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This annual report shows how SEI makes a difference. The ten articles that follow highlight SEI’s top outcomes in 2009, and demonstrate how our work, together with our partners, brings about change towards sustainable development.

We have chosen examples that present the breadth of our influence on policymaking, from local sustainable sanitation projects to Presidents. In addition, this report shows how SEI’s novel research impacts upon the academic community and develops capacity in the world's poorest regions.

But this is only a glimpse into the transformative work of the Institute – we have produced a multimedia version of the report that uses audio and video to capture our impact in more detail. You can view this version of the report at SEI's new website www.sei-international.org, which was launched as part of the Institute's 20th anniversary celebrations. Please browse through the site to discover more about SEI's strategy for the next five years, use the interactive timeline to zoom in on a particular issue, or watch the film to discover how we've been bridging science and policy for more than 20 years.
The year 2009 was critical for world development. A deep global financial crisis plagued the world when it finally seemed as if countries might join forces to solve the climate crisis. It was also a year when social-ecological research on sustainability, led by SEI along with others, pointed at the urgent need to recognize and act on the inter-dependence of the global economic and environmental crises. The global failure to use the financial crisis as an opportunity to bend development trajectories by investing in sustainable growth was – and still is – of grave concern. However, this failure makes plain the profound need for policy relevant, development-oriented research on sustainability that provides new insights and innovative solutions. Incremental change to cushion the environmental impacts of largely unsustainable growth is not enough. What is needed is new ideas, policy options and pathways for transformative change toward development that respects humanity’s safe operating space on planet Earth, as defined by Planetary Boundaries.

This challenge is at the heart of SEI’s new Strategy for the coming five years (2010–2014). Founded on a wide-ranging consultation with partners and stakeholders around the world and taking a global outlook on the next decade’s key environment and development challenges, our strategy focuses on where SEI’s competence best addresses the most pressing issues for sustainable development. To this end, we have transformed SEI’s with ‘a range of research programmes into four themes: Reducing climate risk, Managing environmental systems, Transforming governance and Rethinking development. These themes will enable us to take our research to a new level. For example, by integrating sustainable sanitation, water resource management, air pollution abatement, and stewardship of ecosystem services we will
be able to support a new green revolution in Africa that responds to the need for climate adaptation.

For SEI, 2009 was an extraordinary year in three other respects. We celebrated our 20 year anniversary with a major seminar on the progress of sustainable development since the Rio conference in 1992, and a dialogue on the major challenges for humanity in the coming decades.

Secondly, SEI provided the Swedish Presidency of the European Union with vital policy support. We published a range of research reports on priority environment and development issues for Sweden and Europe, such as laying the foundation for policy on the transition to an eco-efficient economy.

Finally, SEI has been through no less than three external evaluations, and a fourth and final one is ongoing in 2010. These evaluations are intended to assess whether institutional support to the institute should be increased. It is very gratifying that the evaluation of SEI’s relevance by Statskontoret, and the scientific evaluation of SEI by Formas, confirm that our research and policy support is highly relevant and achieves leading international standards. It is also satisfying that the systems audit by Sida shows that SEI is an effective and reliable organization.

All three evaluations provide recommendations that will further raise SEI’s capacity to contribute to sustainable development in the world. We have already come a long way in putting these changes in place thanks to the successful launch of the SEI strategy and an outstanding effort from our 180 staff around the world.

“SEI’s new strategy for the coming five years is founded on wide-ranging consultation with partners and stakeholders and takes a global outlook on the next decade’s key environment and development challenges.”
Insights derived from SEI research prompt UK policy shift on carbon reduction

Carbon cuts in the UK

RECENT SEI RESEARCH has changed perspectives and policy on carbon management in the UK Government. The UK Climate Change Act has created political momentum to bring about effective climate mitigation strategies, and SEI has helped organisations like the UK National Health Service understand that reducing emissions is not merely about addressing direct emissions but extends to the impacts of their activities right up the supply chain.

The NHS asked SEI to develop a comprehensive understanding of the carbon footprint of the NHS in England. The analysis formed the evidence base for the NHS Carbon Reduction Strategy, which sets ambitious carbon reduction targets needed to progress towards the Climate Change Act requirements. SEI calculated the carbon footprint of the NHS, identified and explored the impact of key supply chains and evaluated the potential carbon savings of different policy options.

We have undertaken further research for the UK Government to determine the drivers behind the UK’s GHG emissions. This work clearly shows that technology can only play a limited role in achieving substantial reductions, and that a policy package that fails to deal in some way with the ever growing demand for goods and services will not secure a 2°C pathway.

