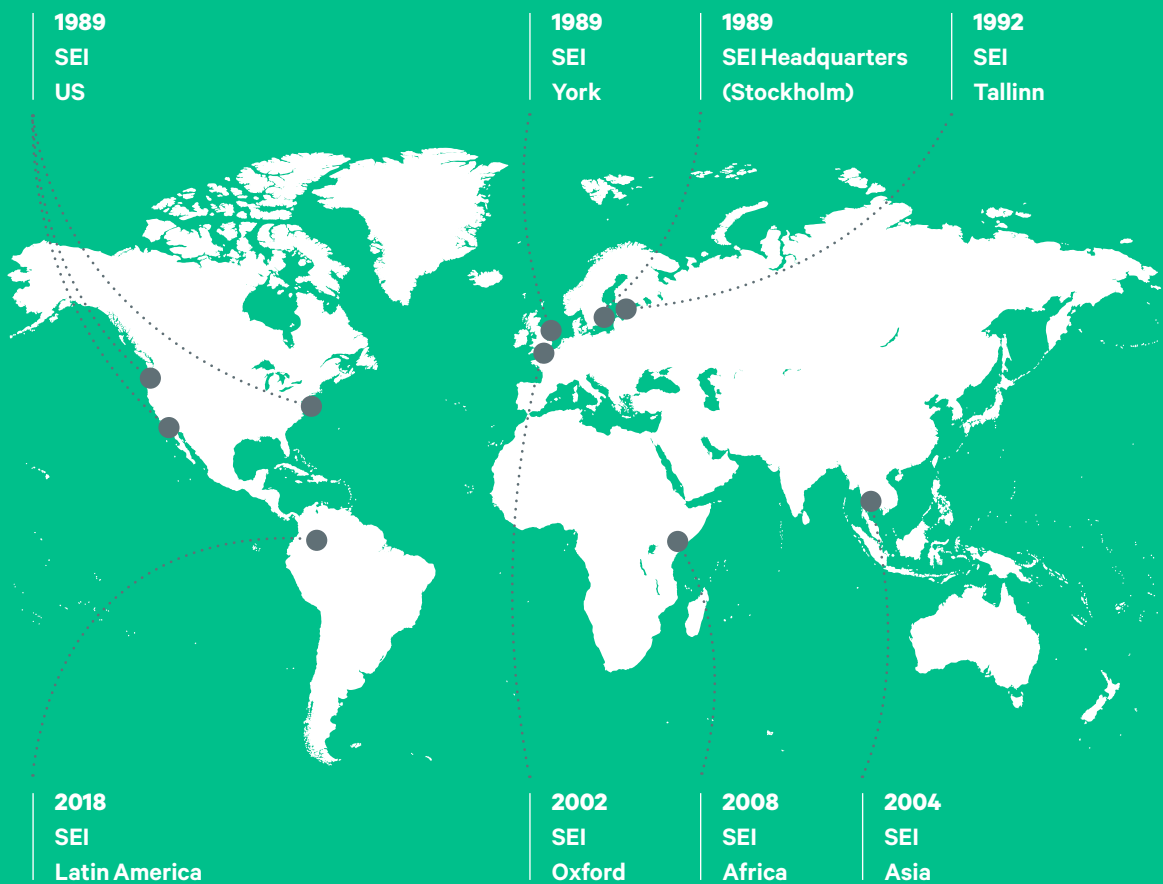




Partnership for change

Our centres: working and learning in partnership

SEI was an early mover in establishing regional centres around the world. Initially, SEI was located in Sweden, the UK and the US. Our centres ground us in local and regional realities and ensure we are responding to the right agendas and creating opportunities for long-term engagement. We build capacity by prioritizing local and regional staffing in all positions. Our aim is to add value to regional policy discourse and to be a trusted regional partner.



