Stockholm Resilience Centre
Annual Report 2012
Stockholm Resilience Centre Annual Report 2012

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The Stockholm Resilience Centre (SRC) not only advances sustainability science and solutions, it also stands as a significant experiment in how universities can pursue interdisciplinary research across disciplines and faculties, while still attracting young scholars, providing good career pathways and generating good academic results in science and education. Similar efforts at universities around the world of setting up “sustainability centres” are often virtual institutions, with a small coordinating unit surrounded by a wide network of scientists based at the disciplinary “home” departments.

The Stockholm Resilience Centre is an attempt of applying a different strategy. Here the idea of Mistra, the main funder of the centre, was to invest in a critical mass of scientists from the natural and social sciences who would operate under one roof in a common organization with the aim of creating a new research environment for the advancement of integrated sustainability science. To mark the cross-faculty character of the centre and to stimulate a truly interdisciplinary evolution, the centre was placed outside of the faculty structure.

This placement has had its pros and cons, and in 2012 a decision was taken to move the SRC inside the Stockholm University structure. With the support of the university leadership and the university board, this move has now been made in a way that provides excellent opportunities for SRC to continue, just as before, to pursue cross-faculty research and education in the pursuit of integrated sustainability research. From 1 January 2013 the SRC is part of the Faculty of Science at the university. It will maintain all its organizational structures, from an international governing board to the ability to recruit scientific staff and students from all disciplines.

At the same time SRC can now contribute more actively to the development of interdisciplinary research and education at the university.

This organizational transition has occurred during a year when the centre has also been preparing for its large external evaluation.

Arlind Underdal
Chair of the Board

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WE APPLY a social-ecological systems approach and resilience thinking in our research. A diversity of theories and methods from different disciplines are applied to solve complex problems and advance new insights. This requires inter-disciplinary learning from natural sciences, social sciences and the humanities, and transdisciplinary approaches through co-production of knowledge with practitioners and other stakeholders.

Over the years we have gradually refined this framework. We depart from the strategic role of advancing new knowledge on biosphere stewardship and innovation in the Anthropocene, with a strong emphasis on ecosystem services and human well-being. We see nature and society as truly interdependent, complex and adaptive social-ecological systems, subject to cross-scale and dynamic interactions. Three challenges are of particular interest in our work: (i) the existence of potential thresholds and regime shifts and what they imply for societies, (ii) the adaptive capacity to deal with rising uncertainty and surprise, (iii) the capacity, in situations of crisis, to ensure that social-ecological systems can sustain and enhance ecosystem services and human well-being.

Our scientific approach has, we believe, served us well. The results of our scientific achievements from 2007-2012 reveals, encouragingly, relevance and impact, with 525 publications in scientific journals and books.

We also place a strong emphasis on creating a seamless continuum between research, teaching and training, dialogues and communication, administration and working environment. In 2012, we applied some resilience thinking to our own organization as we went through the important process of clarifying our placement within Stockholm University (see Chair’s View). We also started preparing our long-term action plan with regards to funding and strategic directions. Our group of senior research and teaching staff continues to grow, with five full professors and eight docents (associate professors) as of early 2013. The middle of 2012 also marked the point when Johan Rockström stepped down as head of SEI to engage full-time as Director of the centre.

Our integration into the Science Faculty from 1 January 2013 also included two important developments in our institutional set-up. The first is that the Natural Resource Management (NRM) group at the Department of Systems Ecology, which has been collaborating closely with us over the years, has formally become a part of the centre from 1 January 2013. This will not only boost our staff but also complete our research school with our own PhD education in Sustainability Science.

We are very proud and excited to welcome all our NRM colleagues to the SRC! Furthermore, after six years together, a large part of the Baltic Nest modeling team (BSN), moved out from SRC to help form the new Stockholm University Baltic Sea Centre. This centre is an important integration of scientific strength at the university, and we wish our colleagues the best of luck in this new endeavour!

Overall, 2012 was about building our own institutional resilience and defining our research challenges and priorities for the coming years. Given the continued recognition of resilience thinking, we look forward to continuing being a provider of knowledge for change at the frontier of sustainability thinking.

Chair’s preface

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Our funders

Since the launch of the Stockholm Resilience Centre, the support from our funders has been a determining factor for our success. We would like to express our gratitude to the following funders that have supported the centre:

In edition to Stiftelsen Futura and Ebba och Sven Schwartz stiftelse
Ostrom taught the world that the commons is not such a tragic place after all. She countered the conventional wisdom that only private ownership or top-down regulation could prevent “the tragedy of the commons,” a scenario where users would inevitably destroy the resources that they held in common.

Through an interdisciplinary approach that combined theory, field studies and laboratory experiments, “Lin,” as she was called among friends and colleagues, showed that people are capable of creating rules and institutions that allow for the sustainable and equitable management of shared resources.

“Pioneers always have a hard time with the conventional. Lin struggled without losing vision or focus, tirelessly and with deep commitment. She was incredibly impressive in breaking through many barriers on her way to a remarkable set of life achievements,” said centre scientific director Carl Folke.

Curious till the end
Ostrom was always open for new findings and new thinking. She was deeply engaged in research on social-ecological systems and resilience thinking. She was excited about learning and rethinking earlier views, and expand frameworks and understanding across the sciences. It was never about defending turf but all about collaboration.

At Indiana University, she was senior research director of the Vincent and Elinor Ostrom Workshop in Political Theory and Policy Analysis, Distinguished Professor and Arthur F. Bentley Professor of Political Science in the College of Arts and Sciences, and professor in the School of Public and Environmental Affairs.

Ostrom provided groundbreaking insights on sustainable collective action, ranging from the institutional dimensions of sustainability to the effectiveness of urban police departments. She was instrumental in the development of the International Association for the Study of the Commons, and her work on common pool resource management has been truly influential with the well-known 1990 book Governing the Commons: the Evolution of Institutions for Collective Action.

As the first woman ever, Professor Elinor Ostrom received the 2009 Prize in Economic Sciences in memory of Alfred Nobel “for her analysis of economic governance, especially the commons” and groundbreaking research on how people organize themselves to manage resources.

An intellectual sharpness
In April 2012, she was among Time magazine’s annual list of the 100 most influential people in the world. She was a member of the American Academy of Arts and Sciences, the US National Academy of Sciences and the American Philosophical Society.

