

# 2010

**BRIDGING SCIENCE AND POLICY SINCE 1989** 

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## **ABOUT THIS REPORT**

his report shows how we work to reach our goals – to build a sustainable world and help people beat poverty. The eight stories inside give a snapshot of how we seek solutions to urgent environment and development challenges.

The institute operates from seven locations on four continents. We work in the North and South with capacity building, policy engagement and natural and social science.

The insight that the environment and human development are tightly intertwined drives our integrated research. For example, our work with UNEP on air pollution (page 9) embraces food security, climate change, ecosystems and governance, and our research on the Millenium Development Goals takes in energy access, soil science, water issues and economics (page 17).

We realise that science and policy need to work together more closely and flexibly than ever to keep pace with a fast-changing world. SEI's new research structure (see page 7) enables our staff across disciplines to combine and integrate issues in new ways, to explore research frontiers, and to respond more swiftly to the needs of policymakers and our stakeholders.

Inside you can also find an overview of our goals, locations, donors and partners, and our financial and environmental performance. To learn more about the institute, our people and our research, please visit our website at www.sei-international.org.

## **STATEMENT**

#### from the Executive Director and the Chair of the Board

**2010** was the first year of SEI's new five-year strategy, and thus also a transition into a new way of organizing our research. The new structure for SEI's inter-disciplinary research is now firmly established through four integrated Themes: Managing environmental systems; Reducing climate risk; Transforming governance and Rethinking development. The purpose of moving from six cross-centre programmes to larger integrated themes is to become even better at cutting-edge integrative research to address real challenges facing our world. For example, this means that we have integrated under one theme our work on air pollution abatement, energy access, sustainable sanitation, water resource management and planning, and agricultural development, which opens new opportunities to address sustainable rural development and explore co-benefits.

Most likely, though, 2010 will go down in SEI's history as the year of external evaluations. In 2009 and 2010, SEI under went no less than four organisational evaluations, of which one, a systems audit of SEI's administrative and management systems, was finalized in 2009. The remaining three, finalized in 2010, include the first comprehensive international scientific evaluation of the institute (by The Swedish

Research Council Formas), an evaluation by the Swedish International Development Cooperation Agency (Sida) of those activities that it supports, and finally an evaluation of the relevance of SEI for the Swedish Government by Statskontoret. The scientific evaluation is particularly important, given that SEI's mission to induce change towards sustainable development depends on the quality of our research and our credibility as an objective and honest broker in bridging between science and policy.

It is therefore very satisfying that the evaluation concluded the following: "SEI as an institution is unusually effective at bridging the divide between science and policymaking. SEI is successful in multiple dimensions that encompass both basic and applied environmental research, the transmission of scientific findings to the public and to the policy process, and the synthesis of science across disciplinary boundaries and multiple levels of stakeholders. These successes appear to be the result of the SEI culture, the particular mix of and passions of SEI scholars, staff and leadership, and a creatively managed institutional structure that fosters collaboration and focused research on important and high-visibility environmental policy issues".

Based on the external evaluations, during 2010 SEI made major efforts to further improve the efficiency

"A particular strength of SEI, as emphasized by the four evaluations, is the ability to synthesize knowledge on complex environment and development issues in ways that support policymaking."

and transparency of internal management systems, and we have developed a new planning, monitoring, evaluation and communication system for mapping outputs, outcomes and impacts, which also provides a platform for continuous learning. We will carry on improving our unique distributed structure, with seven research centres and offices across the world, and further develop our one-institute culture.

A particular strength of SEI, as emphasized by the four evaluations, is the ability to synthesize knowledge on complex environment and development issues in ways that support policymaking. One part of this role is SEI's engagement in global assessments. In 2010 SEI was involved in no less than five global assessment processes, including the IPCC Fifth Assessment Report; UNEP's Fifth Global Environment Outlook; the UN black carbon assessment; the Global Energy Assessment (GEA); and the sustainable development assessment process for the 2012 UN Conference on Sustainable Development (Rio+20).

Biodiversity and ecosystem services were at the centre of the sustainable development agenda in 2010. New global targets for reducing species extinction were set at the UN meeting of the Convention on Biological Diversity (CBD) in Nagoya, Japan, and the

new Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), an equivalent to the IPCC on ecosystems, was successfully established after many years of preparatory work. SEI has engaged and contributed to these processes in several ways through its own activities and through collaboration with the Stockholm Resilience Centre.