SEI research has also been used to prepare the world-leading 2009 Scottish Climate Change Act, which commits to 42% cuts in greenhouse gas emissions by 2020. In particular our work contributed to provisions on consumer emissions, where it has led to the creation of an ecological footprint indicator. The Act also requires that Scottish ministers now report to Parliament every year on emissions associated with the consumption of goods and services.

Most recently, legislation has been tabled in the House of Lords that would put in place a UK
consumer emissions target. The proposal for legislation specifically refers to the research conducted by SEI for the UK Department of Environment Food and Rural Affairs. This builds upon the intention, set out in the UK Sustainable Development Strategy, to reduce the global environmental impacts from production and consumption.
Collaboration persuades Chinese policymakers to propose radical measures to cut carbon

**SEI’S LOW-CARBON** China project brought together leading international experts with top Chinese policymakers and economists from the China Economists 50 Forum. In 2009 the project released recommendations on how China can radically reduce its carbon emissions.

The project shows that a rapid shift to a low-carbon economy is technically feasible, and that it is in China’s interest to get there fast. To do so, a higher price on carbon is essential. The project advocates three key policy measures: abolishing existing subsidies, introducing carbon taxes, and developing carbon trade.

Up to now, China’s economic policy has been little concerned with the environment. But recent government proposals show the impact of the Low-Carbon China project. Fan Gang, for example, a key actor in the project and a member of China’s central bank Monetary Policy Committee, is now advocating a policy change to a domestic carbon tax.

The project advised the Swedish Government and the EU presidency on China’s energy and climate policy in preparation for the EU/China summit, as well as the Nordic COP group about China/EU-US issues in the run-up to COP 15. The project report was also relied on by UNFCCC negotiators.

In November 2009 SEI presented the report *Going Clean: The Economics of China’s Low carbon Development to the Chinese Environment Minister at a conference in Beijing. SEI also briefed the Swedish Prime Minister and Environment Minister, Fredrik Reinfeldt and Andreas Carlgren ahead of a state visit to China in 2009.*
Brighter future? China is taking steps to decarbonise.
SEI makes deal with Bolivian government to tackle sanitation, water and agricultural challenges in local communities

Smart sanitation

**SEI’s Ecosanres Programme** provides and promotes pro-poor sustainable sanitation around the world by building local capacity. This is urgent work in Bolivia, where 5 million people have no access to proper sanitation and 2.5 million lack access to clean water.

EcoSanRes and its partners helped to set up a government directorate that represents the Bolivian sanitation and housing sectors. Last year SEI signed a contract with the Bolivian Government to help design, promote and put in place sustainable sanitation for poor rural and urban households. SEI is also cooperating with professionals and organisations in related sectors to spread awareness and enmesh sustainable sanitation in wider society.

Bolivia’s water managers are under huge pressure to expand water and sanitation services while protecting aquatic ecosystems and supplies for other productive water uses, like agriculture. This is no easy task when the region’s water supply is threatened by the rapid and dramatic loss of glacier cover in the Andes.

Ecological sanitation can help to meet this challenge through systems that safely recycle organic waste and human manure for crop production. This conserves water and reduces demand for other non-renewable resources like phosphorous, used in conventional fertiliser.

In 2009 SEI, with its partners in Bolivia, trained more than 500 key professionals and more than 100 government personnel in sustainable sanitation. We also ran three regional workshops and carried out nine demonstrations of sustainable sanitation systems, enabling government staff to run demonstrations in the future.

In Bolivia, as well as in many other countries around the world, SEI is building capacity through its network of partners to expand the use of sustainable sanitation over the short and long-term.
Simple ecological toilets, such as this one in the plains of el Alto, save crucial water resources and help to grow crops.
Peer-reviewed science from the developing world will help the IPCC make stronger assessments. SEI’s new journal is filling gaps in knowledge.

Vital knowledge from the Global South

The Academic Journal  Climate and Development was born in 2007 while SEI staff were working on the IPCC’s fourth assessment report. They noticed that more peer-reviewed research from the developing world was needed to underpin solid conclusions about the impacts of climate change and how these impacts might affect people and communities.

The only option was to turn to so-called ‘grey literature’ (non peer-reviewed research) to support assessments. This backfired during the controversy that erupted around IPCC in 2009 and 2010 when the use of grey literature provided ammunition for critics to attack the panel’s scientific credibility.

In 2009, SEI and Earthscan published Climate and Development as a move to meet the need for peer-reviewed research from developing countries.

The journal communicates research of the highest standard on the links between climate and development, with a focus on the Global South. Now in its second volume, it has published 22 peer-reviewed articles on the developing world, Twelve of which are by developing-world authors. This data will be available to the IPCC in its future work. The journal is also reaching a wide audience: some 80 universities and institutions subscribed to the journal in its first year.