2019 in review

Highlights in research, policy and engagement

Leadership perspective 04
Introduction by the Executive Director and the Chair of the SEI Board

30 years of partnership 06
Milestones from three decades of research, capacity development and policy impact

Centre in focus 08
SEI Asia

SEI in 2019 12
A timeline of communication and engagement highlights

Scientific impact in 2019 16
A selection of notable peer-reviewed papers

Funding sources 18
Who funds us, and how much do they provide?

SEI financial statistics 21
Our income, centre by centre

Partnership for the Goals

SEI's focus is on building trust, empowerment, and working with partners to co-create knowledge, resulting in ownership of results and sustained action for the 2030 Agenda

Partnership for change 24
How we work on the 2030 Agenda for Sustainable Development

SDG 1 28
Combining indigenous knowledge and modern science

SDG 2 30
Communication drives change in the edible insect sector

SDG 5 32
Making gender count in water, sanitation and hygiene

SDG 7 34
Kuwait plans a new energy future, with SEI's help

SDG 11 36
Partnership, poetry and play make for safer cities in East Africa

SDG 13 38
Course set for net zero in Estonia

SDG 13 40
The Production Gap Report brings fossil fuel production to the centre of climate policy debate

SEI Foundation Annual Report

SEI Executive Director's report 44

Operations 44

Key developments in 2019 44

The SEI strategy 45

Key developments after the year's end 47

Expected developments in 2020 47

Financial overview 47

Environmental impact 47

Appropriation of results 48

Human resources 48

Significant risks and uncertainties 48

Financial statements 49

Income statement 49

Balance sheet 50

Cash flow statement 51

Notes to the financial statements 52

**The Stockholm
Environment
Institute is
an international
non-profit research
and policy
organization that
tackles environment
and development
challenges.**



Leadership perspective

An introduction from the Executive Director and the Chair of the SEI Board

2019 was in many ways a difficult year for sustainable development. With the raging wildfires in Australia and escalating deforestation in South America, the US beginning the process of withdrawal from the Paris Agreement, a lack of momentum in the climate talks at COP25, and social tensions and unrest in Hong Kong, France and Chile, it would be easy to feel dispirited.

But, outside the negotiation rooms, more and more countries and companies are committing to net zero emissions by 2050 or earlier. More and more sustainable innovations show market readiness. Sustainable investment has begun to quickly scale up. Coal use for electricity production reduced drastically in several countries. The new European Commission launched an ambitious joined-up European Green Deal after only a few days in office. And the global 2030 Agenda continued to catalyse strategic change across public sector agencies, businesses and civil society.

So, without doubt, there are positive signs and opportunities, alongside the towering political, social and environmental challenges. We expect these trends to gather pace over the coming years and, as ever, strive to support them.

New strategy

For SEI, 2019 was the final year of the 2015–2019 strategy period and saw a concerted effort to develop and agree on the next strategy. The SEI Strategy 2020–24: Knowledge for Action was adopted by the SEI Board in October 2019. Based on a thorough participatory process involving the whole organization, it also took in results from two major institutional evaluations carried out in late 2019. It brings a much stronger focus on SEI's identity and values, on our outcomes and ultimate impacts in society, and clearly articulates our organizational theory of change. It also outlines upgraded efforts for strategic policy engagement and for mainstreaming gender, poverty and social equity issues into all our work.

The transition into a new strategy period has also entailed intensive preparations on results frameworks and work planning, and the development of a new set of core-funded SEI Initiatives, which cut across SEI centres and research teams.

30 years of SEI

Last year SEI celebrated its 30-year anniversary and the 10-year anniversary of SEI Africa, which were marked by holding our annual SEI Science Forum in Nairobi in October at our host ICRAF's campus. On page 6 you can read a feature on SEI's history and landmark achievements from 30 years of bridging science and policy.