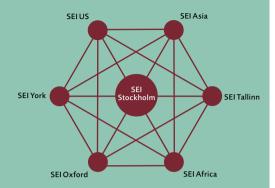
As we move deeper into our era of rapid global environmental change, it becomes increasingly clear that new integrated approaches to growth and development, based on sustainability principles, are necessary for human wellbeing and to avoid the risk of unacceptable regime shifts in the human lifesupport base. In the run-up to Rio+20 in 2012, the coming year is critical for rethinking sustainable development in an increasingly turbulent world, and SEI will remain at the forefront in providing state-of-the-art policy-relevant knowledge for human development.



Kerstin Niblaeus - Chair of the SEI Board

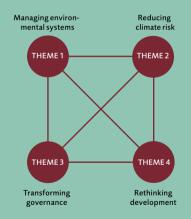


Johan Rockström - SEI Executive Director



#### **CENTRES AND OFFICES**

Our staff work from seven centres and offices, and project teams generally span these locations.



#### THEMES

Our research is organised under four integrated themes, which also collaborate with one another. All themes work across natural and social science, capacity building and policy engagement.

## **SEI IN BRIEF**

Our goal is to bring about change for sustainable development by bridging science and policy. We do this by providing integrated analysis to support decision makers.

#### **WHO WE ARE**

SEI is an independent international research institute. We have been engaged in environment and development issues at local, national, regional and global policy levels for more than a quarter of a century.

The institute was formally established in 1989 by the Swedish Government. Since then SEI has established a reputation for rigorous and objective scientific analysis in the field of environment and development.

#### **HOW WE WORK**

We believe that scientific insights can guide us through change and should inform decision making and public policy. We also believe that local knowledge and values are crucial in building sustainable lives. Our approach is often highly collaborative, and stakeholder involvement has always been at the heart of what we do. Our projects help to build capacity and strengthen institutions to equip our partners for the long-term.

SEI's researchers are gathered into four new research themes (see page opposite), working across seven locations on four continents. These themes will take our work forward in new directions while consolidating historical achievements, such as our work on scenarios, sustainability modelling and vulnerability assessments.

SEI is an innovator, and has consistently shown the vision to confront issues before they enter the mainstream: our pioneering work on renewable energy and sustainable sanitation has its roots in the early days of the Institute.

#### WHAT MAKES US DIFFERENT

We combine the qualities of:

- a non-profit and non-partisan research institute
- an honest broker in handling complex environmental, developmental and social issues
- a research institute committed to rigorous and objective scientific analysis to support improved policymaking
- an agent for change that promotes transitions to a more sustainable world.

## REWIRED RESEARCH

New challenges to building a sustainable world are continually emerging. Fresh thinking and analysis are needed if the world is to successfully meet them.

Our new research structure allows us to more effectively take on these challenges. The following pages show how we do this in practice, with real-world examples of how each of the four themes pursues its aims – aims which underpin the wider aspiration of the institute: to bring about change for sustainable development.

#### Managing environmental systems

Growing populations, rapid urbanization and increased consumption put unprecedented pressure on land, water and air resources. Our research addresses how to manage these resources to enhance food security for our planet's six billion people, to reduce the health impacts of air pollution and poor sanitation, and to protect ecosystem services through sound management of land and water resources.

#### Reducing climate risk

The goal of this theme is to contribute to a safer climate for all. We help design, develop and implement effective and fair strategies for adaptation and mitigation in developing and developed countries, taking into account the broader challenges and policy objectives of sustainable human development.

#### Transforming governance

Sustainable development is essentially about giving people the opportunity to build resilience by providing them with more options in their lives and livelihoods. We advance new insights into good governance for sustainable development in the face of social and ecological change.

#### **Rethinking development**

The global economy has brought welfare and prosperity to many in the world. But it has also depleted natural resources and vital ecosystem services. Our research shows the benefits of a low carbon future and describes how we can get there. We set out alternatives for sustainable futures, from the planetary scale down to local, on-the-ground solutions.

# **Managing environmental systems** 8–9

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A farmer compares an onion cultivated using urine-based fertilizer (left) with another grown using conventional fertilizer.

A perfect storm of issues is threatening food security in sub-Saharan Africa.

Can a combination of water harvesting and urine fertiliser be part of the solution?

# Three times greener

sub-saharan africa faces a three-way squeeze on its food security. First, food is scarce due to low yields, problems with importing goods, and a rising population. Second, it is unsustainable to increase the amount of land used for agriculture or use of conventional fertiliser, supplies of which are dwindling. Third, there is a lack of water.

In 2010 SEI's triple green project stepped up to this challenge through it's on-the-ground field trials in Torodi in The Republic of Niger. The project looked at how water conservation can combine with productive sanitation to boost yields and save water.