“Lin’s cooperative spirit and enthusiasm, and her intellectual sharpness combined with curiosity and excitement about new ideas was simply unique. She inspired, interacted and collaborated with numerous colleagues throughout the world and her true interest and engagement with young people supporting their pathways was exemplary,” Carl Folke said.

She received numerous international awards, including honorary doctorates from universities in India, France, Germany, Sweden, Canada, the Netherlands, Switzerland, Norway and the United States. She served on the editorial boards of more than two dozen academic journals and is the author of hundreds of articles and chapters and more than two dozen books.

Her imprint will continue to inspire, influence and guide researchers and decision-makers worldwide.

In 2012, the world lost one of the most inspirational and important individuals for the development of social-ecological research. Elinor Ostrom died 12 June from pancreatic cancer at the age of 78 years.

A TRUE PIONEER

Lin’s cooperative spirit and enthusiasm, and her intellectual sharpness combined with curiosity and excitement about new ideas was simply unique.

Carl Folke centre scientific director
The core focus of the Stockholm Resilience Centre is to advance research on the frontier of sustainability science, applying a social-ecological approach and resilience thinking.

**Our research framework**

**The Social-Ecological** approach emphasizes humanity as an embedded part of the biosphere, depending on the generation of ecosystem services for human well-being, while simultaneously shaping it from local to global scales. Resilience thinking is about complex dynamics, how periods of gradual changes interact with abrupt changes, and the capacity to adapt or even transform into new development pathways in the face of dynamic change.

All SRC research rests on the worldview that the biosphere forms the critical life-support system underpinning human and social development. Humanity is an integral part of this biosphere, dependent for human well-being upon ecosystem services that it provides, but also transforming its structure and function at unprecedented speed and scale. The SRC’s organizational design is to “frame creativity” through this articulated worldview, guiding and defining a problem space in which creativity and innovation are allowed to flourish.

The SRC’s overarching mission has, from its inception, been to mobilize and integrate diverse expertise in pursuit of research capable of addressing this challenge. Achieving such a mission requires developing and implementing research strategies, organizational structures, and team-building processes that enable support and stimulate creativity, innovation, and cutting-edge research, ranging from disciplinary to interdisciplinary to transdisciplinary.

The SRC’s research efforts are thematically organized (see figure). The six thematics, Regime shifts and their implications in social-ecological systems, Multi-level and adaptive governance, learning and transformation (“Stewardship” in the figure), Global dynamics and cross-level dynamics in the Anthropocene, Urban social-ecological systems, Water, food and ecosystem services in social-ecological landscapes (“Landscape”), and Coastal and marine social-ecological systems (“Marine”) are broadly reflective of the diverse skill sets contained within the SRC and the complexity of current social-ecological challenges. The themes operate as collaborative learning platforms wherein researchers with a variety of skills and backgrounds can discuss, compare and amalgamate findings and develop new research ideas. Significant time, energy, and resources have been devoted to encouraging cross-theme interaction to stimulate sharing of ideas in the frontier of sustainability science and resilience thinking and the emergence of meta-synthetic insights across themes.

**Research highlights**

Since its launch in 2007, more than 525 centre publications have appeared in scientific journals and books.

**The focus of these publications ranges from theoretical contributions to findings from field work and case studies and reflect a wide spectrum of inductive and deductive work, practice and theory.** SRC researchers have published in 150 different journals, particularly Agricultural Water Management, Ambio, Current Opinion in Environmental Sustainability, Ecological Economics, Ecology and Society, Environmental Education Research, Global Environmental Change, Journal of Marine Systems, Marine Policy, Proceedings of the National Academy of Sciences, USA (PNAS), Science, and Trends in Ecology and Evolution (TREE).

This year alone produced 99 journal publications plus 12 reported online in 2012 (officially published in 2013), two new books and 15 book chapters (see Appendix for further details). The centre has published in high-ranked journals such as the Annual Review of the Environment and Resources, Frontiers in Ecology and the Environment, Global Environmental Change, PNAS, Science and also the new Nature-associated journals Nature Climate Change and Nature Communication.

There were two special journal issues edited by members of the centre in 2012. Victor Galaz led a special issue in Ecological Economics, “Global environmental governance and planetary boundaries”. This issue explored a range of theoretical approaches as diverse as international regime theory, network approaches, institutional and policy analysis, theories on polycentric governance, and resilience thinking, with governance associated with ‘planetary boundaries’ ranging from ocean acidification, to climate change, biodiversity loss, freshwater availability, and land use. The other issue, “Urban ecological and social-ecological research in the City of Cape Town”, which appeared in Ecology and Society, was edited by Thomas Elmqvist.

The distribution of SRC articles in natural sciences, social sciences/ humanities journals as classified by Web of Science.
Centre researcher Maja Schlüter receives 1.3 million Euro starting grant to study social-ecological linkages and their implication for dynamics and governance of SES.

The project, entitled SES-LINK, will develop simulation models to explore the co-evolution of social-ecological systems in a range of different environments such as river basins, land use and marine systems. The project will further look at how dynamic interactions between actors, institutions and ecosystems influence adaptation and change and ultimately the governance of such coupled systems.

Building the Southern African Programme on Ecosystem Change and Society (SAPECS)

In collaboration with leading South African and international scientists, Stockholm Resilience Centre plans to establish a Southern African Programme on Ecosystem Change and Society (SAPECS). The programme aims to strengthen and build a collaborative regional research community that focuses on social-ecological systems and ecosystem services research in southern Africa, and will involve both regional and international researchers and practitioners working in the southern African region.

SAPECS forms one of several case studies around the world linked to the international Program on Ecosystem Change and Society (PECS), a 10-year research initiative within the ICSU global change programmes.

Gretchen Daily awarded 2012 Volvo Environment Prize

Centre board member and long-time partner, Professor Gretchen Daily, was awarded the 2012 Volvo Environment Prize for her pioneering work on quantifying and valuing natural capital. Professor Daily of Stanford University is one of the world’s foremost experts on the valuation of natural capital. She is convinced that the only way to create longterm welfare is to quantify the value of ecosystems. A seminar was organised 21 November 2012 in honour of Daily’s work, exploring key challenges and research frontiers when moving from theory to real-world application in achieving more sustainable land management practices.

Planet under Pressure

Over the course of three days in March, some 3000 delegates, including a large contingent from the Stockholm Resilience Centre, gathered in London to discuss the state of the Earth.

