2012. (By employed we mean at least 10 percent of a full time employment. By engaged we mean e.g. in kind contributions.)

Antal bifogade filer: 1. Filen/filerna kan ses i resultatöversikten (webb).

FRÅGA 88



Please also state i) the number of persons from industry, ii) the number of persons from organizations outside of academia other than industry, and iii) the number of researchers from the research environment who have been employed or engaged by industry/industrial research institutes during 2012. The number should be the same as the number of persons that has been listed in the Excel-file D 2 d i-iii.

	Number of persons from industry	Number of persons from organizations outside of academia other than industry	Number of researchers from the research environment who have been employed or engaged by industry/industrial research institutes
			3

FRÅGA 89



D2. Strategic importance for the business sector and society

FRÅGA 90



e. Education in 2012

i. Has the strategic research environment carried out contract education on behalf of external clients during 2012?

Yes

No

FRÅGA 91



D2.Strategic importance for the business sector and society

FRÅGA 92



e. Education in 2012

ii. If the strategic research environment has carried out contract education during 2012, please list clients on whose behalf the strategic research environment has carried out contract education.

Start by specifying the number of clients. Click on OK and the specified number of rows will be created. Fill in the created table by stating name of external client, subject area of contract education, number of participants of the contract education and extent of contract education (days).

Number of clients

Name of external client	Subject area of contract education

FRÅGA 93



D2. Strategic importance for the business sector and society

FRÅGA 94



f. Policy impact in 2012

Some research has impact in the public realm, e.g. through supporting government in setting policy or standards. Please, list any such impacts during 2012.

Start by specifying the number organizations where these impacts have taken place. Click on OK and the specified number of rows will be created. Fill in the created table by stating name of organization, area of activity, role and kind of impact.

Number of organizations

Name of organization	Area of activity	Role	Kind of impact

Name of organization	Area of activity	Role	Kind of impact
Swedish Board of Agriculture	Communication of science to policy-makers area; Governmental Agency	Authors of report (A.M. Jönsson et al.)	Review of current knowledge "Modeling climate impact on production and risk of pests in agriculture" to SJV report 2012:10 (Kunskapssammanställning Växtskydd och klimat Modellering av klimatets påverkan på produktion och risk för skadegörare inom jordbruket)
Swedish Board of Agriculture	Communication of science to policy-makers area; Governmental Agency	Invited speakers (H.G. Smith, M. Brady)	Seminar "Evaluation of the Swedish agri-environmental schemes" (Utvärdering av miljöstöden i Sverige)
Swedish Board of Agriculture	Communication of science to policy-makers area; Governmental Agency	Author of report (Å.Lindström et al.)	Compilation of report "Birds in the agricultural landscape today and tomorrow" SJV report 2012:10 (Fåglarna i odlingslandskapet - I dag och i morgon)
Swedish Environmental Protection Agency (EPA)	Communication of science to policy-makers area; Governmental Agency	Lead Scientist (Å. Kasimir Klemedtsson)	Summary of current knowledge around wetlands for GHG accounting in the second Kyoto period
Swedish Environmental Protection Agency (EPA)	Communication of science to policy-makers area; Governmental Agency	Researchers (C. Akselsson and S. Belyazid)	Review of current knowledge to develop new indicators to the Environmental objective "Natural Acidification Only"
Swedish Environmental Protection Agency (EPA)	Communication of science to policy-makers area; Governmental Agency	External expert (H.G. Smith)	Member of EPA reference group "Valuation of ecosystem services"
Swedish Environmental Protection Agency (EPA)	Communication of science to policy-makers area; Governmental Agency	Adviser (S. Belyazid)	Adviser "Methods and estimates of critical loads of Nitrogen"
Swedish Environmental Protection Agency (EPA)	Environmental assessment for policy support area; Governmental Agency	Heading the Swedish Bird Survey-the nationwide monitoring Scheme (Å. Lindström)	Running nationwide biodiversity Monitoring and calculating biodiversity indices
Swedish Environmental Protection Agency (EPA)	Environmental assessment for policy support area; Governmental Agency	Heading the Swedish Butterfly Monitoring Scheme (L. Pettersson)	Running nationwide biodiversity monitoring and calculating biodiversity indices
Swedish Environmental Protection Agency (EPA)	Communication of science to policy-makers area; Governmental Agency	Expert (L. Pettersson)	Member of the national advisory board for EU habitats directive species (Lepidoptera)