Impact

This report also presents impact stories from across our centres (page 24), which demonstrate how SEI works for change. And we have started new activities that will drive impact over the coming years. The [Production Gap Report](#) (see page 40), which was endorsed by UNEP and quantifies the discrepancy between fossil fuel production plans and the Paris targets, was widely reported on in top media outlets around the world. Our new [Aid Atlas](#) platform was launched at COP25 in Madrid, where we demonstrated how it transparently tracks flows of

The new SEI Strategy also outlines upgraded efforts for strategic policy engagement and for mainstreaming gender, poverty and social equity issues into all our work.

global development finance for a range of sustainability issues, for example the ocean. In the [Leadership Group on Industry Transitions](#) – a science-industry-policy platform to mobilize heavy industry to move towards net zero emissions – SEI is acting as a secretariat and providing expert knowledge to support Sweden and India in their role as co-chairs.

Science is at the core of our work.

For 2019 we are pleased to have again strengthened our performance in scientific publishing, not least with multiple contributions to high impact journals such as Nature and PNAS. You can read more about our scientific impact and a selection of high-profile articles on page 16.

New and evolving partnerships

Partnership remains a hallmark of SEI. In 2019 we initiated a new alliance of think tanks on European environmental policy, along with Belgium's IEEP and

others. And together with the UK's ODI and France's IDDRI, we launched a new joint initiative on transnational adaptation. We also set up collaborative agreements with UNEP and with the Green Technology Center–Korea, and, in Sweden, our partnerships with KTH Royal Institute of Technology and Stockholm University maintained strong momentum.

Organization

Alongside research and engagement, we continued to focus on organizational development, further enhancing a common global SEI project model, developing a new framework and process for organizational risk management, and building a system for organizational learning, including a new intranet.

We also set in motion an updated environmental policy for the Institute, with a new travel emissions reductions target, environmental action plans for each of our centres, and a new partnership to develop a travel tracker tool for individuals.

SEI experienced another year of organic expansion in externally funded projects, in particular grant-based projects, and in staff numbers. The total turnover for 2019 was SEK 293 million, and the staff count at the end of 2019 was 258.

2019 was a year of landmarks and new beginnings for the organization, and we can look forward to the coming years with confidence that we are well placed to make a notable contribution to the changes in the world that are so urgently needed.



Kerstin Niblaeus
Chair of the Board



Måns Nilsson
Executive Director

30 years of partnership

Last year SEI celebrated 30 years of working at the forefront of sustainability. It's undergone many changes in that time. But strong and enduring partnerships and the commitment of its staff are central to why it has continued to thrive over the years.

Founding of the institute

The idea for SEI was seeded in 1987, when the Brundtland Commission published the landmark report *Our Common Future*, which introduced the term “sustainable development” into mainstream global discourse. Gordon Goodman, SEI's first director, was one of the global team of experts who came together to draft the report.

In 1988, a report commissioned by the Swedish Government proposed a new global institute that would assess clean technologies. But the proposal was modified for two reasons. First, there was already an environmental institute in Stockholm – the Beijer Institute – and there were doubts about maintaining two institutes with a similar focus in the same city. Second, there were concerns that “technology assessment” alone dealt only with one aspect of the environmental challenge; to succeed, technology also requires fertile societal conditions, which a new institute should take into account.

Gordon Goodman was at that time leading the Beijer Institute, and in 1989 the Swedish Government appointed Goodman to take the helm at SEI, with about two thirds of the staff of the Beijer Institute moving with him, not only from Stockholm but also from Beijer's centres in Boston in the US and York in the UK.

In its first two years SEI hit the ground running, with its headquarters and two

original branches, SEI York and SEI Boston. It used a grant from the Swedish Government to set up programmes tackling climate change, renewable energy for development, and biotechnology for food production in developing countries. After the landmark Rio-92 Conference, it also began work on the global environmental conventions and on Agenda 21, the precursor to the Millennium Development Goals and the current 2030 Agenda – which is still part of the institute's core work today.

While SEI has changed greatly over the years, in many ways Goodman's approach – the spirit of setting up and nurturing effective and lasting partnerships that support change – has animated the institute ever since.