The conference ended with a State of the Planet Declaration which was welcomed by UN Secretary-General Ban Kimoon. Based on the insights generated from the conference, the declaration contained several far-reaching recommendations on how to generate a large-scale political mind shift on global sustainability:

– Global sustainability must be part of the bedrock of nation states and the fabric of societies.
– Our increasingly interconnected and interdependent economic, social, cultural and political systems is both the problem and the solution to the challenges we are facing.
– Existing international arrangements are not dealing quickly enough with current global challenges such as climate change and biodiversity loss.
– The international scientific community calls for a framework for regular global sustainability analyses that link existing assessments that build on the foundations of the Intergovernmental Panel on Climate Change, Intergovernmental Platform on Biodiversity and Ecosystem Services and other ongoing efforts.

The centre contributed with five papers to the special conference issue published in Current Opinion in Environmental Sustainability.
Scientific publications

A matter of principle

Don’t forget Darwin

Triangle cooperation

We need to talk

Cracking the social-ecological code

Single-track sustainability ‘solutions’ threaten people and planet

Avoiding the tragedy of overfishing

Many interests, one enemy
Different stakeholders join forces to curb illegal fishing in the Southern Ocean. Österblom, H., Bodin, Ö. 2012. Global cooperation among diverse organizations to reduce illegal fishing in the Southern Ocean. Conservation Biology, 26, 638-648

Lock, stock and too many feedbacks
Getting the whole historic picture

IHOPE project maps records of biophysical and human system changes over the past millennia


Scuba-diving bandits

Sea cucumber harvesting in the Western Indian Ocean needs better management.


Governing within the planetary boundaries

Developing the scientific concept is one thing, coming up with appropriate governance strategies is quite another.


A roadmap for the Anthropocene

Time to bolster global sustainability governance and give UNEP more influence, scientists say.


Like a bridge over troubled governance

Assessing current concepts and methods on how bridging organizations can contribute to improved resource governance.


Shift happens

Reflections on managing social-ecological systems in light of potential regime shifts


The more the merrier?

Polycentric governance can boost governance of planetary boundaries, but beware of pitfalls.


What goes up must come down

New method tracks path of water, from where it starts as evaporation to where it falls as rain

Necessary uncertainties

Look beyond city limits

Spilt nitrogen

Bouncing back?

What it means to think resilient

Trading with coral reef resilience

Parting water

Clearing confusion

Wordfeud
A centre with an impact

The SRC not only scores high on producing interdisciplinary environmental research, its publications are also among the most cited.

If the mission of Stockholm Resilience Center is to advance interdisciplinary research on social-ecological systems, it has certainly succeeded doing so during its first five years.

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Planetary boundaries (PB) – addressing some key misconceptions

The planetary boundaries concept has, since its inception, appeared prominently in discussions on global sustainability. It has also triggered some criticism, which we welcome, but some of this has been based on key misconceptions.

The framework has been criticised for not being well adapted to policy. It is important to stress that the planetary boundaries research is first and foremost designed to advance Earth System science. We welcome policy related discussions, but only beyond the biophysical boundaries we are trying to identify. We sought to identify boundary positions beyond which we cannot exclude non-linear changes in one or several sub-systems on Earth. We have always stressed the fact that many of the PB definitions are tentative, but they all depart from an approach of identifying non-linear change/ tipping points that can have dramatic impacts for humans. It is up to societies to choose where the boundary position is placed.

We chose to place it at the lower end of the uncertainty range in science as a measure of applying a precautionary principle (e.g., for climate change at 350 ppm (CO2)). One could also take a more risk prone approach, opting for the higher end of our analysis of uncertainty, in this case at 550 ppm (CO2). This is a social choice, but the range is based on an Earth System analysis. The PB research concludes, based on paleo-climatic evidence, that the environmental conditions during the Holocene is the only state that we know for certain can support the modern world we live in. It may be perceived as a normative statement, but it is above all a robust and evidence-based conclusion: human civilizations only started to develop after the onset of the long and relatively stable Holocene. Before the beginning of the Holocene, human numbers were much lower and we existed in hunter-gatherer societies only. Despite the criticisms, there seems to be a shared view that biophysical thresholds do exist and that resource constraints are a challenge for prosperity in the world.

The governance implications of the planetary boundaries concept is a research challenge in its own right. This is why the original framework cannot simply be taken off the shelf and translated directly to operational policy. However, it can be used as a framework to guide sustainable development goals in the Anthropocene.

Read the full reply to the PB criticism at www.stockholmresilience.org/planetary-boundaries.
Research projects and collaborations

Stockholm Resilience Centre continues to expand its collaboration with a global network of partners. Below is a selected list.

**URBES - Urbanization, Biodiversity and Ecosystem Services**

URBES is a three-year research project funded by Biodiversity and Ecosystem Services that aims to bridge the knowledge gap on the links between urbanization, ecosystem services and biodiversity. URBES builds on case studies of four European cities: Berlin, Rotterdam, Salzburg and Stockholm. Some studies are also done on the cities of Barcelona, Helsinki and New York. The research consortium consists of 11 world-leading research institutes for social-ecological studies of urban areas, ten based in Europe and one in the USA (New York). Helsinki University and The New School (New York) participate as self-funded partners. URBES runs from 2012 to 2014.

Social-ecological dynamics of ecosystem services in the Norrström basin (SEEN)

This project will explore the dynamics that contribute to the reliable production of ecosystem services in social-ecological systems. It will be carried out in the Norrström drainage basin in Sweden, the most densely populated drainage basin in the country. It spans urban, agricultural, forest and wetland landscapes and includes two of Sweden's largest lakes. The project will assess the patterns of trade-offs and synergies among 6-12 key ecosystem services and will generate novel knowledge on ecosystem service governance in the region. The project is funded by Formas. Current partners include Eskilstuna municipality and Programme on Ecosystem Change and Society (PECS), but partnership will hopefully increase during the project. The project runs from 2013 to 2016.

Does moisture recycling matter for social-ecological resilience?

An analysis of land use change impact on evaporation and precipitation at regional to global scales

This project will globally map changes in moisture recycling (the amount of evaporation from terrestrial systems that return as precipitation on the continents) that stem from past, present and future land-use changes. The aim is to understand where these changes have important effects on precipitation and social-ecological resilience. The project is funded by the National Science Foundation (Vetenskapsrådet) and is a collaboration with the Delft University of Technology and the Potsdam Institute for Climate Impact Research (PIK). The project runs from 2012 to 2015.