Name of organization	Area of activity	Role	Kind of impact
Swedish Environmental Protection Agency (EPA)	Communication of science to policy-makers area; Governmental Agency	Author of report (S.G.Nilsson)	Review of current knowledge for species action plan for saproxylic beetles in (old) oak logs (Åtgärdsprogram skalbaggar i eklågor 2012-2016 Report 6507)
Swedish Energy Agency	Communication of science to policy-makers area; Governmental Agency	Co-author of report (C. Akselsson)	Member of synthesis group writing the report "Impact of increasing biomass harvesting on forest production and environmental services" ("Konsekvenser av ett ökat uttag av skogsbränsle")
Swedish Energy Agency	Communication of science to policy-makers area; Governmental Agency	Expert (M.Green)	Member of expert panel "Vindval" Cooperation between the Swedish Energy Agency and the Swedish Environmental Protection Agency
Intergovernmental Panel on Climate Change (IPCC)	Communication of science to policy-makers area; Intergovernmental Panel	Expert (T. Sterner)	Author on the next Intergovernmental Panel on Climate Change (IPCC) assessment report on climate change
Intergovernmental Panel on Climate Change (IPCC)	Communication of science to policy-makers area; Intergovernmental Panel	Expert (H. Linderholm)	Expert reviewer
Intergovernmental Panel on Climate Change (IPCC)	Communication of science to policy-makers area; Intergovernmental Panel	Expert (Å. Kasimir Klemedtsson)	Elected member to review and may accept suggested emission factors for inclusion into the database
UN ECE Convention on Long-range Transboundary Air Pollution (LRTAP)	Communication of science to policy-makers area; UN	Expert (S. Belyazid)	National expert on Transboundary air pollution
Directorate-General for the Environment (European Commission)	Communication of science to policy-makers area; European Commission	Expert (K. Hedlund)	Coordinating researcher Dissemination workshop at DG environment, Brussels, Feb 2012, SOILSERVICE project
Directorate-General for the Environment (European Commission)	Communication of science to policy-makers area; European Commission	Expert (K. Hedlund)	Participator in workshop "Mapping and assessing ecosystem service" May 2012

Name of organization	Area of activity	Role	Kind of impact
The Global Soil Forum	Communication of science to policy-makers	Expert (K. Hedlund)	Expert in panel on soil ecosystem services at the Global soil week in Berlin, Nov 2012
the European Platform for Biodiversity Research Strategy (EPBRS) European Union	Communication of science to policy-makers area; European union	Expert (K. Hedlund)	Participator in Meeting of the European Platform for Biodiversity Research Strategy (EPBRS) under the Danish presidency of the European Union
Swedish Board of Agriculture	Communication of science to policy-makers area; Governmental Agency	Experts (H.G Smith and A. Jönsson)	Experts at the Swedish Board of Agriculture field day for the project "Diversity on the plains" (Mångfald på slätten)
Swedish Ministry of the Environment	Communication of science to policy-makers area; Governmental Agency	Expert (H.G. Smith)	Member of Miljöforskningsberedningen
Swedish Ministry of the Environment	Communication of science to policy-makers area; Governmental Agency	Authors (R. Ottvall et al.)	Author of the report "Ejderns och andra musselätande dykänders minskning i Östersjön from Miljöforskningsberedningen
Mistra Council for Evidence-based Environmental management	Science-based policy support	Member (H.G.Smith)	Member of executive committee of Mistra Council for Evidence-based Environmental management (EviEM)
The Swedish Research Council Formas	Policy of Science	Member (H.G.Smith)	Member of the board of the Swedish Research Council Formas
Environment Climate Data Sweden(ECDS)	Policy of Science	Member (L. Eklundh)	Member of the board
The European Parliament	Communication of science to policy-makers area; European Parliament	Expert (T. Sterner)	Oral presentation "manging fishing overcapacity" April 24 2012
The French Parliament	Communication of science to policy-makers area; French Parliament	Expert (T. Sterner)	Oral presentation "Perspectives on a comprehensive tax reform – Experiences from Sweden and challenges for France" March 15 2012
Thermal Engineering Research Institute (Värmeforsk)	Communication of science to policy-makers area; Research Institute	Authors (R. Björk et al.)	Authors of report "Tillförsel av aska i skog på dikad torvmark i södra Sverige – skogsproduktion och emission av växthusgaser"