Consolidation, expansion

Goodman retired in 1991, and during the 1990s, despite budget constraints and political turbulence, SEI consolidated its research base and established itself globally as an independent and authoritative voice on the environment and human development. In 1992 SEI Tallinn was established as a gateway for collaboration in the Baltic region and the post-Soviet world. In 2002 the SEI Oxford Centre was established, followed by SEI Asia in 2004 (see page 8), both under Roger Kasperson's leadership.

While thriving internationally, SEI was less well known in Sweden in the

early 2000s. The Board chose to appoint a Swedish Director – Johan Rockström – who successfully boosted SEI’s domestic profile and research and funding base. In 2009, SEI Africa was established. Currently located in Nairobi, Kenya, SEI Africa collaborates with African governments, organizations and networks, acting as a hub for SEI’s engagement across the continent.

Johan Kuylenstierna, who followed Johan Rockström in the Director’s role, continued to strengthen SEI’s profile in Sweden, and established cooperation agreements with Stockholm University, KTH Royal Institute of Technology and Lund University.

New directions

At the same time as deepening relationships at home, SEI was embarking on new forms of collaboration with industry, business and finance, as the leadership understood that transitions to sustainability can’t be achieved without their participation. SEI’s newest centre, [SEI Latin America](#),

was established in 2018, building on the institute’s long standing work in the region.

Last year SEI developed a new strategy for the years 2020–2024. While there is much that is new in the strategy, it also draws on the same identity and values instilled by Gordon Goodman: a deep commitment to human rights, to research excellence, to independence and integrity, and to the value of working in partnership.

**In many ways
Goodman’s approach –
the spirit of setting up
and nurturing lasting
partnerships that
support change – has
animated the institute
ever since.**



Centre in focus – SEI Asia

Asia faces profound development challenges in the coming decades, not least linked to climate change and water resources. Three staff at our Asia centre discuss their roles and how they are working to meet these challenges, particularly through engaging with the new Lancang-Mekong Cooperation Framework and decision-makers in the Chindwin River basin.

Chayanis Krittasudthacheewa SEI Asia Deputy Director

What brought you to SEI Asia?

Prior to joining SEI in 2006, I worked for several years at the Mekong River Commission (MRC), an intergovernmental organization that works directly with the governments of Cambodia, Lao PDR, Thailand and Vietnam, to jointly manage water resources in the Mekong River. These countries faced major challenges on how to manage their resources effectively while balancing economic development with environment integrity and social justice, within and beyond their borders. Limited knowledge and understanding of the practical solutions are often some of fundamental issues preventing governments from taking effective action and in a timely manner. I have an aspiration to help fill this gap. SEI's mission in generating the evidence to support decision-making processes attracted me to join, and I have been bridging science and policy with the team for 14 years now.

What inspires you in your work?

I am a mother of nine-year old son, who often asks difficult questions, like why a kid like him still needs to face such pollution,

despite most of us learning about these issues in school. Life is not easy, and decisions associated with the activities to increase or reduce the pollution and harm to others in the society are complex.

I believe SEI contributes to decisions for a more sustainable world for my son, and hopefully his kids, in the future. Whenever I come to the office I feel at home and surrounded by like-minded people. I have many talented colleagues that I learn from every day, and that inspires me. I'm also able to see how my work has contributed to making people happier. For example, I see that Mekong researchers associated with the SUMERNET programme have gained capacity to engage with local policymakers. Small scale farmers in Thailand now have better access to water and get more income from their organic vegetables, and I see local communities actively engaging in environmental conservation in Myanmar. My son knows very well how proud I am to work for SEI.

What are the key challenges you see for the region in the coming five years?

All countries in Asia face uncertainties associated with climate change and development. During the past few decades,



the Lancang-Mekong region, including Cambodia, China, Lao PDR, Myanmar, Thailand and Vietnam, has been facing more frequent extreme events such as droughts, floods and rapid water fluctuations, affecting local communities living along the riverbanks.