Productive sanitation is sustainable and entirely safe. Recycled human urine and excreta is just as effective as conventional fertiliser, and according to some studies can outperform it. Research shows that a year's supply of urine from one individual contains enough nitrogen, phosphorous and potassium to grow a year's supply of wheat for that person. With world supplies of mined phosphorous due to run out this century bringing inevitable price rises, this makes economic and environmental sense. And water harvesting can also support crops during dry spells while

conserving resources. A 2006 UNEP study showed that in Kenya and Ethiopia, rainwater harvesting can meet the needs of six to seven times the current populations.

The triple green project is so called because it has the potential to 1) boost yields, 2) to do so sustainably, and 3) to save water. Results from the Niger field trials indicate that the triple green approach works: greater yields can be produced through the combined use of productive sanitation and methods to harvest and conserve water

SEI plans to expand the project to also tackle the problem of salinization, and to share techniques and knowledge across the region.

With further development, the triple green approach can improve livelihoods and human health and make a real and sustainable contribution to food security in sub-Saharan Africa.

Cutting air pollution can benefit health, food production, livelihoods and ecosystems, especially in Asia. And – according to a new report coordinated by SEI – it can also buy time to curb climate change.

# Clearing the air

**SEI SYNCHRONIZED** input from over 80 scientists and experts from government agencies and research groups to produce the 2010 UNEP Integrated Assessment of Black Carbon and Tropospheric Ozone.

The UNEP report is not only a synthesis of the best available knowledge, it makes firmer predictions about the co-benefits of cutting air pollution, and outlines real-world ways to do so. Uncertainty tends to unnerve policymakers, which in the past has dogged efforts to tackle air pollution. This report provides clearer information for decision makers.

Asia suffers from air pollution more than any other region, and Asia's poor are hit most of all: in India alone it is estimated that around two million people die each year from conditions related to the vast 'brown cloud' of pollutants that hovers in the atmosphere over Asia from January to March each year. The cloud is caused mainly by black carbon (soot) and other pollutants given off by coal-fired power plants, cars, wood-smoke and factories.

The impacts of air pollution on human health are broadly agreed upon. But its effects on climate are not so clear cut. Soot and other aerosols (fine particles that

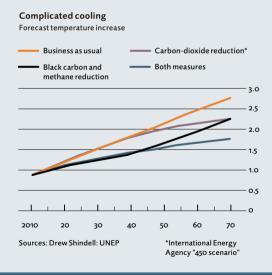
float in the air) contain compounds like methane and ozone which have a powerful short-term climate effects.

The debate on how far measures to control air pollution can cool the climate is complex (for instance, some types of aerosol can cool the climate rather than warm it.) But the report's innovative scenarios predict that if the steps it outlines were followed, future global warming could be reduced by around 0.5°C up to 2050. While such measures can't replace action on  $CO_2$ , they would buy crucial time for the world to stay within a 'safe' climate guardrail of 2°C of warming.

The UNEP report is the most authoritative account yet of the effects of air pollution, and how action on it can kill several birds with one stone: not only would it relieve poverty, improve health, maintain food security and protect regional ecosystems, it would also help to fight climate change. And without compromising development for the Global South.

SEI has a 20-year history of air pollution research. In the coming years we will build on this experience, along with our partners and networks, to support a stronger regional knowledge base for more assured decision making.

Smog over Manila: SEI is promoting real-world measures to beat air pollution





Climate research is debated at the first SEI writeshop.

A dearth of peer-reviewed science from the Global South has marred past climate assessments. How is SEI helping to fill the gap?

# **Knowledge gateway**

THE IPCC has found it tricky to draw solid conclusions about how climate change will play out in the developing world, and how it will affect people and communities. This means not only that it is tough to craft sound policy responses, but has also left the panel itself open to criticism.

SEI, alongside UN ISDR, has set up a series of 'writeshops' to bring more science from developing countries into the journals that shape policy and knowledge on climate change. We also run our own academic journal, Climate and Development, as a possible vehicle for that science.

Many academics and people working in NGOs in the South have vital knowledge to communicate, but when this information remains unseen, the IPCC does not assess it. Tapping this rich source of knowledge will help to produce better reports and, as a result, better responses to climate change.

The writeshops focus on early-career scientists and practitioners from the South, who are paired with mentors who have a strong background in their field and in peer-review. A key aim of the writeshops is to help participants to identify the most compelling findings from their work, find a suitable journal and learn how it works, and support them as they prepare and submit a manuscript and deal with review comments. As well as bolstering writing and research skills, the project helps to demistify the process of submitting articles to academic publications, which can appear arcane to the uninitiated.

The first writeshop was held in Bangkok, Thailand, in September 2010, A second one for anglophone Africa took place in Accra, Ghana, in early 2011. Both writeshops were organised in collaboration with the United Nations University. Interest in the writeshops has been overwhelming; available spots could have been filled many times over. Results are already tangible, with many of the participants submitting articles to journals.

