

**SEI Strategy**  
**2010 - 2014**



## Preface

The SEI Strategy 2010-2014 will guide the directions of SEI's research and engagement in bridging science to policy for sustainable development over the coming five years. It also defines where SEI aims to be in five years time, based on a careful assessment of the needs for new integrated knowledge to support transitions to sustainability, the areas where SEI can offer internationally recognised expertise, and the knowledge gaps that lead to international demand for SEI's services. We have focused our priorities in the new Strategy on where these three criteria – needs, know-how, and demand – overlap.

The SEI Strategy 2010-2014 covers a decisive period for world development in the efforts to provide a safe operating space for humanity on the planet. Evidence indicates that we have entered a decade when humanity must bend the curves of many of the undesirable trends in global environmental change; from greenhouse gas emissions, to air pollution, loss of

biodiversity and over-use of freshwater resources. In this transformative period of human enterprise, scientific advancements, innovations and policy support on solutions and strategies for sustainable development are needed more than ever. SEI is well positioned to provide integrated knowledge, policy support, dialogue platforms and capacity development in line with the mandate provided by the Swedish government, to support the business of taking care of our planet in an era of rapid global change.

The Strategy was developed following an extensive internal and external consultation. We interviewed over 50 partners in research or policy making at different scales and from all parts of the world. Group meetings and online surveys were used to gather and process the input from staff from across the Institute. We have listened carefully to advice and critique from SEI colleagues and key stakeholders in the world.

**SEI is an independent international research institute that undertakes policy oriented and applied research on environment and development issues. Our innovative, integrated systems research forms the basis for our work on policy advice, capacity development, decision support and implementation of policy and practice.**

To meet anticipated needs and demands we expect SEI's impacts and outcomes to increase over the coming five years. We aim, by the end of this new Strategy, to have raised even further SEI's ability to provide high quality integrated knowledge and policy support for sustainable development. Our programmatic structure has been transformed to fewer more comprehensive research themes. We emphasise SEI's focus on science-based policy and development outcomes, and firmly position SEI as an international research institute. At the same time we will continue to be an independent institutional knowledge resource to support Swedish priorities at home and abroad on sustainable development. We will significantly raise our institutional capacity on governance and management, improve our own learning capacity through a new monitoring and evaluation system, our capacity for results-based management, and continue to invest in our one institute culture and our internal and external communications.

This is an ambitious new SEI strategy confirming the direction and building on the achievements of the Institute over the past decade. It raises expectations of a new level. We are confident the Strategy provides a wise and realistic way towards this goal.



Kerstin Niblaeus  
SEI Board Chair




Johan Rockström  
SEI Executive Director



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Our mission is to support decision making and induce change towards sustainable development around the world by bridging science and policy in the field of environment and development.



## SEI in 2014

Over the coming five years (2010-2014) SEI will respond to the growing demand for knowledge driven policy support and practical solutions that help to solve the challenges of environment and development. Building on SEI's legacy, we aim to be one of the world's leading providers of systems understanding, innovative ideas and policy solutions for sustainable development at local, national, regional and global levels.

### Research

We will improve our core business - research and capacity development to inform policy and promote change to sustainable development - by enhancing and integrating our research capabilities. We will explore new opportunities to study issues of relevance for the private sector, from large global corporations to local businesses, but will always maintain the independence and excellence of SEI's research.

In order to strengthen SEI's position as a top-class international research institute we aim to raise our strategic core funding to at least

40 per cent of our global operations by 2014. Increasing our institutional and flexible long-term funding will put us in the position to respond to urgent and complex problems over the coming five years. It will also enable us to define our own strategic directions, ensuring that we stay at the frontier of knowledge, and make us a more effective and efficient partner by improving the management and accountability of the Institute.

*"What makes SEI unique is the strength of its scientific research."* Saleemul Huq, Senior Fellow, Climate Change Group, International Institute for Environment and Development.

### Communication

SEI will prioritise science-to-policy communication so that our research is more visible and can take an active part in making change happen. We aim to combine SEI's role as an independent knowledge provider with

stronger institutional arrangements with agents and arenas of change in the world. We are committed to strengthening our partnership-based work from community to regional levels, and linking these to key public policy and private sector arenas. By embedding our research within partnership-based communication of science and policy, we aim to increase our impact on policy making and implementation.

Our role as a provider of science-based policy advice to national governments, regional agencies and global organisations will continue to be important for SEI. As an institution funded in part by the Swedish state, we will further develop our special position as an international resource to support Swedish priorities on sustainable development.

### Global and local

We will capitalise on SEI's unique distributed structure, using our seven research centres and offices around the world to develop local and regional partnerships

and networks. We will continue to develop SEI's global commitment, by pursuing work that supports transitions to sustainable development in both rich and poor regions of the world, with a strong emphasis on our longstanding legacy in the USA, Europe, Asia and Africa. A key focus will be on linking our global competence to grow our institutional partnerships in Africa and Asia. We will develop our collaborative work in Latin America, and continue to exchange methods and experiences between different regions in the world.

We will build institutional and leadership capacities in the South. Our research is carried out with partners in the North and the South, and we will give further emphasis to supporting the exchange of knowledge, collaborative North-South and South-South efforts on research, and policy making, as well as capacity development, particularly with partners in poor countries.

### Overarching institutional goals

In five years time SEI aims to:

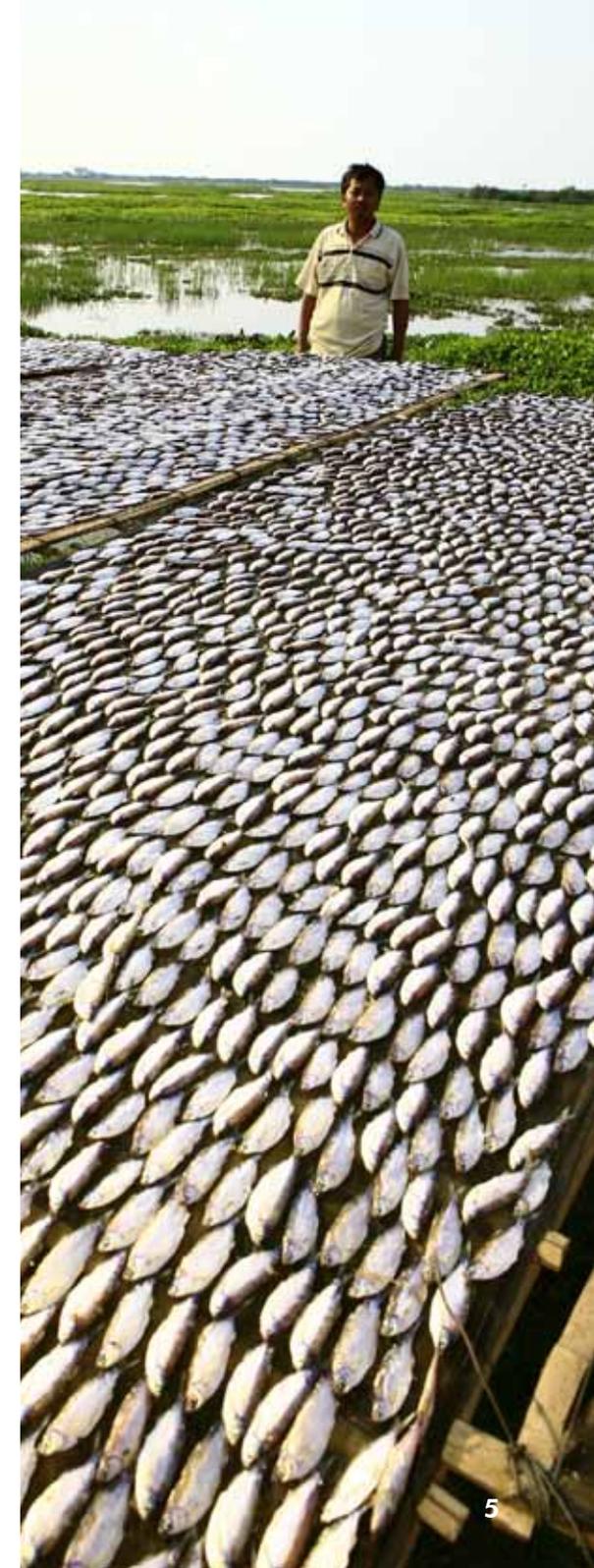
1. Be among the world leading knowledge institutions advancing credible, policy oriented and applied inter-and multidisciplinary research for sustainable development.
2. Be a relevant and respected international convener of science-policy dialogues on complex sustainable development challenges.