Water Resources and Resilience in the agricultural landscape: A social-ecological systems analysis in the Upper Blue Nile

This project uses numerical models to investigate the impacts of different agricultural water interventions, with a special focus on water harvesting systems. The potential for enhancing resilience to drought in small scale farming systems by implementing water harvesting is assessed, as well as potential down-stream impacts. The project will study the difference between one large or many small-scale dams, as well as compare different locations of dams in the landscape. Moreover, it is anticipated that the project will shed light into how the rainfall runoff relationships can be represented in numerical tool in a way that provides accurate results of the hydrological cycle in tropical environments. The project is financed by the Swedish Research Council FORMAS and will run from 2012 to 2015.

**Stockholm Resilience Centre’s key collaborators**

Geographic location of SRC collaborators, including 18 MoUs, 38 agreements and 45 other collaborators.

URBES case study: The Tempelhof Airport in Berlin has since its close-down three years ago become the home to one of Europe’s largest urban gardens, managed by around 100 people growing fruits, vegetables and flowers. The airport covers an area nearly as big as the Central Park in New York.
Policy and practice

One of the most significant communication impacts the centre had in 2012 was the screening of the “Welcome to the Anthropocene” video during UN Secretary-General Ban Ki-moon’s official opening of the Rio+20 conference. It was produced as part of the launch of the website bearing the same name, Welcome to the Anthropocene. The website is designed to improve our collective understanding of the Earth system and to inspire, educate and engage people about humanity’s impact on Earth. Its unique combination of high-level scientific data and powerful imagery will help people visualize and better understand humanity’s geographic imprint in recent time.

For more information, go to www.anthropocene.info.

Rich biodiversity can exist in cities

Global urbanization will have significant implications for biodiversity and ecosystems of current trends continue, with knock-on effects for human health and development, according to a new assessment produced by the UN Convention on Biological Diversity (CBD) in partnership with the Stockholm Resilience Centre and Local Governments for Sustainability (ICLEI). The assessment was officially launched during the UN CBD COP11 which took place in October in Hyderabad, India.

Much more to be built

The Cities and Biodiversity Outlook is the world’s first global analysis of how projected patterns of urban land expansion will impact biodiversity and crucial ecosystems. The assessment is scientifically edited by centre researcher Thomas Elmqvist and draws on contributions from more than 120 scientists worldwide. It states that over 40 percent of the land projected to become urban by 2030 has yet to be built.

“This presents a major opportunity to greatly improve global sustainability by promoting low-carbon, resource-efficient urban development that can reduce adverse effects on biodiversity and improve quality of life,” Thomas Elmqvist says.

A strong argument for better urban planning

The assessment states that urban expansion is occurring fast in areas close to biodiversity ‘hotspots’ and coastal zones. In rapidly urbanizing regions, such as large and mid-size settlements in sub-Saharan Africa, India and China, resources to implement sustainable urban planning are often lacking.

“More than half the global population already resides in cities. This number is projected to increase, with 60 percent of the population living in urban areas by 2030,” says Achim Steiner, UN Under-Secretary General and Executive Director of the United Nations Environment Programme.

“This report makes a strong argument for greater attention to be paid by urban planners and managers to the nature-based assets within city boundaries, and shows how urbanizing areas represent major opportunities for reducing carbon emissions and creating a more sustainable and resource-efficient world,” he added.

Important health benefits

Urban green spaces perform important ecosystem services, such as filtering dust, absorbing carbon dioxide from the air and improving air quality. Data from the United Kingdom show that a ten percent increase in tree canopy cover in cities may result in a 3-4°C decrease in ambient temperature, thus reducing energy used in air conditioning.

Urban biodiversity also delivers important health benefits. Studies have shown that proximity to trees can reduce the prevalence of childhood asthma and allergies. Sustainable urban planning, which addresses biodiversity issues along with other priorities such as poverty alleviation, employment, and housing, can bring positive effects for health and the environment.

“The Outlook provides an overview and response to knowledge gaps in how we understand processes behind urban social-ecological systems and how urbanization is shaping land use,” says Professor Thomas Elmqvist.

Welcome to the Anthropocene

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A world’s first assessment of urban biodiversity edited by centre researcher Thomas Elmqvist (left) demonstrates the enormous potential cities have in global sustainability.
Picking up where Rio left off

With Rio+20 ending in disappointment, centre is asked to contribute to developing new global sustainability goals

Ten points for trying, but it was never going to be easy. In a series of Nobel Laureates symposia held in Potsdam, London and Stockholm, the world’s most renowned experts on global sustainability have strived to convey to world leaders the unequivocal scientific evidence that we are heading in the wrong direction. The UN summit on sustainable development in Rio was the perfect arena to get the message across once and for all.

The build-up

Organised simultaneously with the historic summit in Rio de Janeiro, a fourth symposium took place, this time joining forces with the UN Secretary-General’s High-level Panel on Global Sustainability.

In a series of events building up to the official round table discussions, the scientific support for policy action was discussed. A closed high-level meeting on 17 June with Nobel Laureates, global policy makers and world leading sustainability profiles was followed up with an open, high-level dialogue the day after. Inaugurated by His Majesty Carl XVI Gustaf, King of Sweden, panelists and audience discussed the need to develop Sustainable Development Goals that could succeed the Millennium Development Goals in 2015.

Many of the discussions focused on narrowing the gap between what is required at policy level and what is being done, largely at the grass roots level. On 21 June, leading economists such as Jeffrey Sachs (Earth Institute), Armenio Farga (former president of the Central Bank of Brazil) and Pavan Sukhdev (TEEB) discussed how to reform the economy to support sustainable development.

The message

Supporting all these events, and confirming the significance and influence of the Symposia series, a statement was presented to the world’s heads of states and governments at the formal discussions of the Rio summit. Nobel Laureates Yuan-Tieh Lee, Rajendra Pachauri, Muhammad Yunus and Carlo Rubbia delivered a clear message: “We are concerned, it said. “We are on the threshold of a future with unprecedented environmental risks.”

The Laureates called upon world leaders to “move beyond aspirational statements and exercise a collective responsibility.”

The aftermath

Despite all efforts, the outcome of the Rio summit was criticised for lacking detail and ambition. However, one of the most significant outcomes from Rio 2012 was indeed the agreement to develop Sustainable Development Goals, a new set of goals to succeed the Millennium Development Goals. UN Secretary-General Ban Ki-moon was given the mandate to initiate appropriate work to support this process. He announced a high-level meeting on Sustainable Development Goals, a new set of goals to succeed the Millennium Development Goals. UN Secretary-General Ban Ki-moon was given the mandate to initiate appropriate work to support this process. He announced a high-level meeting on Sustainable Development Goals the day after and how to implement them on all levels including regional and local scales.