In 2011, additional writeshops will be held for small island developing states, Latin America, the Middle East and West Asia, and francophone Africa.

Forests can help curb climate change and safeguard local people from its effects, but up to now these benefits have been considered separately. A new project in the Congo Basin is discovering how we can maximize both.

# **Forest forward**

FORESTS PLAY a big part in regulating climate, absorbing huge quantities of CO<sub>2</sub> from the atmosphere - deforestation and forest damage accounts for up to a quarter of all greenhouse gas emissions. Forests also support livelihoods, provide household fuel and food, regulate water quality and limit the spread of disease.

At the international level, policies to reduce greenhouse gas emissions (mitigation) and actions to help people deal with its effects (adaptation) are not often linked. We recognise that synergies exist between adaptation and mitigation policy, especially in the forestry sector. A new SEI project, Climate Change and Forests in the Congo Basin (COBAM) is finding ways to link and improve mitigation and adaptation policies in the forests of Central Africa.

The main UN policy for preserving forests to mitigate climate change is REDD+. Though complex in practice, the principle of REDD+ is simple - the aim is to make it pay to manage forests sustainably. The money to do this will largely come from carbon trading, whereby companies and other actors in the industrialized nations pay to offset their emissions, with the proceeds then transferred to

developing countries that are conserving forests.

COBAM, alongside our partners the Center for International Forestry Research (CIFOR) and the University of East Anglia (UEA), will research how REDD+ and adaptation measures are decided on, how the policy process plays out down to the local level, and what win-win strategies can be promoted in the Congo Basin. The results will help decision makers at all levels to conserve forests and ecosystems, reduce poverty, and help vulnerable groups to plan better for a changing climate.

Forests are not isolated from people, and REDD+ and adaptation policy need each other: REDD+ will work better if the effects of climate change on people and forest ecosystems is recognised, and well designed REDD+ policies can reduce the vulnerability of forestdependent communities to climate change.

With REDD+ activities just beginning in the Congo Basin (the Central African Forest Commission is now active in the debate, and the World Wildlife Fund is trying to replace logging in the Central African Republic with REDD+ money) the need for new knowledge to feed into these processes is vital.



Logging in Central Africa: SEI is working on inte-







A healthy mix: Thai farmer Jamchan Thonmad believes in the benefits of growing a range of crops on her land. One challenge of agricultural policy in the Mekong is to make sure that smallscale farmers have a role in future agriculture.

Agriculture is in flux in the Mekong region, with biofuel crops at the forefront of change. As industry, government and local farmers compete over land, what policies can protect food security, livelihoods and ecosystems?

# Land choices, land futures

AN SEI PROJECT on the future of agriculture in the Mekong Region has found that the rush to grow biofuels and palm oil, especially in Thailand, jeopardises food security and damages ecosystems. The main drivers behind this are the Thailand government's push to achieve greater energy independence and to meet international climate targets.

Though biofuel plantations mean big profits for some, our study shows that many smallholders and households are feeling the pinch as food prices are forced up. Large monoculture plantations can also damage and encroach on ecosystems, such as forests and peatlands, which many local communities rely on for survival.

Our work showed that governance is a key factor in whether different groups lose or gain by agricultural change. With the emergence of biofuels the energy sector is increasingly shaping changes in land use with only a limited understanding of how these changes impact on ecosystems and food production. Biofuel crops are not bad in themselves. It is largely in the decision-making process – in deciding where and what to grow, and who should grow it – that settles the outcome.

SEI has indentified a range of measures for governance in Thailand that can help agriculture for food flourish alongside biofuel cultivation and other landuse changes. Raising incomes and capping food prices would have a direct effect on supporting farmers, as would more equitable distribution of land and of the benefits of agricultural change. But perhaps most importantly, government departments, the private sector and civil society need to work together to make integrated policy. Improved cooperation can mean that it is not simply a set of narrow interests that drive decision-making.

Changes in land use in the Greater Mekong Region are also linked to China's decision to outsource food and energy production to neighbouring countries. To understand the impact of these transformations the Government of China has decided to co-finance a project on land use change and ecosystem services. The project will be led by SEI in collaboration with a range of partners from China, Vietnam, Thailand and the UN, and will build on our work in 2010 to provide regional decision makers with a firmer foundation for decision making.

Agriculture causes vast blooms of algae in the Baltic Sea, which hit bio-diversity, encourage invasive species, and poison food chains. Farming practices should change, but how can Baltic countries agree on what to do? SEI is working with a new project to find solutions.