3. Build bridges between knowledge and decision makers by investing in communications.
4. Establish institutional relations with agents of change, making SEI a prime provider of policy advice on sustainable development.
5. Use our unique distributed structure to raise the local and regional impact of our work through capacity development that supports implementation.
6. Fill key knowledge gaps in new areas including economics, transformations, governance and resource integration (land, water, air, sanitation) for human development.
7. Create strategic flexibility, greater impact, and better accountability by diversifying our funding base and obtaining at least 40 per cent institutional core funding by 2014.

8. Understand and demonstrate evidence of our impacts by investing in planning, monitoring and evaluation.
9. Improve SEI's leadership and management systems.
10. Continue to develop the SEI global one-institute culture.

To reach our overarching goals over the coming five years we will organise our work in clusters of strategic investment, covering the current and emerging science-policy agenda and our leadership, management, and staff development:

- managing environmental systems for human wellbeing,
- reducing climate risk,
- transforming governance for sustainable livelihoods,
- rethinking development,
- policy impact and communications
- leadership and staff development,
- management, monitoring and evaluation.





## Our strengths

**Carrying out integrated research to fully evaluate challenges and provide solutions**

**Confronting issues before they enter the main stream**

**Providing decision makers with rigorous and objective analysis**

**Working in partnership to bring about change**

*“SEI has carried out an extremely important series of research activities in which [the Institute] has looked not only at climate change or environmental problems but also at the context in which these problems occur, as far as development and economic growth are concerned. SEI has thus contributed to a holistic understanding of these issues.”* Dr Rajendra Pachauri, Chairman of the Intergovernmental Panel

on Climate Change, describes one of SEI’s trademarks: breaking down barriers between development and environment issues, exposing the complex relationships between people, nature and social systems and striving for a complete picture rather than looking at aspects of a problem in isolation. SEI’s broader view of problems is, in part, made possible by its global network of research centres.

Over the past 20 years, SEI researchers have been generating, synthesising and communicating knowledge for evidence-based policies that support sustainable development in the North and South. From briefing the Kenyan cabinet on adaptation to climate change, to leading contributions to the UN’s Global Environment Outlook assessment (GEO4); we have an impact from local to global levels.

critical gap between fundamental science and implementation, by concentrating our efforts on connecting these two through applied research to pilot testing and demonstration. Extending our fundamental science, we draw upon close partnerships with universities around SEI focus the world for input to our applied and integrated research. Similarly, we work with partners – from the public and private sector – to translate our knowledge into improved practice on the ground.

Our research has three key purposes:

- advancing new knowledge,
- providing policy advice,
- enabling agents of change.

SEI’s role is to provide solutions to environment and development challenges through state-of-the-art inter-and multidisciplinary research, combined with on-the-ground capacity building. SEI fills a

We tackle overarching issues like climate change, energy futures, food security, vulnerability, risk management, and governance, as well as resource challenges such as the sustainable use of land and water, and how to deal with air pollution. Our water and energy systems tools are used all over the world to model the present and plan for the future. We now host a community of over 2000 Southern energy analysts

## Going Clean: the economics of China's low-carbon development

How can China best make the transition from its present macro-economic structure to a low-carbon future?

This is the question that a groundbreaking economic study, led by the Stockholm Environment Institute and the Chinese Economists 50 Forum, tries to answer. The research brings together leading international thinkers

in economics, climate change, and development, to tackle some of the most challenging issues relating to China's low-carbon development.

The project shows that a shift to a low-carbon economy is technically feasible and that it lies in China's interest to move forcefully in that direction. Environmental concerns have

in the past not been integrated into China's economic policymaking, but, influenced by this project, this is now changing. For example, Fan Gang, a key actor in the low-carbon China project and a member of China's central bank Monetary Policy Committee, is now advocating a policy change to a domestic carbon tax.

## Energy Futures

The Long Range Energy Alternatives Planning system (LEAP) is fast becoming the de facto standard for countries undertaking integrated resource planning and greenhouse gas mitigation assessments, especially in the developing world. The United Nations recently announced that more than 85 countries have chosen to use LEAP as part of their commitment to report to the UN Framework Convention on Climate Change (UNFCCC).

In China, the Chinese Energy Research Institute (ERI) has used LEAP to explore how China could achieve its development goals whilst also reducing its carbon intensity. These studies have helped to influence national energy policies and plans. In the US, Rhode Island has used LEAP as the main organisational tool for analysing and monitoring the State's award-winning GHG mitigation process, in which multiple stakeholders are guiding the State's efforts to meet its GHG emission reduction goals.

And research into improving and extending the LEAP model continues. In 2009, work was completed that means that LEAP now includes a wider range of greenhouse gases (such as ozone) and even takes account of the pollutants that lead to such gases.

and 85 countries use our LEAP software as part of their commitment to report greenhouse gas emissions to the UNFCCC. Our water allocation and planning model, WEAP, is applied in over 50 river basins in the world. On average, we produce around 75 articles in peer

reviewed scientific journals each year, including articles in leading journals such as Science and Nature. And in 2007, eight SEI researchers were recognised by the Nobel Peace Prize committee for their contribution to the Intergovernmental Panel on Climate Change.

We are:

- a research institute committed to rigorous and objective scientific analysis to support improved policymaking,
- an honest broker in handling complex environment, development and social issues and providing impartial policy advice,
- an agent for change that promotes transitions to a more sustainable world.

Our research is open source and not-for-profit. We believe that the insights generated by our work 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.