SEI not only publishes research from the South, it also builds capacity to ensure that more of it will be available in the future. SEI has launched an initiative called Writeshops, where up-and-coming researchers from the developing world attend workshops with experienced academics. Writeshops aim to transfer the skills required to write science articles that can stand up to the peer-review process. In 2008 SEI ran a successful pilot writeshop in Bangkok, and three more are planned for 2010 in South America, the Middle East and the Pacific.
SEI is sharing best practice with researchers in the developing world to help them meet the highest academic standards. This can support more accurate assessments of the effects of climate change.
Policy support, knowledge and training bring shift in development approaches across the Mekong region

THE SUSTAINABLE MEKONG Research Network (Sumernet) produces and communicates the latest research on sustainability to governments and decision makers in the Mekong region. Last year the Sumernet programme completed its first phase, which yielded a harvest of policy-relevant reports on topics as diverse as fisheries, land-use, migration and flood preparedness.

The programme has achieved a range of policy impacts. In Laos, the government put on hold all land seizures for rubber plantations for eight months as a result of our research. Sumernet teamed up with 10 government officials to research the effects of rubber plantations on local livelihoods and ecosystems. Huge swathes of Laotian land have recently been given over to rubber production, mainly to serve the Chinese market, and our research gave a deeper understanding of the impacts of these plantations. A concise version of the report has been translated into Lao, and is now used by provincial governments as the basis for decision making.

Sumernet works closely with state agencies throughout the research process. For example, Sumernet collaborated with Cambodia’s environment minister to work on development challenges in the Mekong Delta and in Cambodia’s great lake (Tonle Sap) – the world’s second biggest fishery. This resulted in a research report that is now relied on by the Cambodian government in policymaking.

Sumernet also communicates its work in innovative ways. New research on regional migration led to a 20-minute TV documentary on labour migration from Myanmar, which was broadcast to half a million viewers on Thailand’s Channel 9. The Thailand government now uses the film as a training resource to educate its officials about regional migration.

The programme has three main aims: to build a transnational research network that rises...
above national interest to benefit the entire region, to produce original research and gather knowledge from throughout the Mekong, and to use this network and knowledge to influence policy.

Last year Sumernet set out plans for its second phase, in which it will further entrench sustainability in regional decision-making. The programme will promote even greater diversity through closer ties with policymakers and communicators, and geographically by bringing in new partners, especially from China.

The Laos government put a stop on land seizures for rubber plantations to wait for the results of SEI’s research. We are working with policymakers in the Mekong to understand the impacts of rubber cultivation.
Navigation for negotiation

IN 2009 a team of SEI researchers prepared a report that gives climate change negotiators a comprehensive picture of the challenges around adaptation finance, as well as setting out realistic ways to confront them.

The value of the report became clear at COP15 in Copenhagen. Delegates – from developed and developing countries alike – relied on the report as a one-stop information resource to help them navigate the complex negotiations on adaptation finance.

The Bali Action Plan was adopted in 2007 at the United Nations climate summit in Bali. The Plan put adaptation to climate change high up on the political agenda, and laid the groundwork for international negotiations on how to pay for adaptation action to protect poorer countries from climate change impacts.

But it was soon obvious that adaptation finance is one of the thorniest issues in the climate change negotiations, marred by suspicion and uncertainty. Why? Simply put, there is mistrust between the developing and developed world over money commitments, and no-one is sure exactly how much money will be needed to help countries adapt, or where the money should come from.

The report, titled Adaptation Finance under a Copenhagen Agreed Outcome, asks how enough money can be generated to meet adaptation needs, how that money should be managed, and how it can best be delivered to developing countries. It also identifies policy options that promote a fair, efficient and flexible process of international adaptation funding.

The report is based on three years of in-depth background work by SEI.
SEI research shapes EU policy on eco-efficiency during the Swedish Presidency

Europe’s economy – leaner and greener

An SEI report commissioned by the Swedish Government was last year used as the evidence base for three ministerial meetings on energy, the environment and competitiveness during the Sweden’s EU Presidency.

The report, outlining how the EU could move toward a more eco-efficient economy, provided the Swedish Government with the heft to drive forward its pro-environment and pro-growth agenda.

European leaders endorsed the concept of eco-efficiency. In addition, the European Commission plans to develop indicators to measure progress towards it.

Findings from the report figured prominently in the formal Council conclusions from October 2009, and have fed into the EU’s 2020 Strategy, in which resource efficiency is a central theme.