# **Balance** in the Baltic

**EUTROPHICATION MEANS** 'over-nourishment'. Chemicals like nitrates and phosphates enter a body of water and over-feed algae and plankton at the expense of more complex plants. It can occur naturally, but in the Baltic as in many other places it is chiefly man-made.

The Baltic Compass project, established in 2010 and funded by the EU, is working on a range of fronts to manage this issue. Approaches include exchanging best practice and technology among farmers, encouraging investment in technology, and bringing new insights to decision-makers through scientific assessments and policy dialogue.

SEI is one of 24 partners in the project. Our task is to bring together stakeholders from government, business and civil society in the nine Baltic countries to achieve realistic win-win targets for tackling the issue - targets that balance national and sectoral interests.

Past targets set by HELCOM (The Baltic Marine Environment Protection Commission) have largely failed. One reason for this is that regional ministries of environment fixed the targets without fully

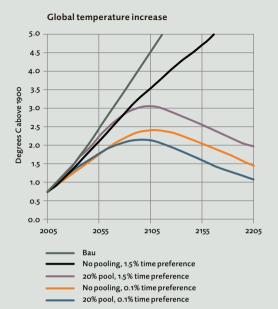
acknowledging competing interests. Another is that they have been seen as unfair - some countries could easily meet targets while others lost out. For example Sweden, with its long Baltic coast, has more to gain by tackling eutrophication than Poland, which has a larger rural population and a much shorter seaboard. For Poland, meeting past HELCOM targets would have meant its farming sector would have been hit harder than Sweden's.

To succeed, targets must knit opposing interests and overcome disputes to promote solutions that benefit everyone. Measures such as creating wetlands, using green manure, and increased flood control not only slow eutrophication, but have a good chance of getting buy-in because they have a range of other potential advantages for agriculture and industry.

By setting up fruitful dialogue among regional players, coupled with a solid analysis of what measures work and why, SEI is fostering realistic targets and win-win measures for protecting the Baltic Sea environment.



Pig farming is a big contributor to nutrient run-off into the Baltic Sea. SEI is helping countries in the region to agree on measures to deal with it.



Global temperature increase under different scenarios produced by SEI's CRED model. The top line shows how much the planet will warm if we do nothing. The other lines show how far we can limit temperature rise with economic policies that pool resources over time to deal with the problem. The most equitable solution – the bottommost line – is also the most economically efficient and effective for keeping global warming in check.

The basic science of climate change is in. The question is now economic – what policies are most effective to staunch global greenhouse gas emissions and support growth? SEI's groundbreaking model shows a fair path forward.

# Credible and equitable

IT IS WIDELY recognized that to succeed politically global climate policy must in some way be equitable – that poor countries' right to development cannot be compromised.

But SEI research now shows that more equitable policy is also the most economically efficient way to tackle global warming.

SEI's new climate economic model, CRED (Climate and Regional Economics of Development), avoids the flaws of previous models and uses the best available data. The results show that, if there were no other constraints, the optimum global scenario for both economic growth and climate safety would involve a big increase in savings in the rich world in order to boost investment in reducing emissions and to promote clean development in developing countries.

However, although more equitable action turns out to be the most efficient path for growth and climate safety, the optimum CRED scenario is not currently acceptable to rich countries. But even when the CRED model is run under 'real-world' constraints, with reduced investment from rich countries and a guaranteed minimum level of growth in every region's

consumption, the resulting scenarios are still a huge improvement on business as usual.

In 2010–11 the CRED model was showcased in major academic journals, and will be further refined in coming months for application at the regional level. SEI is also seeking partners in developing countries to take the work forward.

These results show that win-win outcomes in climate policy are achievable, and make the important point that the attritional character of today's climate negotiations is not carved in stone – there are solutions to climate change that both rich and poor countries can benefit from.

Damage to ecosystems from pollution is more than a threat to health, it can also scupper people's efforts to escape poverty. How do we keep development goals on track?

# Natural development

**SERVICES PROVIDED** by ecosystems – such as food production, climate regulation, pollination and disease control – allow humans to flourish, but our development has been driven by polluting energy and industries. A 2010 SEI project reveals how damage to ecosystems caused by air pollution, energy use and pesticides jeopardize Millenium Development Goals (MDGs). and recommends how policymakers can respond.

In 2000, all 129 UN member states signed up to the MDGs. The eight goals, to be reached by 2015, set out targets on issues such as poverty, education, and disease. SEI's research focuses on the role ecosystems play in efforts to reach targets to halve extreme poverty and hunger (MDG 1).

Air pollutants like ground-level ozone, ammonia and sulphur dioxide, produced largely by industry and transport, can devastate crop production (see page 9). In India, ozone alone causes more than USD 4 billion worth of crop damage annually. How can cutting air pollution be reconciled with industrial growth?