In the last five years, SEI has established network based research centres in Asia and Africa. We are working closely with the local academic communities to draw upon their local expertise and to help develop their research capacity. Our research centers in Africa and Asia also give the Institute access to local and regional decision makers (and an

understanding of their decision making context), providing a solid base for stakeholder engagement and policy advice that is grounded in the region. Our research, communications and capacity development has helped farmers in semiarid areas of East Africa to better manage their water resources and improve yields. These and other bright spots of innovation in land and water management for food and livelihood improvements have been synthesised and presented to the UN Commission for Sustainable Development (on behalf of the Swedish government) in 2009. In York (UK), our research is helping the local authority to target individuals and induce changes in lifestyles on the basis of analytical tools related to consumption and people's preferences. We are also continuing our initiative in China, but without establishing a new centre. Instead, the "China cluster" is staffed across SEI centres, with the coordinating unit at headquarters in Stockholm.



### Sustainable sanitation

SEI's research on sustainable and productive sanitation, carried out by the EcoSan-Res programme and funded principally by Sida, is a prime example of how the Institute integrates research, policy support and capacity development to provide solutions that increase food security, alleviate poverty and improve public health.

The success of the programme, which has put sustainable and productive san-

itation on the agenda of policy makers, rests on evidence that the concept works and can be replicated in many different contexts. In southern Niger where rainfall can be erratic, an SEI project in cooperation with CREPA (Centre Régional pour l'Eau Potable et l'Assainissement à faible coût) and IFAD (International Fund for Agricultural Development) involves more than 700 households in the

densely populated Aguié province collecting urine and using it as a liquid fertiliser. The results have been significant for the eight communities involved in the participatory test: good yields have led to high demand for productive sanitation toilets that produce fertiliser and improve hygiene. Moreover, the economic worth of recycling human waste as a fertiliser

Our approach is often highly collaborative, and stakeholder involvement has always been at the heart of SEI's work. Our projects help to build capacity and strengthen institutions to equip our partners for the long-term. Our sustainable sanitation programme has not only put this topic on the policy making map, but also actively spreads knowledge through a network of 'nodes' that stretch from Bolivia to Nepal. At the regional scale SEI has been instrumental with UNEP in developing and implementing the Malé Declaration in South Asia, helping governments cooperate on air pollution and developing the scientific underpinning for decision making. SEI is an innovator, and has consistently shown the vision to confront issues before they enter the mainstream: our pioneering work on renewable energy in Africa, originates in the early days of the Institute, while our more recent research into sustainable consumption

and production brought the concept of embedded carbon to the attention of European governments. This has led to changes in government policy, such as in Scotland where embedded carbon has become a key sustainability indicator.

As we face multiple challenges at all levels, SEI's expertise is more relevant than ever. This strategic document sets out the direction for SEI and how we will deliver our objectives over the next five years.

### Baltic Compass: navigating the route to a healthy Baltic Sea through agriculture-environment partnerships

Baltic COMPASS is a strategic research initiative bringing the business, environmental and agricultural sectors together to protect the Baltic Sea and put agriculture at the centre of the emerging knowledge-based bio-economy.

Land use for agricultural purposes in the region is expected to intensify due to climate change and increasing global demands for food and bioenergy. This is likely to exacerbate current pressures on the sensitive marine ecosys-

tems. Nevertheless, the competence, technologies, policies and science for developing more sustainable solutions is available but currently unevenly distributed and used. The project particularly aims to remedy the gaps in capacity and resources to combat eutrophication and to communicate effectively at different policy levels. Together with partners from across the Baltic region we want to identify win-win solutions for agriculture, environment and business sectors.



# Mounting challenges, increasing opportunities: the world in 2015

The world is experiencing environmental, political and economic change at a pace that has never before been witnessed. The Earth's biophysical systems have been put under huge stress over the last few decades. At the same time human development challenges remain dire and elusive to remedy. While many people have been lifted out of poverty and received better quality of life thanks to the global economic boom in the 1990s and early 2000s, many groups are experiencing increasing vulnerability, deprived livelihoods and food insecurity as the environmental resources on which they depend have been depleted.

As this strategic plan is being written, the number of people suffering from hunger in the world is, after a period of decline, on the rise and now exceeds one billion people. Environmental change tends to impact poor groups the hardest, and while they are both the least prepared for it and the least responsible for it, they are largely marginalised in existing governance

processes. Food shortages and high-cost energy coupled with increasing water scarcity and air pollution are creating more fundamental and serious impacts on the earth system than previously expected. Losses of biodiversity are projected to be ten thousand times higher than ever seen on the fossil record, with up to 30 per cent of species already threatened with extinction.

Climate change is no longer an absent threat but an immediate reality that requires global action on both mitigation and adaptation. To remain within an already relatively dangerous two degree warming

*"Despite the gaps in knowledge, enough is known to indicate the need for urgent collective action, building on existing activities, to mitigate the further loss of ecosystem services"*  
Millennium Ecosystem Assessment, *Our human planet*, p. 38.

trajectory, greenhouse gas emissions must be brought down in the five year window, from 2015-2020. To achieve effective mitigation energy systems, including transportation, must be well on the way to a wholesale transformation within the next five years.

Since 2008, the world economy has been in a state of recession. This has put additional demands on global decision makers to stake out the way towards a development path that will generate development and welfare, while proactively dealing with resource constraints, mitigating the threat of climate change, reversing natural resource degradation and preserving vital ecosystems services. At the same time, the recession has also opened opportunities for reshaping the development and economic growth agenda towards a "green new deal". As governments and businesses gear up to invest in new infrastructure, technology and innovation over the coming years, it is now that we

can shape the form and content of these financial flows.

The shortcomings of unsustainable growth and high-consumption lifestyles are now apparent for the world's developing and developed countries. These shortcomings and the persistent challenges to human wellbeing urgently require a new development vision and trajectory for the global economy. This will entail differentiated sectoral and regional development paths and niches, including for instance a new "green revolution" for Africa. It will also entail a new paradigm on how to analyse and implement economic change.

The next five years represent a real challenge. But there are windows of opportunity in which to make the necessary breakthroughs. At the level of global conventions, the "Rio" conventions on desertification (CCD), biological diversity (CBD) and climate change (UNFCCC) are up for revision. In 2012, "Rio plus 20" may

become a decisive moment for defining further action within the context of the United Nations system. But other arenas for global governance will also be critical in order to shape and steer world regions towards a sustainability agenda. These include the European Union and its neighbours, where strong policy and political change is ongoing, the development of Africa as an emerging player on the global marketplace, new and reformed trade discussions bilaterally and under the WTO framework, and new geopolitical ad hoc deliberations, involving emerging economic and political power holders such as China, India and Brazil, as well as the old giants like the US, EU and Russia.

Despite decades of efforts by researchers and policymakers, the governance of Earth systems is developing more slowly than the rapidly mounting problems require. Policies and institutional arrangements at different scales and across sectors play key roles in setting and implementing the agenda of change. These policy processes do not stop at the point of decision making; the ways in which policies and strategies impact in practice involve social processes that affect and often hinder implementation. Multiple barriers impede change on the ground, ranging from political interests and power relations, institutional path-dependencies, cultures and traditions, lack of agency and capacity among impacted communities, and lack of credible, useable and accessible knowledge for governance.