Name of organization	Area of activity	Role	Kind of impact
The National Institute of Economic Research (NIER) (Swe: Konjunkturinstitutet)	Science-based policy support area; National institute	Expert (K. Bäckstrand)	Member of Scientific Advisory Board of the Environmental Economics Unit
The Swedish Nature Protection Agency (Naturskyddsföreningen)	Science-based policy support area: NGO	Expert (K. Bäckstrand)	Member of the Scientific Expert Board
Earth System Governance	Policy of Science	Member (K. Bäckstrand)	Member of the Scientific Steering Committee
The Swedish Research Council	Policy of Science	Member (S. Björck)	Chairperson of the NT board
the Arctic Council	Science based policy support area: Intergovernmental forum	Co-author (T. Christensen)	Co-author of report "The Snow, Water, Ice and Permafrost in the Arctic" (SWIPA)
County Administrative Board of Skåne	Communication of science to policy-makers area; regional authority	Member (P. A. Olsson)	Member of committee for nature conservation (P. A. Olsson)
County Administrative Board of Skåne	Communication of science to policy-makers area; regional authority	Expert (E. Kritzberg)	Expert in working group on actions to reach the Environmental Objectives in Scania (E.Kritzberg)
International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops (ICP Vegetation)	Communication of science to policy-makers area; UN	Expert (H. Pleijel)	Review of current knowledge to set Environmental targets for ozone within ICP Vegetation of the LRTAP convention
Food and Agriculture Organization of the United Nations (FAO)	Communication of science to policy-makers area; UN	Expert (Å. Kasimir Klemedtsson)	Expert meeting- Peatland and organic soil climate change mitigation initiative
The Global Research Alliance on Agricultural Greenhouse Gases	Communication of science to policy-makers area; international alliance	Expert (Å. Kasimir Klemedtsson)	Croplands research Group Meeting (Å. Kasimir Klemedtsson)
Skåne Regional Council; Steering Group for Strategic Environmental Program	Communication of science to policy-makers area: regional authority	Expert (H.G. Smith)	Expert in steering group for strategic Environmental Program
County Administrative Board of Skåne	Communication of science to policy-makers area; regional authority	Expert (E. Kritzberg)	Co-author to the report "Effects of humic and ferrous water on coastal eel" (Effekter av humöst och järnhaltigt vatten på kustnära ål) (http://www.lansstyrelsen.se/skane)

Name of organization	Area of activity	Role	Kind of impact
The City of Malmö	Communication of science to policy-makers area; regional	Author of report (A. Persson)	Strategier, åtgärder och uppföljningsmetoder till stöd för pollinerande insekter i stadsmiljö

FRÅGA 95



D2. Strategic importance for the business sector and society

FRÅGA 96



g. Public impact in 2012

Please list public impacts through for instance media, textbooks, conferences, popular science presentations and policy lobbying etc during 2012.

Start by specifying the number of activities. Click on OK and the specified number of rows will be created. Fill in the created table by stating type of activity, purpose of activity, name of activity and reference (e.g. <http://www.xxx.yy>)