Increased access to energy is a necessary condition for people to escape poverty. However, overwhwelmingly the very poor rely on traditional biomass energy

- mainly woodfuel - for cooking and heating, which is neither sufficient to enable development, nor sustainable, as it threatens the local ecosystems that are vital to maintain food production and livelihoods. But greenhouse gas emissions must also be factored in to any solution.

Though pesticide use in modern agriculture has brought short-term food security to many, the human and environmental trade-offs can be high. Pesticides can damage fisheries, risk the long-term health of soils, encourage pests and put fresh water supplies at risk.

Among the most urgent actions our researchers recommend to keep MDG 1 on track are: immediate air pollution controls to protect crop yields, especially in South Asia; create pro-poor investment to deliver sustainable energy to the poor; and strengthen pesticide legislation and train farmers in integrated pest management to protect ecosystems.

Devising policy to meet the MDGs can be complex, and there will always be trade-offs between protecting ecosystems and meeting people's needs. SEI's research provides crucial integrated knowledge on ecosystems and poverty reduction up to 2015 and beyond.



Goals to eliminate poverty are at risk due to ecosystem damage. SEI research shows how environmental protection and development are linked.

## COMMUNICATION

Delivering timely knowledge to the right people – policymakers, our partners and the press – is essential if we are to meet our mandate. In step with our new strategy, our communications took big strides in 2010.

#### **EVENTS**

Seminars and events are a crucial platform for bringing our work to policymakers. In March 2010 SEI Executive Director Johan Rockström reached leading world figures from academia, media, government, and business when he spoke at the State of the Planet conference in New York.

In April, SEI revealed plans for how the EU can cut its greenhouse gas emissions by 40% to key EU policymakers at the European Sustainable Energy Week in Brussels. SEI also presented its research on consumption to the European Parliament.

In May, SEI held its annual Gordon Goodman lecture, where Ashok Khosla was the guest speaker at the seminar 'Equity and empowerment: the missing variables in the sustainability equation'.

In the summer, the SEI York Centre showcased its Green Streets project to UK MPs, including Labour Party leader Ed Miliband, while Johan Rockström presented the Planetary Boundaries concept at the TED Global event.

World Water Week in Stockholm in September gave us the chance to reach key audiences through several seminars and side events. In October SEI was

asked to present its research to Sweden's ministers for development, environment, industry and energy.

Demand from the private sector for our research is increasing. In October, at a conference of financial leaders, Johan Rockström, Al Gore and Sweden's minister for financial markets were invited to give an environmental perspective on future developments in Sweden's financial sector.

Other key events in the autumn included the annual SEI-US Symposium, which focused on water and energy challenges in the 21st century.

In November, SEI organized an international conference on climate adaptation in the Nordic countries, and reached the Chinese Prime Minister with its ecosystems and climate research.

In December, we organized an event in Bangkok with regional partners on 'Rethinking growth in an era of rapid global change'. SEI had a big presence at the international climate negotiations in Cancún, where we organized a side-event, hosted an exhibition and advised delegates and media on key issues.

At the end of the year preparations were also under way for the 3rd Nobel Laureate Symposium on Global Sustainability, held in Stockholm in May 2011. The







event will gather around 50 Laureates and thinkers and experts on sustainability to discuss new approaches for governing the world's social and ecological systems. Visit globalsymposium2011.org for more information.

#### **MEDIA, PUBLICATIONS AND AWARDS**

SEI was cited in the media twice as many times in 2010 than the previous year – on average around twice a day - and a broad array of media published, publicised or plugged our work. These include peer-reviewed journals like Nature and Science; newspapers and news agencies including The Nation, The Washington Post, The Observer, The Guardian and Reuters; TV and radio, including the BBC, Swedish SVT and TV4, and China Radio International. SEI's new peer-reviewed journal, Climate and Development, is in line to receive ISI ranking. The Swedish business magazine Veckans Affärer named Johan Rockström the award of Social Capitalist of the year, 2010. SEI was also named one of the world's top ten environmental think tanks in the definitive list produced by the University of Pennsylvania.

Last year SEI staff authored more than 220 publications. The 70 peer-reviewed journal articles and academic books written by our staff show the strength of our research base, while the 150 reports, conference papers and popular science articles speak of the breadth of our engagement with policymakers, the media and our stakeholders. Visit sei-international.org for more details.

#### **WEB**

Over the past year, sei-international.org has established itself as a fundamental channel for SEI's external communication. The website now has over 10,000 unique visitors a month and is an entry point for updates on all new publications and research projects. The website is regularly updated with news of SEI's activities and research, and the video archive gives access to a growing cache of interviews, seminars and debates. We also now send out a monthly e-newsletter with a fast growing subscriber base numbering in the thousands.