What role will SEI play to meet these challenges? The size and complexity of the environment and development challenges facing us is so large that new approaches to solve them will be needed. At the same time there is ample knowledge available to allow immediate action on multiple fronts. SEI will contribute by staying at the frontier of knowledge for sustainable development, continuing to provide integrated assessments and capacity development that support policy and practice.

Today, many scientists and policymakers are struck by the complexity of social, economic and environmental systems that need to be governed. Economics, organisational and management sciences, and ecology are only a few of the disciplines that have been forced to re-evaluate old truths and assumptions about how the systems they seek to understand (and steer) really work. Insights that much of the governing dynamics take the form of complex adaptive systems have translated into scientific concepts and fields of inquiry such as resilience, transitions, complexity economics and complexity leadership. In the economic system, the recent economic crisis is a manifestation of this unpredictable pattern, with causalities spiralling and leading to abrupt changes and discontinuous change in coupled financial and industrial systems. In the environmental system, such change patterns are well documented in climate change and ecosystems. Similar patterns have been observed in the transformations

of socio-technical systems such as energy, transport and ICT.

It is clear that some of the big questions in sustainability science for the coming years lie in the substantiation and validation of these fields of inquiry, and, most importantly, turning the insights coming out of them to applicable and useful knowledge for decision makers – be they development cooperation administrators, governmental policy-makers or natural resource managers.

SEI seeks to address three basic needs.

- First, much knowledge about problems and solutions is available, but it is fragmented and inaccessible for decision makers. This requires synthesis and integration of knowledge.
- Second, new knowledge is needed, on Earth's biophysical systems and on decision processes, people and institutions, and the interactions between these.
- Third, existing connections between scientific knowledge and decision making and practice are often weak, and new bridges, knowledge arenas and forms of policy dialogue are needed.





## Research themes

Based on a broad consultation among SEI staff and stakeholders around the world, we have decided to re-organise our research activities. This will strengthen the scientific integration and policy relevance of our work, and fill some of the new critical knowledge gaps that we have identified in the strategic process. Our previous cross-centre research programmes are transformed into four themes of inter- and multidisciplinary research. Key legacies of SEI's past programmes, such as our work on energy and bioresources, and policy and institutional analysis, are being mainstreamed into all themes. Others, such as land, water and atmospheric issues are combined and integrated in new ways.

The themes function as coordination platforms for our knowledge generation and as units for reporting, monitoring and evaluation of our achievements. The themes have a clear long-term strategy (outlined below) but within and across

them, we also explore novel research ideas and frontiers, and respond rapidly to knowledge gaps and rapidly arising policy demands, by establishing a flexible resource for *emerging issues*. For the second half of the strategy period (2012-2014), our aim is to invest further in the themes by making them the prime vehicles for strategic research initiatives. Common to all themes, we have identified four linked fields of activity that are central to meeting these global challenges:

- analysing pathways of biophysical and behavioural transformation by understanding the technical, social and ecological processes underlying systems change,
- understanding the governance of change and the ways in which states and civil society interact and deploy processes and instruments to steer change,

- providing the technical tools needed to advance problem-solving capacities in different societies,
- developing capacity and networks to support policy making and implementation.

Each theme works across North and South contexts, across science, policy engagement and capacity building, and across social and natural-science disciplines. We will deploy a new theme management structure involving a cross-centre leadership “trojka” for each theme, and new internal communication mechanisms that enable research staff across the institute to provide their expertise to thematic research projects and programmes. The themes and their activities are included in our new planning, monitoring and evaluation system.

## MANAGING ENVIRONMENTAL SYSTEMS

Growing human populations and levels of consumption, combined with resource-intensive production methods, rapid urbanisation and huge increases in energy and transport have put unprecedented pressure on land, water and atmospheric resources. This is undermining the ability of environmental systems to provide functions and services that provide the basis for social and economic development. There is a threat to human health, ecosystems and economic development from the pollution of air and water, the rapidly growing demand for water resources and the lack of appropriate and sustainable sanitation service systems that are ecosystem-based and return safe nutrients to soils. International and national governance processes for developing bioresource- and energy systems remain largely uninformed about implications on resources and people. Agricultural productivity can be considerably improved to ensure worldwide food security by combining conservation agriculture, water harvesting and other water management innovations, and productive sanitation. Currently, however, poor management of soil and water resources contributes to global environmental change, and undermines the resilience needed to deal with social and environmental shocks. These linked environmental systems are currently analysed and managed in a fragmented

and uncoordinated manner, although their connections and interdependence, particularly between ecosystem management, socio-economic development and human health, suggest that a more integrated approach would bring significant benefits.

### Goal

Our goal is to enhance food security for an expected global population of nine billion people by 2050, to reduce the health impacts caused by air pollution and lack of sustainable sanitation and to ensure management of land and water resources to protect ecosystem services.

### Strategic objectives

To advance new insights on the interaction between land, air and water resources and the management of these resources, and support policy change taking into consideration social issues such as gender and equity. Our efforts are targeted at the scales where managers seek to protect and improve the provision of ecosystem services and are designed to support policy change for enhanced food security, human health and biodiversity.

### What we will do

- 1.1 Support sustainable urbanisation through systemic analyses of urban infrastructures and their service delivery capacity and consequences for communities in relation to land-use, air quality, water resources, sanitation and solid waste.
- 1.2 Support sustainable bioresource and bioenergy strategies and their governance processes towards securing both food and energy access by collaboratively developing integrated energy and land-use planning approaches to assess the future implications for atmospheric, land and water resources.
- 1.3 Support the implementation of good governance and management in sustainable agriculture, water security and sanitation in the face of water scarcity, land-use pressures and environmental degradation, especially in sub-Saharan Africa, North Africa, the Middle East, Latin America and Asia.
- 1.4 Develop and support the application of tools to analyse the co-benefits of addressing both climate change and air pollution mitigation in relation to ecosystem services with a focus on human health, food security and biodiversity.
- 1.5 Develop our understanding of biogeochemical cycling (particularly water, carbon and nutrient cycles) to advise policy at global to regional scales through an enhanced understanding of the role the terrestrial biosphere plays in controlling climate feedbacks.
- 1.6 Turn our experience of building natural resource management models that can deal with land, air and water resources such as WEAP, into the next generation of integrated assessment tools to advise and support policy development and implementation.

## REDUCING CLIMATE RISK

Among the wide range of environmental and development challenges, climate change is one of the most urgent and difficult to address. It is urgent because of the calamitous consequences climate change can have if left unchecked. It could make some countries uninhabitable, cause costly damage to infrastructure, increase mortality and prevalence of disease, and make it more difficult to eradicate poverty. In fact, impacts of climate change are already costly for some people and places, and the costs will increase rapidly. It is difficult because the main drivers of climate change are built into our socio-economic systems: greenhouse gas emissions result from many activities that support livelihoods and economies.

Still, investments in adaptation and mitigation will yield human and economic benefits around the world, if made in a timely and efficient manner and based on the best available knowledge. Action on climate change must also be considered along with responses to other pressing issues such as water and food security, public health, desertification and biodiversity loss.