Taking part in the new network follows from the significant influence the centre had on the report by the Secretary-General’s High-level Panel on Global Sustainability, entitled “Resilient People, Resilient Planet: A Future Worth Choosing”. “The fact that the centre has been asked to join the network shows how important our research is in pushing for a mindset in global sustainability thinking,” says centre director Johan Rockström.

From Rio to Stockholm

Following up from Rio and the launch of the Sustainable Development Solutions Network, its newly appointed leader, Professor Jeffrey Sachs from Columbia University, came to Stockholm to discuss the outcomes of Rio+20, particularly the formulation of the sustainable development goals.

The presentation by Sachs (pictured above) was followed by a panel debate including Gunilla Carlsson, Swedish Swedish Minister for International Development Cooperation. The seminar was hosted by the Stockholm Environment Institute (SEI), together with the Stockholm Resilience Centre and the Beijer Institute of Ecological Economics, with support from the Swedish Postcode Lottery.
Madagascar, music and sustainability

Malagasy music icon Hanitra Rasoanaivo visited the centre to discuss science, art, and sustainability issues in Madagascar

At a seminar-cum-bar taking place at the centre in March, Hanitra Rasoanaivo, charismatic lead singer of Tarika Be and an internationally renowned cultural personality, presented her work and discussed the integration of science, music, and practice with researchers from the Stockholm Resilience Centre.

Rasoanaivo is deeply engaged in using music and art to inform and influence environmental issues. In her work she combines the styles and instruments of many tribes with forceful, often political songwriting. She is also the founder of the Antshow Cultural Center, established to promote Malagasy arts and artists. The Stockholm Resilience Centre centre has a long history of transdisciplinary research on Madagascar, ranging from livelihoods and culture among agropastoralists and fishermen to the role of sacred rites protecting “taboo” forests.

Research has also looked at unofficial land ownership agreements for regenerating large areas of tropical forest previously in decline.

The centre has previously been involved in projects working to integrate art, music, science and practice. This includes the art exhibition and jam session during the Resilience 2008 conference and the 2011 Coral Guardian concert and seminar on the world’s coral reefs.

It’s good to talk

Reaching targets for biodiversity requires formal negotiations, but informal gatherings for knowledge exchange and trust building are equally important

To prepare for challenging discussions about biodiversity financing mechanisms ahead of the COP11 negotiations in India October 2012, the centre’s Resilience and Development Programme took the initiative to organise a dialogue seminar 6–9 March in Quito, Equador.

The intention of the seminar was not to draft formal recommendations, but to enhance understanding among participants to pave the way for the upcoming negotiations in India.

Some 80 participants from a range of governmental, non-governmental, scientific and private organisations shared their perspectives on financial resources mobilization for biodiversity. The dialogue seminar not only contributed to better understanding of differing viewpoints but also created new alliances. Several negotiators also referred to the Quito dialogue during the COP11 in India.

“*This seminar shows that informal but carefully prepared dialogues can help understanding among a very diverse group of actors,*” says Maria Schultz, co-chair of the seminar and head of the Resilience and Development programme.

For more information, go to dialogueseminars.net.

Added values, crucial knowledge

*Indigenous peoples and local communities recognised in new platform to curb biodiversity loss*

After several years of negotiations, the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) was finally established in April 2012. The platform aims to bridge the distance between science and policy and hopefully improve the understanding of biodiversity loss and how it affects human well-being.

Prior to the launch, in an attempt to bridge the gaps between various knowledge systems, the Resilience and Development programme convened a workshop 10-13 April in the Panamanian indigenous autonomous region Comarca Guna Yala (pictured).

The workshop, entitled “Knowledge for the 21st Century: Indigenous Knowledge, Traditional Knowledge, Science and connecting diverse knowledge systems”, was considered highly successful as it bolstered openness and support for indigenous knowledge and diverse knowledge systems in the work of IPBES.

People are willing to pay for a healthier Baltic Sea

*A STUDY FROM the international research network BalticsSTERN shows that people in the nine countries around the Baltic Sea are willing to pay in total some 3,800 million Euros per year for a healthier sea. With 10,500 people participating in the survey, the study captured large interest from both the public and the media. The results from the willingness to pay study will be included in a cost-benefit analysis to be published by the BalticsSTERN research network early 2013.*

BalticsSTERN, which is coordinated by a secretariat based at the Stockholm Resilience Centre, combines socioeconomic and ecological models to make cost-benefit analyses and to identify cost-effective measures needed to meet the targets of HELCOM’s Baltic Sea Action Plan, an ambitious programme to restore the good ecological status of the Baltic marine environment by 2021 and agreed upon by the nine countries around the sea.

Research has looked at unofficial land ownership agreements for regenerating large areas of tropical forest previously in decline.
A royal cup of tea

At the request of HRH The Prince of Wales, the centre, together with the Stockholm Environment Institute (SEI), hosted a visit 23 March 2012

Together with HM Carl XVI Gustaf of Sweden, The Prince of Wales was given an introduction to central aspects of the research conducted at the centre.

Research from SEI was also presented, including Fiona Lambe’s research on the use of ethanol-fuelled cooking stoves (pictured) to reduce environmentally harmful fuel wood consumption and indoor smoke.

Lambe’s presentation was followed by a round table discussion on energy and food security. Three short presentations set the scene and seeded further discussions: Sarah Cornell from the centre presented the Planetary Boundaries concept; Henrik Österblom presented research on the Baltic Sea and Louise Karlberg (SEI) presented issues related to water, energy and food security.

The participants in the round table discussion included centre director Johan Rockström, science director Carl Folke, Ben Moxham (the UK prime minister’s advisor on climate and energy), Jan Agri (DeLavall), Erik Brandsma (Vattenfall), Måns Nilsson (SEI) and Justin Mundy (HRH Prince of Wales’ advisor on sustainability).

A key message from the discussion was the importance of linking science with the private sector and to tap into the enormous innovative capacity and resources these two sectors have. HRH The Prince of Wales emphasized the importance of building environmental capital and social capital, and connecting the highest levels of the private sector with local communities.

Where science meant business

LEADING UP TO Rio+20, the centre, together with the Stockholm Environment Institute, the Stockholm School of Economics and the Stichting af Jochnick Foundation hosted in May 2012 a forum for Swedish business leaders.