Number of activities

52

Type of activity	Purpose of activity	Name of activity	Reference
Radio interview	Communication and dissemination of science	"Vetandets Värld" P1 Swedish National radio	Swedish national radio; http://sverigesradio.se/sida/avsnitt/108908?programid=412 (P-Å. Olsson)
Radio interview	Communication and dissemination of science	"Vetenskap och miljö" P1 Swedish National radio	Swedish national radio; http://sverigesradio.se/sida/artikel.aspx?programid=406&artikel=5158835 (R. Björk)
Radio interview	Communication and dissemination of science	News Swedish National Radio	Swedish national radio; http://sverigesradio.se/sida/artikel.aspx?programid=96&artikel=5170528 (D. Conley)
Press release	Communication and dissemination of science	Yield vs. Quality trade-offs for wheat in response to carbon dioxide and ozone (Sämre kvalitet på vete när koldioxiden i luften ökar)	Gothenburg University; http://www.science.gu.se/aktuellt/nyheter/Nyheter+Detalj/samre-kvalitet-pa-vete-nar-koldioxiden-i-luften-okar.cid1109755 (H. Pleijel, J. Uddling)

Type of activity	Purpose of activity	Name of activity	Reference
Press release	Communication and dissemination of science	Differences in the climatic debts of birds and butterflies at a continental scale (Klimatanpassning svårt för Europas fåglar)	Lund University; http://www4.lu.se/o.o.i.s?id=1383&visa=pm&pm_id=1807 (Å. Lindström)
News paper article	Communication and dissemination of science	High tolls in the spring - for health	Göteborgsposten; http://www.gp.se/nyheter/sverige/1.1131667-hoga-biltullar-pa-varen-for-halsan (J. Coria et al.)
News paper interview	Communication and dissemination of science	The Scania flora widely affected (Skånes flora påverkas extra mycket)	Skånes Fria Tidning 15 sept 2012 (P. A. Olsson)
News paper interview	Communication and dissemination of science	Humans a greater threat then changed climate (Människan större hot än förändrat klimat)	Skånes Fria Tidning 15 sept 2012 (H. Smith)
News paper interview	Communication and dissemination of science	Future water resources (Framtida vattenresurser)	Skånes Fria Tidning november 2012 (L-A. Hansson)
News paper interview	Communication and dissemination of science	Organic Farming Improves Pollination Success in Strawberries (Jordgubbar banar väg för eko-gårdar)	Dagens Nyheter; http://www.dn.se/ekonomi/jordgubbar-banar-vag-for-eko-gardar (H. Smith)
News paper interview	Communication and dissemination of science	Arctic ice melt and climate change	Skånskan; http://www.skanskan.se/article/20120629/VADER/706289931/-/arktis-isar-bakom-vart-klimat (H. Linderholm)
News paper interviews	Communication and dissemination of science	Yield vs. Quality trade-offs for wheat in response to carbon dioxide and ozone (Sämre kvalitet på vete när koldioxiden i luften ökar)	Swedish national tv; http://www.svt.se/nyheter/vetenskap/vaxhusgas-ger-samre-grodor (J. Uddling)
TV interview	Communication and dissemination of science	Yield vs. Quality trade-offs for wheat in response to carbon dioxide and ozone (Sämre kvalitet på vete när koldioxiden i luften ökar)	Swedish national tv; http://www.svt.se/nyheter/vetenskap/vaxhusgas-ger-samre-grodor (J. Uddling)
Text book	Communication and dissemination of science	Environment and Energy Science (Miljö- och energikunskap)	Book shop; http://www.gleerups.se/40676733-product (H. Pleijel)