To effectively and fairly reduce climate risk, better knowledge is vital. SEI is uniquely placed to address issues at the interface of science and policy, including equitable effort-sharing in climate policy; energy policy and planning; sustainable use and development of bio-resources and water resources; options for climate finance (including carbon markets);

human rights; the geopolitics, economics and governance aspects of adaptation and mitigation; and cross-scale links between climate change and development.

### Goal

Our goal is to contribute to a safer climate for all. The theme supports the design, development and implementation of effective and equitable strategies for adaptation and mitigation in developing and developed countries, taking into account the broader challenges and policy objectives of sustainable human development.

### Strategic objectives

To develop and advance new knowledge and insights into climate risk reduction, in support of adaptation and mitigation action in developing and developed countries. We address the need to incorporate measures to reduce climate risk into policy and practice, in particular the management of energy systems, bio-resources and water resources. We do this by concentrating on governance, economics, vulnerability and equity. Recognising that the effective reduction of climate risk requires multi-sectoral action across all scales, the theme covers local, national, regional and international policy, as well as initiatives taken by private firms and civil society. We also address knowledge and capacity-building needs of stakeholders - especially policy actors.

### What we will do

2.1 Conduct research on key areas of adaptation and mitigation, based on a rigorous scientific understanding of climate change and relevant policy regimes, and of the increasing role of climate change in regional and global politics.

2.2. Provide timely, authoritative and pertinent analysis to support policymakers and negotiators, finance institutions, development planners, the private sector, civil society and other stakeholders. For example, we advise on equitable effort-sharing through the Greenhouse Development Rights initiative, and together with local experts we analyse the economics of climate change in China and several African countries. We examine the emergence of a new institutional architecture for climate finance, assess the technical and economic potential for greenhouse gas emission reductions in Europe and North America, and analyse the possible consequences of biofuel strategies on food security and ecosystems.

2.3 Address knowledge and capacity deficits that hinder effective action on adaptation and mitigation, through (i) developing collaborative information, training and awareness raising, (ii) promoting knowledge sharing aimed at stimulating

social learning, and (iii) supporting national and regional networks, in particular in Africa, Asia and Latin America. For example, we contribute to regional knowledge platforms for climate adaptation, and organise 'writeshops' aimed at training and empowering developing-country academics to publish in peer-reviewed journals.

2.4 Pioneer and apply innovative analytical tools and collaborative platforms to support action on climate change, including the integrated energy planning tool LEAP and the weADAPT platform for sharing knowledge on adaptation. As well as supporting analysts and decision-makers, these tools serve to build flourishing communities of practice.

2.5 Work with local, national, regional and international organisations and networks to explore and promote pathways towards effective and equitable climate policy. Our partners include renowned universities and academic institutes around the world, international policymakers such as the UN Climate Change Secretariat, civil society organisations and networks, and the private sector. An example of the latter is our partnership with 3C, a global initiative of business leaders, to produce in-depth research at the intersection of climate policy and business.

## TRANSFORMING GOVERNANCE

Recent decades have seen striking progress in poverty reduction and the improvement of lives and livelihood opportunities in many parts of the world. Hundreds of millions of people now live longer, more prosperous and more secure lives than their parents and grandparents. This progress is reflected in a wider range of livelihood choices, and increasingly secure settings that are less vulnerable to external disruption. Despite this, persistent poverty still exists and nearly one billion people remain locked in hunger and absolute poverty as we approach the 2015 MDG target of halving hunger and poverty. For these remaining poor, social and environmental change (including climate change), violent and non-violent conflicts of interest and persistent inequities limit their livelihood opportunities, whilst the same sources of vulnerability can threaten to throw millions back into poverty and insecurity. In the developed parts of the world, vulnerable and marginalised groups in particular are faced with increasing challenges such as resource degradation and health problems. Preparing for and managing environmental risks are important to ensure a continued quality of life, profitability of economic sectors and security from natural events.

At its heart, sustainable development is about giving people, wherever they are in the world but especially the poor, the opportunity to build resilience by providing them with more options in their lives and livelihoods. The

social, institutional and political setting is of critical importance to achieving improved livelihoods, environmental sustainability and enhanced resilience. Despite considerable improvements to date, prevailing inefficiencies and ambiguities in the governance system have created space for stakeholder agencies which often bypasses formal policy processes. Such informal processes of self organisation have led to mixed outcomes in terms of sustainable livelihoods and development. By supporting an enabling environment for policy making and implementation of sustainable development, this Theme will contribute to the strengthening of community-level institutions that are the basis of sustainable livelihoods and which provide access to external markets and institutions. It will help identify and foster more transparent and representative systems of multi-level governance of natural resources, as a means to respond to change and uncertainty, take advantage of opportunities as they emerge and resist negative shocks and trends. Further it will promote collective action, empowerment, knowledge sharing and learning across stakeholders.

### Goal

Our goal is the widespread improvement of governance for sustainable livelihoods through fostering learning and collective action within civil society, markets and the public sphere.

### Strategic objectives

To advance new insights into good governance for sustainable development in the face of social and ecological change through partnerships with public sector, private sector and civil society and International NGOs; and to promote good practice at local, regional and national levels. We will develop tools and knowledge to help understand how these conditions can be established through improving governance conditions. It will focus on identifying solutions to complex problems and will ensure that the knowledge is generated in forms that are accessible to both the public and policy makers, who make decisions on how societies, resources and economies are governed.

### What we will do

- 3.1 Advance knowledge on livelihoods improvement and social change with particular emphasis on governance and institutional dynamics (including issues of land tenure, land rights, agrarian policies, urban and rural development and entrepreneurship; vis-à-vis the role of the state, the private sector and trade regimes).
- 3.2 Develop syntheses and scenarios to provide insights, tools and approaches that integrate livelihoods, adaptation, vulnerability, risk, gender, equity and economics for improved analysis

of the potential impacts of social, economic and environmental change on communities.

- 3.3 Facilitate multi-stakeholder dialogue in the review and analysis of the effectiveness of relevant policy processes to support social learning, adaptation, resilience, livelihoods development and the transformation of communities towards sustainable development pathways.
- 3.4 Develop evidence and methodologies to stimulate the inclusion of stakeholder perspectives and the generation of a more complete understanding of the consequences of different policy choices for livelihoods improvement and sustainable development.
- 3.5 Counteract perverse policy outcomes by supporting the new international development architecture with innovative mechanisms and procedures.
- 3.6 Evaluate and disseminate knowledge on the impact of action plans, governance arrangements, and practices for sustainable development to key stakeholders and policy-makers.

## RETHINKING DEVELOPMENT

While the continuing expansion and connectivity of the global economy had brought welfare and prosperity to some, the majority of the world's population still live in poverty. The prosperity of the few has gone hand in hand with the depletion of natural resources and vital ecosystem functions that are the foundation for human existence. Long-term and cumulative impacts on atmospheric, terrestrial and oceanic systems are calling into question current production and consumption patterns. Social and ecological systems are in flux, with slow-moving and abrupt changes and regime shifts becoming apparent.

However, the type of economy and necessary governance systems to tackle both the sustainable use of ecosystems and substantial global inequalities is not well understood and rarely implemented. In many developing countries, economic growth fails to deliver further societal gains. There are extremely few signs of the developed world changing production and consumption patterns to truly respect global limits. Furthermore, the large scale transformations of social and ecological systems are connected to rapid geopolitical change, economic change and developments in governance globally

and regionally within and between East and West, North and South.