The forum, entitled Sustainable Business in a Sustainable World, was a high-level science/business forum that brought together CEOs, corporate executive teams, leading scientists and policy-makers to explore how to implement and manage the transformation to sustainability.

A meeting place for leading thinkers from business, science and politics, the forum placed the latest science and megatrends in the context of today’s corporate challenges.

“The transition to sustainability is an exciting but challenging journey. To develop relevant know-how and useful references is crucial. I hope and believe that this forum, due to its interesting combination of perspectives, will assist in that challenge,” said Magnus Brännström, CEO of Oriflame Cosmetics, one of the core sponsors of the event.

Read more at www.sustainablebusinessworld.com.
tipping point – an exhibition

In an exhibition at Kulturhuset in Stockholm, science and art met to demonstrate the close interdependencies between humans and nature. With a range of curiously crafted installations, the exhibition “Tipping Point” provided visitors with the opportunity to feel, listen, play and discover what resilience, planetary boundaries, ecosystem services and biomimicry is all about.

Centre contributes to artistic exhibition on the close links between humans and nature

Receiving more than 17,000 visitors, the exhibition took place from 17 March to 3 June 2012 and was a collaboration between the Stockholm Resilience Centre, the Stockholm Environment Institute, Munktell Science Park, the Swedish Weather & Climate Centre (SWC), Albaeco, Energimyndigheten, Länsstyrelsen i Stockholms län, SLL/Miljöbidraget and Antonia Axsson Johnsons Stiftelse for Mäjo och Utveckling.

Stockholm Seminars

The Stockholm Seminars cover a broad range of perspectives on sustainability issues. The seminars are organized by Albaeco, Stockholm Resilience Centre, the Beijer Institute of Ecological Economics, the International Biosphere-Geosphere Programme (IGBP), Stockholm Environment Institute and the Swedish Secretariat for Environmental Earth System Sciences (SSEESS).

3 February
Tim Lynam
Making sense of climate change and adaptation

9 February
Karine Nyborg
The ethics and politics of environmental cost-benefit analysis

21 February
Henrik Osterblom
Tipping points and why seabirds depend on access to one third of the world’s fish

7 March
Oran Young
The effectiveness of international regimes: research opportunities

18 April
John Ingram
Food security and planetary boundaries

26 April
Jean-Marc Jancovici
Going carbon-free, a mere joke?

11 May
Mark Swilling
Is a just transition possible? – a southern perspective on the global polycrisis and what happens next

21 May
Rolph Payet
Climate change and sea level rise: can we adapt?

23 May
John Tanzer
Institutional entrepreneurs and the emergence of international institutions for ecosystem stewardship

29 May
Robert Costanza
Solutions for a sustainable and desirable future

31 May
Steve Lanning
Did a butterfly effect change the history of the Pacific?

7 June
Marianne Krasny
Civic ecology: social-ecological innovations in human-nature connections in cities

12 June
François Bouquet
Collective action and conservation of identities

10 September
Scott Barrett
Climate negotiations and approaching catastrophes

14 September
Villy Christensen
Ecological networks — from who did it to future food webs

28 September
Cindi Katz
Resilience in a social field – response to transition

2 October
Anantha Duraiappah
Inclusive Wealth Report: Transition to sustainability

8 November
Charles Hall
Improving real productivity: from labour productivity to multidimensional measure of productivity

12 November
Lance Gunderson
The nature of change and the change of nature: obstacles and opportunities for building adaptive capacity

20 November
Brigitte Baptiste
Questions and challenges for the governance of biodiversity and ecosystem services in Colombia
Resilience dialogues

The Resilience dialogues are weekly internal seminars for staff and students. The purpose of the seminars is to create a space for reflection and exploration of frontier resilience research questions.

18 January
Johan Rockström
What should be our role in science-policy processes?

25 January
Maria Schultz
“Scaling up Biodiversity Finance”
Ecuador 6-9th of March 2012

1 February
Sarah Cornell
How Resilience Science can underpin Sustainable Development Goals

8 February
Richard Klein, Stockholm Environment Institute, Terry Cannon and Chris Béné, UK Institute of Development Studies
How does one integrate disaster risk reduction, adaptation to climate change and poverty reduction to improve resilience?

29 February
Cibele Queiroz
“Tell me where you are from, I will tell you about your research”: Regional patterns found for scientific perspectives on agriculture and biodiversity worldwide

7 March
Sarah Cornell
Planetary Boundaries and Planetary Responsibilities

13 June
Per Olsson
Research on innovations & transformation in SES: insights and ways forward

14 March
Carl Folke, Johan Rockström, Lisa Deutch
The SRC take on education: (Part 1) What is the vision and basic principles for our education?

21 March
Lisa Deutch, Carl Folke
The SRC take on resilience and the future of Education (Part Two) Orienteering our way to excellence in transdisciplinary education

11 April
Victor Galaz
Governing nature in the Anthropocene

18 April
Carl Folke, Oonsie Biggs, Thorsten Blenckner
SRC Surprising Insights: A journey into unexpected research findings, crystal clear ideas and resilience one-liners...

13 September
Oonsie Biggs, Tim Daw, Elin Enfors et. al.
Links between ecosystem services and human wellbeing

14 November
Örjan Bodin, Maja Schlüter
Resilience dialogues: strengthening the linkages between the conceptual and empirical basis of resilience

28 November
Fredrik Moberg, Anna Emmelin
Cooking the SRC narratives: How do we write and tell compelling place-based stories about our research and its implications?

Theme leader retreat
November 2012
Education

2012 saw a continued increase in the role that education plays in not only bridging groups and activities at the centre but also contributing to research and capacity building.

We enjoyed the company of Prof. Lance Gunderson from Emory University during his sabbatical in the autumn. Lance not only gave a course for the Resilience Research School (RRS) in adaptive management, he also made time to join the PhD book club in their discussion of his classic work Panarchy and lectured for the Master’s students on the challenges of dealing with scale in ecosystem management - to everyone’s delight!

In the spring, the course Conducting Resilience Assessments in Social-Ecological Systems brought together an exciting group of experts on resilience: Paul Ryan, a practitioner with international experience in resilience assessments, Brian Walker, one of resilience thinking’s founders and Allison Quinlan, a Senior Research Fellow at the Resilience Alliance who helped develop the first Resilience Assessment Workbook together with centre researchers Lisen Schultz and Cathy Wilkinson. Together they provided a unique and hands-on course for researchers, practitioners, PhDs and Master students alike.