The report makes the straightforward case that an eco-efficient economy works: environmental improvements can go hand-in-hand with competitiveness, and offer mutual benefits. SEI argues that there is much untapped potential within production, consumption and services, and proposes ways to mine that potential to step-up EU moves toward eco-efficiency.

The report ties together the Institute’s work on European environmental policy, integrated governance and sustainable consumption and production. It also drew in expertise from SEI’s research partners such as Lund University, which gave input on energy efficiency.

The question of eco-efficiency takes in a range of fields, and SEI’s broad research base and its history of integrating knowledge from different spheres meant that it was well-positioned to provide the EU with policy advice.

“In the coming years we will establish an eco-efficient economy [that] will benefit the environment and the EU’s competitiveness.” Stavros Dimas, EU Ministers’ meeting on creating an eco-efficient economy in Åre, Sweden, July 2009. An SEI report was used as the evidence base for the meeting.
Kenya primed on climate costs

**SEI’s report** *The Economics of Climate Change: Kenya*, lays out the possible costs to the country of climate impacts and puts forward policy responses. The report was prepared in partnership with the Kenyan Ministry of Environment and Office of the Prime Minister. Africa must take swift action to prepare for climate change if it is to avoid severe human and economic consequences. In 2009, our knowledge support was key to the development of Kenya’s policy response to the threat of rising temperatures.

After the report was published, SEI continued its high-level engagement with the Kenyan Government throughout 2009. At the government leadership retreat in November, SEI staff stressed the report’s key message to Kenya’s top officials – that they should pursue a coordinated policy on adaptation and low-carbon development at the national and sectoral levels.

We officially presented the final report to the Office of the Prime Minister on 4 December, just prior to COP 15. But the study looks far beyond Copenhagen and stresses that in the long-term a successful response to climate change must be built on three pillars: institutional capacity, knowledge management and multi-stakeholder funding.

Climate change policy in Kenya clearly reflects SEI’s input and is making progress, despite the setback of COP 15 and the distraction of upcoming elections. The government will take forward adaptation policy – including our recommendations – through a new agency set up to implement policy and manage funds.
Kenya’s population has risen by 20 per cent in the past decade. SEI is advising Kenya on how to manage the consequences of rising temperatures and rapid socio-economic change.
Innovative software and analysis builds a sounder foundation for California’s unstable water supply

SEI is helping California make a step-change in its water governance. Every five years California’s Department of Water Resources (DWR) measures water use across the state, judges how much water is available and estimates future needs. These five-year updates are a crucial guide for California’s water policy and form the basis of the California Water Plan. Our work is behind a shift to scenario-based analysis in the California Water Plan – an approach that enables better responses to the inherent uncertainty of future water conditions.

DWR turned to SEI because of the success of our software system WEAP (Water Evaluation and Planning). WEAP allows water planners to explore outcomes by processing data from a huge array of questions, such as what if population and economic patterns change? What if groundwater is over-exploited? What if climate change alters demand and supply? How does pollution affect water quality?

Comparing scenarios can help California make better policy. For example, how do modern approaches like conservation, wastewater reuse and combined use compare to traditional strategies, such as building more dams and reservoirs? How will different strategies perform in a changed climate that is expected to dramatically shift the mix of snow and rain in major watersheds in the state? Our researchers are helping to answer these questions, and California’s water supply will be more stable and resilient as a result.

Last year SEI also co-developed a climate change information system for California, based on Google Earth technology (see panel, left). The system will help water managers to integrate complex climate information into planning.

In the US, SEI’s reputation for creative thinking on water management and climate adaptation continued to grow in 2009.
Last year SEI also co-developed a climate change information system for California, based on Google Earth technology. State Governor Arnold Schwarzenegger and Google CEO Eric Schmidt launched the system in December last year. See pic xxx. In the US, SEI's reputation for creative thinking on water management and climate adaptation continued to grow during 2009.
Communication is an essential tool for building bridges between science and policy

**IN 2009** we set new standards in communication, capping a year in which SEI celebrated its 20th anniversary.

**PUBLICATIONS:** 2009 was the year that climate change rose to the top of the geo-political agenda and the leaders of 119 countries gathered in Copenhagen to address the challenges of a carbon constrained world. SEI made this event a major priority and planned its communications activities to feed in new research, advice and support to key actors.

In the run-up to the climate summit, SEI prepared a scenario that showed how Europe could reduce emissions of greenhouse gases by 40 per cent by 2020. *Europe’s Share of the Climate Challenge* was presented to decision makers in Scandinavia, at the EU institutions and at COP 15. SEI also led an analysis of the opportunities that would be created by a successful global agreement to tackle climate change. The conclusions of our *Copenhagen Prognosis* were supported by leading research institutes including The Energy and Resources Institute (TERI), the German Development Institute (DIE) and the Potsdam Institute for Climate Impact Research (PIK). The French language version of the climate bulletin *Tiempo* now reaches 2000 readers in West Africa and our newsletter on renewable energy, RED, has taken on a new life online.