Exploring and articulating local, regional and global pathways to sustainable development and the choices made on these pathways is becoming increasingly sought after.

### Goal

Our goal is the widespread adoption of new development visions and pathways for governing the globalised economy and environment. This requires articulation of sectoral and regional development paths within sustainable boundaries, including more sustainable consumption and production patterns, a new green revolution, and eco-efficient economic change. It also entails an understanding of how to put in place a new economic paradigm for development as well as radical change in governance, institutions and policies that can catalyse transitions to sustainability. As well as understanding global ecological limits, issues of well-being and equality are key foundations of a sustainable world.

### Strategic objectives

To advance new insights and support policy change for alternative pathways to sustainable futures, from the

planetary scale down to local and on-the ground solutions. We illustrate the consequences of traditional development and the opportunities and benefits of new trajectories. We systematically apply these assessments to transform policies, institutions, and governance in a way that promotes the integration of sustainability into mainstream policy and decision making.

To do this, we need to understand policy and institutional change, social and cultural change, and work out how to address challenges through appropriate governance arrangements, institutional structures and political deliberations. Emerging fields of study include the role of public and private actors in managing environment and development in a globalised polity, and the implications of economic crises for sustainable governance.

### What we will do

- 4.1 Provide policy analysis and support on low carbon development pathways and the green economy in the North and South, at multiple scales.
- 4.2 Provide policy analysis and support for sustainable consumption and production in developed and transitional countries.

4.3 Collaboratively develop and support the application of methods, scenario approaches, and analytical tools such as REAP and LEAP to socially and environmentally sustainable pathways of development.

4.4 Advance research on governance and economic transformations that could lead to a transition to ecologically sustainable, equitable, global development.

4.5 Provide policy analysis to question, elaborate and support dialogue on concepts that enter into international treaties, such as equity and responsibility, to help decision-makers establish and implement policies that will encourage and sustain more equitable societies.

4.6 Synthesise SEI knowledge for input to global assessments and dialogues such as the Global Environmental Outlook, Rio plus 20 and various global energy, water, air and climate change assessment.



# Reaching our goals

SEI is active in some of the most cutting-edge fields of sustainability science and policy analysis. We set our own strategic agenda in close consultation with our stakeholders and focus our work on solving real world problems by responding to demands related to sustainable change processes. At the same time we support knowledge driven policy change and capacity development, and keep our feet firmly on the ground by contributing to implementation related projects.

## Making an impact

SEI's brand of research lies in the intersection of academic advancement and real-world implementation. SEI is one of very few organisations worldwide that has been able to perform this role with development credibility and scientific excellence. Our approach for the following years will build on this legacy.

The journal *Climate and Development* was born in 2007 from the experience of SEI staff working on the IPCC's latest assessment report.

They noticed that, for the panel's Working Group on impacts, adaptation and vulnerability, there was not enough rigor-

ous science available from the developing world on which to base precise conclusions.

In 2008, SEI established *Climate and Development* as a step toward filling the gap in peer-reviewed research from developing countries. The journal is now in

its second volume, and is publishing a wide range of high quality peer-reviewed articles about the developing world, and by authors from the developing world. This research will be available for the IPCC to use in its future work.

## Climate and Development: new research puts developing countries in the foreground

## Credibility

The impact of our research rests upon its credibility. To fulfil our mission we need to maintain and enhance our scientific excellence. If we are to enact change we first need to understand the dynamics that shape a particular phenomenon. Such understanding depends on robust empirical study. To become more effective we will continue to raise our scientific profile and use this as a basis to further develop SEI's international role as a credible convenor on science-policy issues.

SEI will continue to place particular emphasis on multi- and inter-disciplinary work. We will pursue our interest in governance, transitions, and other manifestations of complex systems using techniques from across the social, engineering, and natural sciences. Disciplinary advancements are not our main purpose – our research is always problem-driven rather than driven by intra-scientific considerations.

As a learning organisation, trans-disciplinarity and stakeholder engagement that engages decision makers and stakeholders in a process of knowledge co-production are, and will continue to be, important principles of SEI's research. Participatory work is crucial not least when identifying and understanding the problems at hand and in defining the research agenda, in order to ensure that the research is policy relevant and of value to our stakeholders. But stakeholder engagement needs to permeate also the latter stages of analysis, synthesis, learning and communication. Credibility also requires independence. We will maintain a clear demarcation between our approach and that of consultants and campaigners. We produce original and openly accessible analytical work and retain an impartial perspective on sustainability policies and issues to be able to play the role of a credible and trustworthy source of high-quality analysis for all actors in society.

## Knowledge networks

To understand and influence the development agenda SEI will continue to extend our networks with other research institutes, civil society organisations and other agents of change. These networks, whether with local NGOs, UN agencies or organised around a topic or geographical area, will give us channels for learning and for providing novel insights.

SEI has already established networks of research and development organisations through which the capacity of knowledge generation and the scope of policy impacts are enhanced. Among them are our eight sustainable sanitation knowledge nodes around the world, the COMMEND network for energy analysts and Sumernet. The Sustainable Mekong Research Network (Sumernet) was created four years ago in Asia. With strong regional ownership and an agenda defined through a participatory approach, Sumernet has gained a

reputation in Asia for engaging policy makers and stakeholders, conducting cross-country research, holding policy dialogues and building institutional and individual research capacities. Through SEIs credibility and long-standing knowledge partnerships, we have played a key role in supporting the South-South collaboration and policy development on reducing air pollution (through the Malé Declaration), and in launching the global alliance for sustainable sanitation (SuSanA). SEI will continue to facilitate these knowledge, policy and development networks and also link them to different networks and policy processes.

Policy impact is also about improving the interaction and understanding between policy making and scientific knowledge. The gap in this respect is often an issue of capacity. Capacity development will remain an indispensable component of our research and is built into our stakeholder engagement approach.

Our internal assessment project on Getting to Policy Impact identified which factors contribute most significantly to SEI success. It highlights the role and importance of scientific credibility, policy relevance and stakeholder legitimacy, along with effective communication platforms.

### Communication

Making an impact requires a dialogue that gets our research to the right people, in the right way, at the right time. The communication challenge is three-fold: understanding who we wish to influence; translating science-based research findings into effective messages; and identifying and executing opportunities for listening and getting our messages across.

We will continue to engage with our four core audiences in the North and South: academia, public policy decision makers, media and NGOs. Our communication methods will expand to take account of the needs of these audiences and take advantage of new technologies and ways of interacting. In addition to our core audiences, we will explore the potential to bring about change across a broader spectrum by identifying opportunities to reach the social agents of change, the private sector and informed general public.

### What we will do

- 5.1 Implement internal review processes to ensure the quality and impartiality of our research.
- 5.2 Set annual targets for publication in peer reviewed scientific journals.
- 5.3 Move further towards a transdisciplinary approach to research in order to

strengthen the engagement with stakeholders in the entire learning process from problem to solution.