Student fieldwork for thesis 2012

Världens Eko
Our Swedish undergraduate course on sustainable development, Världens eko, remains immensely popular. Initiated and driven by students, the course features some of Sweden’s most qualified researchers and debaters on sustainable development.

The Resilience Research School (RRS)
The RRS provides a structure that allows a focus on resilience in sustainability science and also maintains the flexibility required to work with a diversity of departments from the natural and social sciences. Members receive an introduction to resilience research through courses and forge strong collaborations with PhD students based within other departments at SU and other Swedish universities.

In 2012, we started a seminar series exclusively for our PhDs called “How to be a SRC Scientist”. These seminars helped strengthen academic and practical skills, including how to run effective meetings and write successful grant proposals. The topics of the seminars were chosen by the students themselves and given by SRC supervisors.

Our Master’s Programme
The first year of our new Master’s programme Social-Ecological Resilience for Sustainable Development (SERSD) was a great success according to both student and SRC faculty evaluations. In 2012, all programme students were fully integrated into SRC research for their thesis work, and two former programme students were recruited to pursue PhDs.

Furthermore, six scientific publications and a book chapter stemmed from our students’ theses, and students also contributed to SRC research in coursework activities such as the Bali and urban sprawl cases in the Regime Shift Database (see www.regimeshifts.org).

More courses
In 2013 the centre will merge with the Department of Natural Resources Management at Stockholm University. We will have our own PhD programme, expand our selection of courses and continue to develop the Resilience Research School.
Appendix: Finance and funding

Funding of SrC’s activities and costs 2012:

<table>
<thead>
<tr>
<th>Funding source</th>
<th>Amount (MSEK)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nippon Foundation</td>
<td>31.2</td>
</tr>
<tr>
<td>SIDA (Swedbio)</td>
<td>7.0</td>
</tr>
<tr>
<td>Stockholm University</td>
<td>5.0</td>
</tr>
<tr>
<td>Swedish Environmental Research Council</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Total: 45.7 MSEK

*Allocated grant from Mistra 16.8 MSEK plus accumulated surplus 0.4 MSEK

2012 books
Dül, Y. 2012. Hydrological Response to Climate Change: VDM Verlag Dr. Müller, Saarbrücken, Germany, 112pp

2012 SRC chapters

2012 Articles in scientific journals
Biggs, R., Schimer, M., Biggs, D., Bohensky, E.L., Burn Silver, S., Candilis, G., Dalou, V., Dave, T.M.


Thyrnus, M., Crona, B., Nyvist, M., de la Torre-Carras, M., Jaldern, N. 2012. Tracing val- ues to understand the effects of trade on marine ecologies. Ambio, 41, 787-794


Journal articles online 2012, official publication year 2013
Barkah, S., Jecheleh, C. Urban gardens, agricultu- re, and water management: sources of resilience for long-term food security in cities. Ecology and Society, dx.doi.org/10.1890/12-0267.1
Börde, P., Barkah, S., Colding, J. Circ, greening the urban and peri-urban areas in public access community gardens in Berlin. Landscape and Urban Planning, hgsdx.doi.org/10.1016/j. landscapeurbplan.2012.10.005
Ehrlich, D. Social-ecological traps and transforma- tions in degraded agro-ecosystems: Using water system innovations to change the trajectory of de- velopment. Global Change Biology dx.doi.org/10.1111/j.1365-2486.2012.02570.x
Ensminger, H., Sörlin, S. Ecosystem services as technologies of globalization: On articulating rural landscapes. Ecosystems and Society, dx.doi.org/10.1890/12-0267.1
Göransson, A., Lindgren, M., Neuvonen, S., Blenckner, T., Holstheimo, Z., Müller-Karlova, B., Nistoksi, S., Tomkole, M., Aro, E., Wilmot, B., Almlof, C. Biological ensemble modelling to evaluate potential future of living marine resources. Ecological Applications dx.doi.org/10.1890/10-0371.1
Gang, K.K., Wani, S.P., Barrett, J., Kaheir, L., Rockstroem, J. Up-scaling potential impacts on water flow from agricultural water interventions and trade-offs in the Omawr Sagar catchment, Must humanoid, India. Hydrological Processes dx.doi.org/10.1002/hyp.591
Jansson, A. Reaching for a sustainable, resilient urban future using the lens of ecosystem services. Ecological Economics dx.doi.org/10.1016/j.ecolecon.2012.06.013
Vilinsz, I. Institutional stability and change in the Baltic Sea: 30 years of issues, crisis and solutions. Marine Policy dx.doi.org/10.1016/j.marpol.2012.01.019
Policy reports and other publications
Alday, R., Díaz, P., Stocks, F., Prosser, M., Tucker, P., Kelling, H., Quiggin, D., Cornell, S., Tierney, M., Buswell, E., Mattler, F., Rockström, J. A philosophical and potential empirical applications. Marine Policy, 36, 142-152

Avoiding bank- rupting nature

Laying with extremes

Declaration for the High-Level Dialogue on Global Sustainability. The Future We Choose, 17 June Rio de Janeiro

Master Theses 2012

Ecosystems, Governance and Globalisation programme

Dagok Gobela, Inter municipal collaboration and social-ecological scale mismatch: A network analysis of urban Stockholm Region

Mattias Gaut, Reconnecting to the Biosphere: Children’s socio-ecological emotions for Nature

Christine Hammond, Impacts of Agriculturally-driven Ruminant Shifts on Ecosystem Services and Human Well-being

Andrea Münstermann, Finding the right conditions for wind power - A business environment perspective on Sweden

Audrey Nga, Nature malls as a guide to a resilience perspective on permaculture and an empirical investigation of its use in these cases. Masters degree in British Columbia, Canada

Yamiko Editer, Conflict minerals and Corporate Social Responsibilities in Sweden: How do the Swedish companies respond to the conflict minerals issue and what are the challenges?