Type of activity	Purpose of activity	Name of activity	Reference
Text book, co-author	Communication and dissemination of science	Political Science Issues (Kan klimathotet lösas genom internationella förhandlingar?)	Book shop; http://www.adlibris.com/se/product.aspx?isbn=918694925X (K. Bäckstrand)
Short film	Communication and dissemination of science	World Energy Outlook - A growing constipation	Website; http://thinkforwardfestival.it/home-en/program/giornate-en-US/1-december/afternoon-session/world-energy-outlook-a-growing-constipation-en-US/ (L. di Lucia)
Media production	Communication and dissemination of science	Second Nordic International Conference on Climate Change Adaptation	Website; http://www.youtube.com/watch?v=vT8u4chzyZM&feature=relmfu (M. Hall)
Media production	Communication and dissemination of science	Climate of the Earth (Samtiden-Jordens klimat)	Website; http://www.ur.se/Produktioner/173417-UR-Samtiden-Jordens-klimat-Pengarna-och-temperaturen (D. Hammarlund)
Popular Science book	Communication and dissemination of science	Jord- funderingar kring grunden för vår tillvaro	Book shop; http://www.adlibris.com/se/product.aspx?isbn=917353546X (H. Wallander)
Opinion piece	Communication and dissemination of science	Landsbygdsministern har fel – kalhyggen inte klimatsmarta	www.dn.se/debatt/landsbygdsministern-har-fel--kalhyggen-inte-klimatsmarta (A. Lindroth et al.)
Science presentation	Communication and dissemination of science	Course in agriculture and climate (Jordbruket och klimatet-grundkurs 2 dagar)	Website; http://www.kompass.lf.se/Courses/14484.aspx (Å. Kasimir Klemedtsson)
Popular Science presentation	Communication and dissemination of science	Organising Waterdays (Vattendagarna)	Website; http://www.limnologerna.org/vattendagar.html (E. Kritzberg)
Popular Science article	Communication and dissemination of science	Mistra SWECIA annual report 2011	Website; http://www.mistra-swecia.se/polopoly_fs/1.23324.1342439689!/Mistra_SWECIA_2011_webb%5B1%5D.pdf (A. M Jönsson and F. Lagergren)
Popular Science article	Communication and dissemination of science	Mätningar i myr kan visa klimatväxlingar	Website; http://www4.lu.se/images/lum/lum7.2012/LUM7.2012.pdf (L. Eklundh)

Type of activity	Purpose of activity	Name of activity	Reference
Popular Science article	Communication and dissemination of science	Grödorna blir proteinfattiga	Website; http://fof.se/tidning/2012/8/grodorna-bli-proteinfattiga (H. Pleijel)
Popular Science interview	Communication and dissemination of science	Poorer crops with increased global warming (Ökad växthuseffekt ger sämre grödor)	Website; http://fof.se/tidning/2012/5-6/okad-vaxthuseffekt-ger-samre-grodor (H. Pleijel)
Popular Science presentation	Communication and dissemination of science	Research site information	Website; http://skog.sodra.com/Documents/Tidningar%20och%20informationsblad/S%C3%B6drasdrakontakt/2012/So%20drakontakt%20nr%204%202012.pdf (R. Björk)
Popular Science presentation	Communication and dissemination of science	Climate, forest and the future (Klimatet, skogen och framtiden)	Website; Forest owner seminars arranged by the Swedish Forest Agency in Hässleholm (March 5, 2012) and Malmö (March 7, 2012). (A. M. Jönsson)
Popular Science presentation	Communication and dissemination of science	Climate change and risk of damage to forests (Klimatförändring och risk för skador på skog)	Website; Stakeholder seminar arranged by Mistra-SWECIA in Stockholm (A. M. Jönsson)
Popular Science presentation	Communication and dissemination of science	Odlingssystem för framtiden –Logården en plattform för odlingssystemforskning	Website; http://www.ksla.se/aktivitet/odlingssystem-for-framtiden-2/ (Å. Kasimir Klemedtsson)
Popular Science presentation	Communication and dissemination of science	Biobränsle från skogen – bra eller dåligt?	Y ^ à • ã L @j K0 ä å • t } È ! * È } È & } c } Ø] ä • Ø Ø Ø Ø Ø a N i ä • t N \ [} - ^ } • È Ø Ø Ø å - Å Ø È Ø • ^ • • [} D
Popular Science presentation	Communication and dissemination of science	Leder ett ökat uttag av bioenergi från skogen till kronisk försurning av mark och vatten?	Website; http://www.lansstyrelsen.se/vastragotaland/Svensk-norsk-kalkkonferens-2012.aspx (C. Akselsson)
Popular Science presentation	Communication and dissemination of science	Tree Johan (Träd-Johan)	J. Uddling -Fredin
Popular Science presentation	Communication and dissemination of science	Grassland biodiversity and land-use change	H. Prentice