- 5.4 Increase the impact of our research by integrating scientific inquiry into syntheses, assessments and policy processes.
- 5.5 Invest in exploring emerging issues to remain at the forefront of knowledge development.
- 5.6 Publish a seminal, biennial global assessment crystallising the results of policy dialogues and synthesising our research using techniques such as backcasting.
- 5.7 Set up scientific partnerships with knowledge institutions and continue to integrate SEI centres with local universities.
- 5.8 Develop our publications portfolio, making it even more tailored and relevant to our audiences. This will include books, reports, briefings, newsletters and academic journals. By 2010, the portfolio will be supported by professional editing and writing capacity.
- 5.9 Spread the word by increasing our visibility at conferences, expanding readerships by distributing publications more widely, and exploring a strategic

partnership with a reputable publishing house.

- 5.10 Build an online presence that persuasively communicates our research to our core audiences. We will continue to develop our global online presence, using creative presentation tools to get our messages across and new techniques to engage directly with our audiences. At the same time, we will also cater for audiences without high speed internet connection.
- 5.11 Develop strategic relationships with communications partners and the media in the North and South, in part by expanding our training and seminars for journalists. By 2011 we will recruit an experienced press officer to execute and coordinate a global media engagement strategy.
- 5.12 Exercise our convening power by hosting science policy dialogues that increase the absorption of research findings that allows both communities to engage and provide a vehicle for disseminating. The dialogues will respond to the priorities of our host countries and support their policies of sustainable development.



## Delivering results: mobilising our expertise

SEI has a flat and decentralised leadership and management structure thanks to our distributed organisation, with research centres and offices across the world. Over the coming five years we will invest in the leadership of SEI centres and themes by developing leadership skills

*“Any policy on the environment is a policy only on the basis of effective forms of international cooperation which take into account both ecological relationships on regional and global scales, and the interdependence of the world economy. [...] Since SEI initiates, carries out and disseminates research in the environmental field, the physical presence of SEI in Africa, particularly in Tanzania is of paramount importance.”*

Dr. Batilda Salha Burian,  
Minister of State for Environment,  
United Republic Of Tanzania.

and by improving the transparency and accountability in our management systems. We will establish two new institute-wide leadership functions: a monitoring and evaluation coordinator and a strategic fund raising manager. We will develop leadership and project management skills among younger staff. As a learning organisation, we will continuously invite external peer assessments of the quality of our work and management performance, as a complement to our own internal regular reviews of results and operational quality control.

### **A global, one-institute culture**

Each SEI centre is integrated within its local administrative and institutional settings. This is one of our core strengths: a physical presence on a day to day basis that gives SEI access to information about regional environment and development challenges directly from local stakeholders. This enables SEI to have a close dialogue and exchange of ideas with our target audiences

(policy makers, donors, private sector and other agents of change) on where and how SEI can play a relevant role. Our research centres, which are embedded in local universities, also give us access to a pool of world-class research talent and a platform for developing research and institutional capacity. Through our global reach we can respond quickly and sensitively to local demands, diversify our funding sources, and be cost-effective.

At the same time, in order to effectively harness the full capacity of SEI and its networks and partnerships across the world, it is of critical importance to establish an institute wide sense of identity; effective, collegial and transparent ways of working together; excellent internal communication, and to establish common core values. We have defined this key priority for SEI’s development our “one-institute culture”. We will continue building our one-institute culture over the coming five years, particularly focusing on institute

wide human resource issues, staff capacity and exchange, internal communications, and transparency and accountability in our management systems.

### **Investing in our staff**

The quality of SEI rests in the quality of our staff. SEI is privileged to have (at the outset of this strategic plan) approximately 160 highly qualified and motivated professionals among its international staff.

SEI will invest in human resource development across SEI and management of SEI expertise. A key priority is to invest in research capacity development among our young researchers, create career pathways, and to strengthen our relations with universities as a way of establishing joint staff appointments and contribute to under-graduate and graduate training. We will encourage our staff and SEI partners to take advantage of our joint venture with Stockholm Resilience Centre, where we are developing a new Resilience Research School that will provide a platform for transdisciplinary MSc and PhD training. SEI is also partnering with other institutes and the private sector to establish a global curriculum and professional certification on climate adaptation and we are exploring whether this could be a template for future staff and capacity development.

We will continue to invest in leadership, management and communication skills among SEI staff. A particular focus will be to continue our staff exchange programme within the institute, which provides

opportunities for collaborative research and the publication and communication of new knowledge.

### **Planning, monitoring and evaluation**

SEI steps up its efforts to improve learning, accountability and planning across all our activities. The Institute develops a new web-based platform that integrates planning, monitoring, evaluation and communications (PMEC). PMEC will enable the institute and its funders to identify and track detailed outcomes of its activities, such as changes in behaviour, knowledge, beliefs and actions of key stakeholders and partners. The PMEC system is organised around six key performance areas that are linked to our overarching institutional goals. These are:

1. Policy relevant, scientifically robust research (Be a world leading knowledge institute advancing new, credible, policy oriented and applied inter- and multidisciplinary research for sustainable development).
2. Communication and dialogue (Build bridges between knowledge and decision makers by continued development of our role as a relevant and respected regional and international convener of science-policy dialogues and through continued improvements in the communication of our research).
3. Policy engagement and support (To engage with, and support, the development and implementation

of policy at all stages and at multiple scales to try to ensure governments, institutions, and individuals are aware of alternatives and determine the most sustainable decisions and actions).

4. Partnership and collaboration (Reinforce and establish new institutional partnerships and collaborations with agents of change to maximise our ability to provide policy-relevant advice on sustainable development issues).
5. Capacity building (Use our distributed structure to maximise the local and regional impact of our work through capacity building that supports implementation).
6. Governance and management (Improve the people, research and financial management systems of the institute).

### **Institutional partnerships**

To understand and influence the development agenda SEI will continue to develop our enduring relations with key local, regional and global partners, through networks with other research institutes and agents of change. These networks, whether with local NGOs, UN agencies or organised around a topic or geographical area, are fundamental channels for our impact and learning.

We will also aim to establish stronger long-term institutional arrangements with partners and donors, ranging from multilateral UN agencies (such as our UNEP





Collaborative centre on climate adaptation and the newly organised Climate Change, Environment and Migration Alliance) to bilateral development cooperation agencies (such as our framework agreement with Sida), knowledge institutions (such as our collaborative arrangements with IIED and IISD) and civil society and development NGOs (such as the Ring Alliance). The objective is to build more strategic partnerships and create synergies that deliver greater impacts.

### Funding

Our strategy for 2010-2014 is to diversify our funding base, and to increase institutional core funding to 40 per cent of our total turnover. We use our flexible institutional core support to strengthen our institutional capacities, management systems, and our ability to monitor, learn and make an impact. Core funding also enhances our independence and ability to explore far-reaching solutions to sustainable development challenges that are not yet part of mainstream funding or research. Enhanced fundraising at the institute level is also crucial because funds raised at the core level will help unleash additional funds within research themes.

In addition to pursuing the institutional agreements, SEI will continue to work actively with partners on competitive research grant proposals to research

councils and foundations to fund its independent research and ensure our academic excellence. This bottom-up approach remains a key aspect of SEI funding and will be supported and facilitated through the Institute leadership.