Thomas Talakarbo, Accounting for value: Using Social Return on Investment (SROI) to measure the value created by CSR initiatives

Elna Åkerlund, Children’s systems telling and the story of a mother’s social-ecological systems. A narrative approach to systems thinking in early childhood education for sustainable development

Social-Ecological Resilience for Sustainable Development programme

Beate-Sei You, Understanding the role of government in climate change adaptation: A comparative analysis of national adaptation strategies of Sweden and the Republic of Korea

Nekvro, M., Ercolino, S., Haver vikings for Osteoporos, Balis/STERNIC, Stockholm 2012. 1104-0131


Licenciate Theses 2012

Ardik Bengtsson, Framtidens landskapsutformning: Assessering och kommunikation av landskapskonstnär i human-dominanta landskaps

Marta Kasinska, Man, marina och modern fabriker - A case study in the Baltic Sea

PHD Theses 2012

Gerar Engstrom, Essays on economic modelling of climate change

Björn Nyleen, Social learning in the anthropocene: governance of natural resources inhumans-dominated systems

Mathilda Thyresson, Fish and Food for Ecosystem Function: Fisheries, Trade and Key Ecosystem Processes in Coral Reefs

Magna Tonisalo, Ecosystem services - a tool in sustainable landscape management

Cathy Williamson, Socio-ecological resilience and planning: an interdisciplinary exploration

Diana Chirinos, Resilience through customary sustainable use of biodiversity, Stockholm University

Philippa Ackerman, Co-management in Bali’s Subak cultural landscape

Miji Kim, Motivations for engaging in Corporate Social Responsibility Reporting: A Comparative Study among Different Industries in Sweden

Andrew Mitloehner, What role do environmental and social impacts – practices in the dairy sector

Vladimir Búczyńska, Integrating awareness and communication of landscape connectivity in human-dominateed landscapes

Norström, A., Malmgård, P. 2012. Bringing different knowledge systems to the IPBES Biodiversity Update. www.sinko.se


Centre Staff 2012

Centre Management
Carl Folke Science director
Olof Olsson Deputy director
Johan Rockström Executive director

Administration
Johan Ahlenius Financial & education administrator
Astrid Auralindson Coordinator to executive director
Julie Goodness Project coordinator
Bengt Hall IT-support
Gunnar Jacobsson IT-support
Denise Kjeppeholmer Human resources administrator
Karolina Krzyzanowska Financial controller
Therese La Monde Office & financial administrator
Christine Leinonenhuori Affiliated administrator
Cecilia Linder Human resources Cornelius Ludwig Project assistant
Emina Munarapshic Head of administration
Sina Nieminen Project controller
Henrik Pompeus Fundraiser
Maria Schwenius Project coordinator
Agota Sundin Affiliated administrator

Practice, Policy and Communication
Anna Emmelin Communication strategist
Marika Haeggman Communication officer
Stuart Haug Simonsson Deputy head of communications
Elrika Hermansson Török Project leader
Cajsa Martinsson Communication officer
Fredrik Moberg Senior strategic advisor
Maria Schultz Head of communications and Sundsvol
Arvid Berggren Department service
Fredrik Hammar Senior strategic advisor
Mattias Klum Affiliated senior advisor
Marmar Nekoro Communication and policy officer (BalticSTERN and BNI)
Jeff Ranara Department service

Modeling and Visualisation lab
Emma Sandelin System developer

Resilience and Development programme (Swedbio)
Håkan Berg Senior researcher & advisor
Pamela Cordero Financial controller & administrator
Sara Ellstrand Project officer
Fernilla Malmer Senior advisor
Mauricio Portilla Ospina Project assistant
Marcus Ohlman Senior advisor

BalticSTERN Secretariat
Kerstin Blyk Officer
Sv Graecdotter Head of secretariat
Henrik Scharin Officer

Education
Theodore Adolfsen Course assistant
Lisa Deutsch Senior, Lecturer,
Director of Studies, themes 2 & 3
Eleonora Horn Course assistant
Miriam Huntrig Programme director
Elin Sperber Ousianos Course assistant

Research staff with main theme/programme association
Theme 1 Freshwater, food and ecosystem services
Jennie Baron Affiliated researcher
Elin Enfors Postdoc
Malin Falkenmark Affiliated senior researcher
Line Gordon Senior researcher
Tilman Hertz Visiting researcher
Louise Karlberg Affiliated researcher
Timothy Karposza Postdoc
Patrick Keys PhD student
Steven Lade Postdoc
Mats Lannerstad Affiliated researcher
Olivia Muzarebekov PhD student
Isa Oudaagous Postdoc
Claudia Pahl-West Affiliated senior researcher
Angelina Sanderson Bellamy Researcher
Hanna Sinare PhD student

Theme 2 Urban social-ecological systems
Erik Andersson Researcher
Stephan Barthel Affiliated researcher
Sara Bojerger Postdoc
Johan Colding Affiliated senior researcher
Lisa Deutsch Senior, Lecturer,
Director of Studies
Thomas Elmqvist Professor
Henrik Ennmark Researcher
Marnie Graham PhD student
Åsa Green Affiliated researcher
Jeffrey Lewis PhD student
Cathy Wilkinson Researcher

Theme 3 Governance of coastal and marine systems
Simon Berntsen Researcher
Wijnand Boonstra Researcher
Ery Bachy Postdoc
Beatrice Crona Senior researcher
Tom Dave Researcher
Lisa Deutsch Senior, Lecturer,
Director of Studies
Jonas Henriz Sandberg PhD student
Martina Kadun PhD student
Andrew Merrie PhD student
Marc Metian PhD student
Magnus Nyström Senior lecturer
Max Treff Affiliated senior researcher
Matilda Valman PhD student
Henrik Österblom Associate senior lecturer

Theme 4 Regime shifts
Oonnie Biggs Researcher
Thorsten Bledkner Senior researcher
(Also theme 3 and BNI)
Jamila Haider PhD student
Maik Humann PhD student
Gary Petsson Professor
Juan Carlos Rocha Gordo PhD student

Theme 5 Global and cross-scale dynamics
Victoria Bignet Project assistant
Robert Constanza Affiliated senior researcher
Sarah Cornell Researcher

Centre researcher Beatrice Crona, an expert on marine resource governance, was in 2012 elected to the Young Academy of Sweden. The Academy was founded in May 2011 by the Royal Swedish Academy of Science.

In-house environmental action plan
Stockholm Resilience Centre is actively involved in the current Stockholm University process of becoming ISO 14001 certified. The environmental action plan was updated late 2012 and an internal university revision was carried out at the start of 2013. An external revision is planned for the autumn of 2013. The action plan will further be extended to include aspects related to good psychosocial work environment.
For the second year running, centre staff went on a three-day team building trip to Stora Karlsö, the world’s second oldest nature reserve, known for its abundant bird life.
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