To support the Swedish Government, SEI and its partners delivered 11 major reports on subjects as diverse as resilience and sustainable development, climate politics in the US, India and China, and how to green the European economy. We always tailor our publications for specific audiences, and SEI produced many more publications in 2009, including policy briefs on issues such as household energy in Africa and a report on rainwater harvesting produced in partnership with UNEP.

“Over the years SEI has grown and developed, and it is today one of the world’s leading and most respected research organisations for sustainable development, bridging environment and development, science and policy. I highly value the contribution made by SEI. Your work is always characterised by scientific excellence, high policy relevance, and a global outlook targeted at tomorrow’s major issues. SEI will continue to play an important role in contributing rigorous and objective scientific analysis to support improved and needed policymaking.”

Sweden’s Environment Minister, Andreas Carlgren, in a keynote address at SEI’s 20th anniversary event in October 2009.
**EVENTS FOR DECISION MAKERS:** Over 600 representatives from government, the private sector, academia and NGOs attended the event to mark the 20th anniversary of the Institute. The first annual Gordon Goodman Lecture, in honour of SEI’s first executive director, was delivered by prize-winning researcher Professor V. Ramanathan in April 2009. On the eve of the Swedish Presidency of the European Union we launched our report on a greener European economy at a panel debate that included a former environment minister as well as representatives from the major Swedish political parties, the Swedish business association and leading NGOs. Meanwhile in the UK, SEI researchers were presenting a major report on resource efficiency to a conference attended by representatives from central and local government. Our research on human rights and climate change came alive for policymakers in Humanity on Trial. At this event SEI, alongside the Anna Lindh Memorial Fund and the Swedish Forum for Human Rights, staged a role-play of a future public inquiry to discuss what resources were available in 2009 to deal with climate change and its human rights implications.

**MEDIA:** SEI was more visible in the media than ever before as interest rose in all things climate-related. The Institute was cited by, among others, the *New York Times, The Guardian*, *the China People’s Daily* and *The Melbourne Age*. But our media outreach also included an invitation to guest edit the European Commission’s newsletter *Science for Environment* and opinion articles in Swedish and US newspapers. Our work on sustainable consumption and production was also the basis for a campaign by WWF Sweden (MinPlanet) in which SEI’s ecological footprint calculator was a major component. And we ran five briefing sessions for journalists to deepen the media’s understanding of the complexity of climate change, climate politics and the links between environment and development.

President Nasheed of the Republic of the Maldives visited SEI’s headquarters in Stockholm in 2009. The President, who has compared the struggle for democracy in the Maldives with the global struggle against climate change, praised the work done by SEI and highlighted the importance of climate change adaptation.
SEI generated approximately SEK 167 million in research funding in 2009
WALK THE TALK

Environmental Policy

We aim to work as sustainably as possibly, minimizing our negative impact on the environment

2008–2009 was the pilot phase for our environment policy, with reports from these years providing a baseline for subsequent targets. Preliminary estimates show that from the items monitored, the total carbon footprint in 2009 was 1,275 MT. This is a reduction from 2008 of about 7%, despite an increase in the number of employees. Total emissions from business ground transport and commuting is higher this year due to improved reporting, whereas air travel and utilities emissions have decreased slightly.

Emission levels vary between the centres due to different climates, different energy sources, and the different levels of long-distance travel connected to each centres’s research portfolio. It is clear that reducing our air travel is vital to reducing our footprint. We will ramp up efforts to consolidate our air travel and develop video conferencing in the coming few years.

MINIMISING OUR CARBON FOOTPRINT

1. Reducing our carbon emissions from travel by doing less of it and switching to more environmentally friendly modes of travel.

2. Using video conferencing and other communication technologies wherever possible.

3. Reducing energy and water consumption in our office buildings.

MONITORING OUR CARBON FOOTPRINT

4. Annually reporting our environmental impacts and setting targets for further emission reductions.

5.Offsetting our carbon emissions.

REDUCING WASTE

6. Reducing our paper consumption.

7. Using recycled paper or paper from sustainably harvested forests.


9. Recycling paper, metals, plastics, glass and electrical equipment in all offices.

10. Reducing the amount of non-recyclable material used.

11. Including a component on our environmental management system in staff training.
This annual report has been produced using environmentally-certified printing processes and printed on paper with the environmental standards Swan and FSC.

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.