SEI will also take on partnership-based applied research funding from a range of foundations, governmental agencies, international organisations, the European Union, multilateral development banks and, under certain conditions, the private sector.

### Environment

SEI has adopted an Institute-wide environment policy that aims to monitor and minimise our carbon footprint and reduce waste. This policy is not just a set of static rules, but a living document that guides our own behaviour and will evolve to embrace targets that, for example, aim at reducing GHG emissions to 2t CO<sub>2</sub>e per capita by 2050.

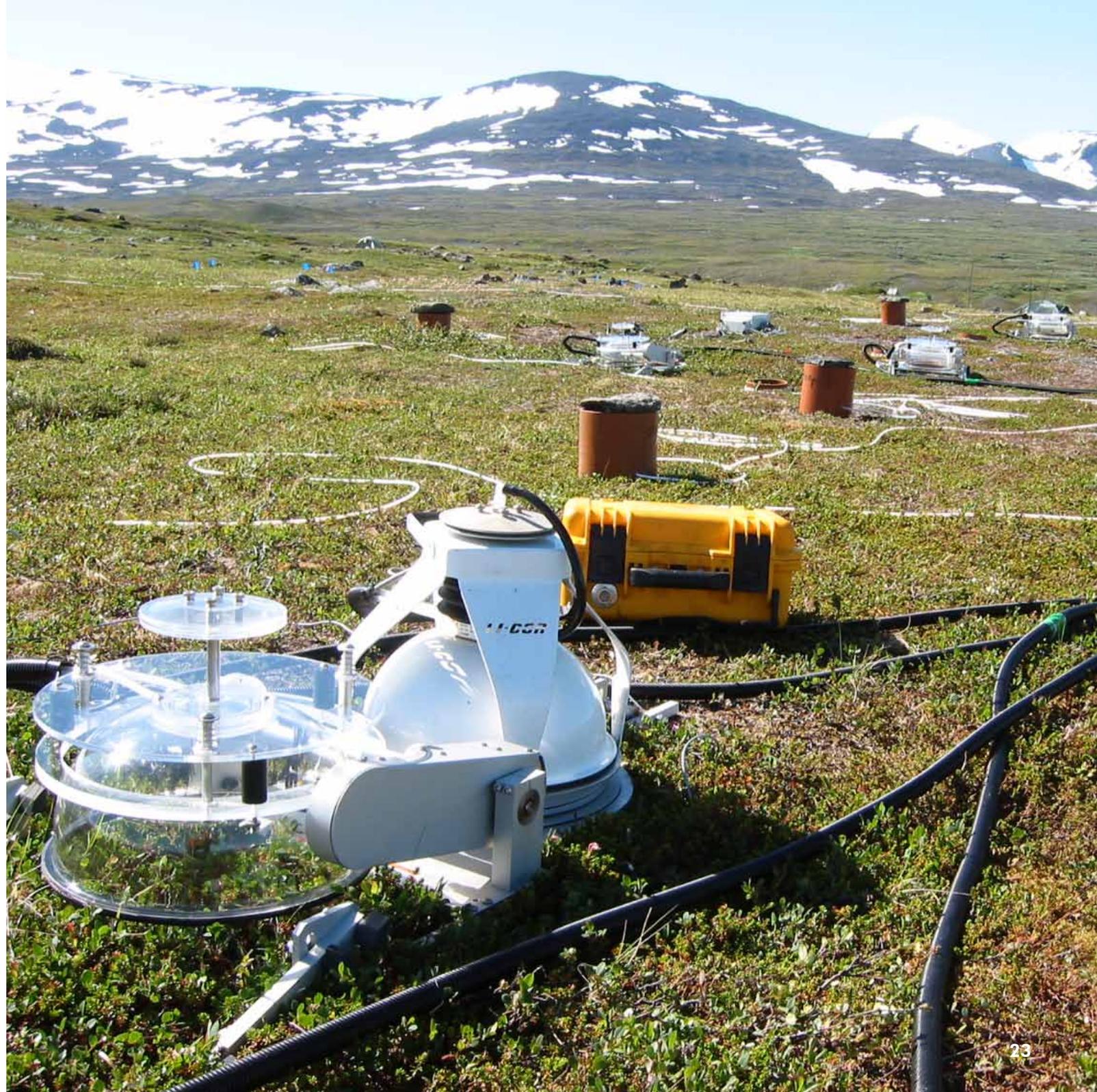
In practice our environment policy is also about demonstrating that we are walking the talk: letting the world know that what our research shows is doable.

### What we will do

- 6.1 Invest in staff development (leadership and communications training) and research capacity development.
- 6.2 Create a leadership structure for the research themes described in the Strategy 2010-2014.
- 6.3 Further develop the SEI Intranet to support our One-institute culture, create intra-SEI research links and provide a toolkit for communications.
- 6.4 Install videoconferencing technologies enabling digital video conferencing to become the norm for intra-institutional meetings by 2011/12.
- 6.5 Build research capacity within SEI by, for example, taking on doctoral students and hosting visiting professors.
- 6.6 Establish an M&E framework in and across all SEI centres, using relevant automated procedures encouraging reporting that seeks staff opinions and regularly asks stakeholders their views thus providing constructive feedback on project outcomes.
- 6.7 Appoint an M&E Coordinator to organise the M&E framework across SEI, gather, handle and analyse diverse data,

and support M&E implementation as an everyday part of staff activity.

- 6.8 Diversify our funding base, and to increase the SEI institutional core funding to 40 per cent of our total turnover.
- 6.9 Pursue and implement institutional agreements with Sida along with other development cooperation agencies around the world.
- 6.10 Expand our institutional funding partners to a minimum of three.
- 6.11 Actively work with partners on competitive research grant proposals to research councils and foundations to fund its independent research and ensure our academic excellence.
- 6.12 Currently, SEI monitors its carbon emissions. By 2011/12, we will work out innovative and effective solutions to reduce and/or offset our carbon footprint. We are looking to work together with like-minded institutes to produce robust reduction responses.



**SEI Stockholm**

Kräftriket 2B  
SE-106 91 Stockholm  
Sweden

Tel +46 8 674 7070

**SEI Africa**

Institute of Resource  
Assessment  
University of Dar es Salaam  
PO Box 35097  
Dar es Salaam  
Tanzania

Tel +255 766 079061

**SEI Asia**

15th Floor, Witthyakit Building  
254 Chulalongkorn University  
Chulalongkorn Soi 64  
Phyathai Road  
Pathumwan  
Bangkok 10330  
Thailand

Tel +66 2 2514415

**SEI Oxford**

Suite 193  
266 Banbury Road,  
Oxford, OX2 7DL  
UK

Tel +44 1865 426316

**SEI Tallinn**

Lai 34,  
Box 160  
EE -10502, Tallinn  
Estonia

Tel +372 6 276 100

**SEI US**

11 Curtis Avenue  
Somerville, MA  
02144  
USA

Tel +1617 627 3786

**SEI York**

University of York  
Heslington  
York YO10 5DD  
UK

Tel +44 1904 43 2897

[sei-international.org](http://sei-international.org)