- Basra Ali, SEI researcher and adviser to the Kenyan
   Government, addresses the 4th International Community
   Based Adaptation Conference in Dar es Salaam, Tanzania.
- SEI Executive Director Johan Rockström (second left) on stage at the State of the Planet conference in New York in March.
- 3. Leader of the UK Labour Party Ed Miliband visited the SEI York Centre to discuss our Green Communities project. The project looks at the carbon footprints of local communities and shows people can work together to reduce them.
- 4. Chinese Prime Minister Wen Jiabao. SEI research on ecosystem services and climate change reached the Chinese premier and the highest levels of Chinese Government.
- SEI researchers and other delegates in a workshop discussion on climate change adaptation.
- 6. Al Gore joined Johan Rockström at a conference of financial leaders to give an environmental perspective on the future for Sweden's financial sector.

# **SELECTED DONORS AND PARTNERS**

Academy for Educational Development (AED)
African Centre for Technology Studies (ACTS)
African Climate Policy Centre

Agence Française de Développement (AFD)

 $Alliance \,to\,Save\,Energy$ 

Arghyam

Asian Development Bank

Australian Agency for International Development (AusAID)

Brazilian Foundation for Sustainable Development

Bundesanstalt für Geowissenschaften und Rohstoffe (BGR)

California Department of Water Resources

California Energy Commission

California State Government

Center for International Forestry Research (CIFOR)

Centre Régional pour l'Eau Potable et L'Assainssement à faible coût (CREPA)

CGIAR Challenge Program on Water and Food

Chalmers University of Technology
City of Seattle Office of Sustainability

Laboratory

ClimateWorks Foundation

The Commonwealth Scientific and Industrial Research Organisation (CSIRO)

Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Deutscher Naturschutzring

Earthjustice

Ecologic – Institute for International and European Environmental Policy

Ecotrust

The Energy and Resources Institute (TERI)
The Energy Foundation

Enterprise Estonia (EAS)

Enveco Environmental Economics

Consultancy

Environment Canada

Environmental Integrity Project

Environmental Investment Centre (KIK)

**EPA Victoria** 

Estonian Association for Environmental

Management (EKJA)

Estonian Council of Environmental NGOs (EKO)

Estonian Ministry of the Environment

European Commission

European Environment Agency (EEA)

Fridtjof Nansen Institute (FNI)

Government of Sweden

Government of Tanzania

 $Government\,of\,the\,United\,Kingdom$ 

Government of Uganda

 $Government\,of\,Vietnam$ 

Göteborg University

International Centre for Integrated Mountain Development (ICIMOD)

International Fertilizer Development Center (IFDC)

International Fund for Agricultural Development (IFAD)

International Institute for Environment and Development (IIED)

International START Secretariat

International Water Management Institute (IWMI)

King County Solid Waste Division, Seattle The Kresge Foundation

Kungliga Tekniska Högskolan

Lawrence Berkeley National Laboratory

 $Link\"{o}ping\,University$ 

Lund University

Massachusetts Department of Energy

Resources

The Mekong River Commission

Microsoft

Milieu Ltd

Ministry of Energy and Minerals, Tanzania

Mistra

National Oceanic and Atmospheric Organization (NOAA)

National Roundtable on the Environment and the Economy Canada

The National Lottery (UK)

Natural Environment Research Council (NERC)

Naturvårdsverket (Swedish EPA)

 $Nether lands\ Environmental\ Assessment$ 

Agency NordForsk

The Nordic Africa Institute

Okeanos

Olympic Region Clean Air Agency

Oregon Department of Environmental Quality

 ${\sf ORGUT\,Consulting\,AB}$ 

Oxfam UK

 $PLAN\,Oslo\,University$ 

Plant Research International

**RAND** Corporation

Swedish Defence Research Agency (FOI)

 ${\sf Simon}\, {\sf Fraser}\, {\sf University}$ 

SINTEF Energi AS Stockholm University

Swedish Association of Local Authorities

and Regions (SKL)
Swedish Energy Agency

Swedish Environmental Protection Agency

Swedish Environmental Research Institute (IVI )

Swedish International Development Cooperation Agency (Sida)

Swedish Meteorological and Hydrological Institute (SMHI)

The Swedish Postcode Lottery

The Swedish Research Council Formas

Tartu City

Tesco Supermarkets

The Nordic Council of Ministers

**Tufts University** 

US Bureau of Reclamation

US Environmental Protection Agency

UK Dept for Environment, Food and Rural Affairs (DEFRA)

UK Dept for International Development (DFID)