Type of activity	Purpose of activity	Name of activity	Reference
Popular Science presentation	Communication and dissemination of science	Information about wild bees	Society for Nature Conservation in Ystad (A. Persson)
Popular Science presentation	Communication and dissemination of science	Information about wild bees	Hallands biodlareförening (A. Persson)
Popular Science presentation	Communication and dissemination of science	Jord- funderingar kring grunden för vår tillvaro	Library in Skurup (H. Wallander)
Popular Science presentation	Communication and dissemination of science	I de lugnaste vatten - hur rovfiskar påverkar livet i våra sjöar	Teknik och naturvetarcirkeln; http://www5.lu.se/o.o.i.s?id=2267&list_mode=id&calendar_id=9806 (C. Brönmark)
Popular Science presentation	Communication and dissemination of science	Presentations on the situation in the Baltic sea	The day of Geology; http://www.geologinsdag.nu/ (D. Conley)
Popular Science presentation	Communication and dissemination of science	Presentations on the Baltic and Skagerack and Kattegat on the NMT-days for high school students	NMT days; http://www4.lu.se/o.o.i.s/19002 (D. Conley)
Popular Science presentation	Communication and dissemination of science	Biodiversity and ecosystem services	Rotary Lund; http://www.edit.rotary.se/1498/events.aspx?OrgId=1498&EventId=286652 (O. Olsson)
Popular Science presentation	Communication and dissemination of science	Annual report for Swedish Butterfly monitoring 2011	Butterfly monitoring http://www.dagfjarilar.lu.se/aktuellt/arsrapport-en-2011-ar-klar (L. Pettersson)
Popular Science presentation	Communication and dissemination of science	ReSource 2012	ReSource 2012; http://www.reversethefuture.org/discussions/48/disruptive-innovation/ (T. Sterner)
Public webpage	Communication and dissemination of science	Ökad skogstillväxt bromsar uppvärmningen av klimatet	Website; http://www.gotbot.se/kulturvast_templates/Kultur_ArticlePage.aspx?id=74036 (G. Wallin)
Public webpage	Communication and dissemination of science	Remote sensing and Earth observation	Lund Earth Observation group http://www.nateko.lu.se/earth_observation/ (L. Eklundh)
Science presentation	Communication and dissemination of science	How can we benefit from modelling in research related to invasive species, biodiversity, pest management, and climate change	Website; http://www.slu.se/en/faculties/ltj/about-the-faculty/departments/plant-protection-biology/about-the-department/departments-meetings/ (J. Holmér)

Type of activity	Purpose of activity	Name of activity	Reference
Popular Science article	Communication and dissemination of science	Towards Effective Earth System Governance: Navigating the Anthropocene	Biermann F., Abbot K., Andresen S., Bäckstrand K. et al. "Towards Effective Earth System Governance: Navigating the Anthropocene", Science Vol. 335, pp 1306-1307
Written report	Communication and dissemination of science	Är anpassning av skogsskötseln nödvändigt i dagsläget för att minska skogsskador i ett förändrat klimat?	Bergh J., Johansson U., Jönsson A.M., Lagergren F., Lundström A., Nilsson U. och Sallnäs O. 2012: Är anpassning av skogsskötseln nödvändigt i dagsläget för att minska skogsskador i ett förändrat klimat? Del 2 –analyser på regional nivå. Sveriges lantbruksuniversitet Arbetsrapport nr 43, ed. J. Bergh, Institutionen för sydsvensk skogsvetenskap Alnarp. pp 43-73.
Stakeholder meeting	Communication of science to policy makers	Start up meeting with stakeholder reference group	Biodiversity and Ecosystem Services in a Changing Climate, December 19 2012, Lund
Stakeholder meeting	Communication of science to policy makers	Workshop; Dialogue and knowledge transfer between science and society	"Biodiversity and Ecosystem Services in a Changing Climate" and stakeholders meeting March 13 2012, Jönköping
Written report	Communication and dissemination of science	Assessment Report of the Global Expert Panel on Biodiversity, Forest Mangament and REDD+	Website; http://www.iufro.org/science/gfep/biodiversity-forman-redd-panel/report/download-chapter (F. Zelli)
Popular Science article	Communication and dissemination of science to policy makers	Gardens benefit bees and enhance pollination in intensively managed farmland	Author of article; http://ec.europa.eu/environment/integration/research/newsalert/pdf/275na1.pdf (A.Persson)

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D3. Other comments

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Other comments