Union of Concerned Scientists (UCS)

 ${\sf United\,Nations\,(UNDP,UNDESA,UNEP,}$ 

UNESCO, UNFCCC, UNOPS, UNITAR, FAO)

University of California, Davis

University of Copenhagen

University of Dar es Salaam University of Tübingen

 $University\, of\, York$ 

Vattenfall

Washington Department of Ecology

Water Research Foundation

 $We stern\,Governors\,Association$ 

World Bank

World Resources Institute
World Wildlife Fund (WWF)

WorleyParsons

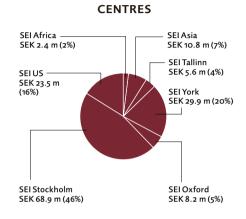
Yorkshire Forward (Regional Development

Agency)

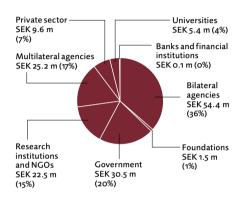
# **FINANCE**

SEI generated approximately SEK 149 million in research funding in 2010.

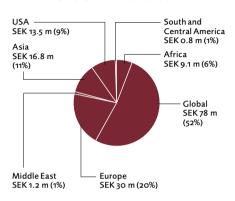
## 2010



#### **FUNDING SOURCES BY SECTOR**

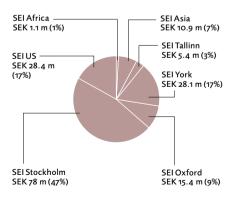


#### **GEOGRAPHIC FOCUS**

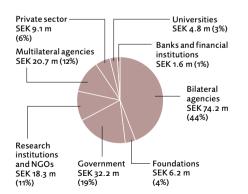


## 2009

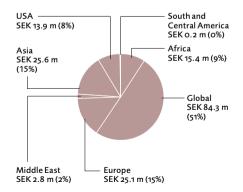




#### **FUNDING SOURCES BY SECTOR**



#### **GEOGRAPHIC FOCUS**

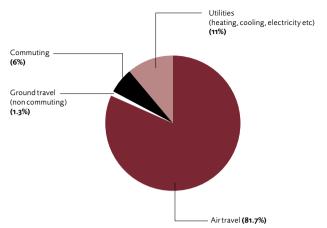


## **OUR FOOTPRINT**

**IN 2008 SEI** kicked off a three-year action plan to reduce our carbon footprint and our consumption. We carried out a detailed inventory of all our processes, activities and behaviour and their environmental impact, from air and ground travel and heating our offices right down to our use of paper clips and how we drink tea and coffee. On the right you can see headline figures from our environmental performance in 2010 and previous years.

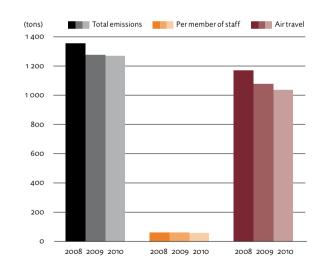
After three years of monitoring, we now have enough data to set benchmark figures for emissions and consumption – a footprint size for all staff members that should not increase. Alongside this we have a detailed policy that over time will reduce our emissions and consumption over time. The policy, as figures opposite show, is already paying off. First, despite the fact that the number of staff has grown, since 2008 our total carbon emissions have declined each year. By far the biggest portion of our emissions is from air travel, and through behavioural change and investment in teleconferencing technology we are making real inroads into reducing the number of plane trips our staff make. We have cut our overall emissions from air travel each year since 2008, again despite an increase in staff numbers.

Now that we have established benchmark figures, we will refine our policy in coming years to ensure that we reduce our emissions further, and continually look at innovative ways to do so. Take a look at next year's report to check our progress.



#### A breakdown of our emissions in 2010

SEI is a global organisation, and air travel is by far the biggest part of our overall emissions, and we are making it a priority to reduce the number of trips we make. Our total emissions from air travel fell by 4% in 2010 compared with 2009, despite a growing staff. Emissions from ground transport also fell by 8% on the previous year. Though emissions from utilities rose a little (by 8%), this was largely because of unusually cold winters in two of our office locations, Stockholm and Tallinn.



# SEI's CO<sub>2</sub> emissions 2008, 2009, 2010, by total, staff and year

We have made substantial cuts in our air travel over the past three years, and our total emissions have also decreased, both in total and per staff member. But we aim to go much further. Our new benchmark emissions figures and environmental policy mean that the next few years should see even bigger reductions.

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FSC, the Forest Stewardship Council, is an international organisation that promotes the responsible management of the world's forests, assuring that products come from forests that are managed to meet the social, economic and ecological needs of present and future generations.

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