There is no lack of research on climate change in the region. But knowledge that is trusted by all six countries, that is credible and will offer practical solutions, is indeed very rare. I had the chance to lead the SEI team in providing technical support to the project Transboundary Cooperation Mechanisms on Adaptation to Climate Change and Hydropower Development Projects – the first transboundary water cooperation project under the

Lancang-Mekong Cooperation (LMC) Framework. We have worked closely with national experts and had open dialogue through intensive consultations with key agencies of LMC countries.

Our approach has shown that it is possible to co-produce knowledge and practical recommendations that all countries are willing to consider. In this case, LMC countries have committed to cooperate for better data sharing and minimizing the risks from extreme events through existing regional cooperation mechanisms. Although it may take time to implement this in practice, I see a great opportunity for SEI to continue to support the LMC Framework for the benefit of people in six countries.





Karthikeyan Matheswaran Research Fellow

What brought you to SEI Asia?

I came across SEI around 2012 during my PhD studies in Denmark. After my postdoctoral studies, I was looking for an opportunity to work at the interface of research, policy and development, where I could use my expertise to help influence the water management discourse in South and Southeast Asia. SEI was well known for its long-standing reputation and expertise in guiding water resources management in the Mekong Region, so I was fortunate to spot an ad for a Research Fellow vacancy. So here I am, enjoying my second work anniversary with SEI.

What inspires you in your work?

I come from a water-scarce region in India where inequality persists in access to water resources. In my career, I have always thought about translating research beyond the academic realm for use in wider society. I am driven by the belief that I could support the stakeholders in these regions through my knowledge and try to influence them gradually towards sustainably managing land and water resources. I also understand that it's a long game and change won't happen overnight, or even in a few months. But it's a process of building trust with the stakeholders and working with them to incorporate their thought processes into our research and collaboratively develop insights for informed decision-making.

SEI colleagues from multidisciplinary backgrounds in Asia and other centres inspire me to think beyond the pure biophysical lens and to look at development problems from different perspectives. For example, we developed

a riverbank erosion monitoring system for Myanmar, but previously I would have missed the nuances of societal impacts and focused on developing a hardcore technical monitoring system. Now I'm more aware of the societal impacts and wear my colleagues' hats to look at issues like internal displacement, livelihoods, and disproportionate impacts on women and other vulnerable groups.

What are the key challenges you see for the region in the coming five years?

In general, the technical capacity of organizations working with water resources in the Mekong Region has significantly improved. Remote sensing, big data analytics and cloud-based processing are radically changing the way we monitor landscape processes to feed decision-making. But most of these advancements still see development problems around land and water management through an engineering lens, and the technocratic solutions implemented are a consequence of this. Hence the role played by environmental think tanks like SEI is critical. There is a lot of conflicting and contrasting information out there, making it hard for policymakers to make informed decisions that provide long-term benefits, and not just short-term gains.

It's possible that all this cluttered information could lead to unsustainable water management practices. SEI's work in participatory and collaborative approaches adds value to the decision-making process in the Mekong region by de-cluttering scientific information and problems, focusing on developing solutions with the partnership and involvement of stakeholders.

Thanapon Piman Research Fellow

What brought you to SEI Asia?

Since 2007, soon after completing my doctoral degree in water resources engineering and management in Thailand, I went abroad to work for international organizations. After about 10 years, I decided it was time to come back home to use my knowledge, skills and experience to help Thailand and the Mekong Region in water management.

There were a number of reasons I decided to join SEI Asia in 2016. Firstly, SEI's focus fits well with my interest in using science and transdisciplinary research to positively influence policy, for sustainable resource use and societal well-being. Secondly, I was very impressed during my first visits to the SEI Asia office, where I met diverse and dynamic colleagues who were friendly, creative and welcomed collaboration. Since then, SEI Asia has provided many opportunities for me to initiate new ideas, develop new projects and further the work of the centre as well as develop my career. Finally, the centre is located in Bangkok where my family lives.

What inspires you in your work?

I am happy with my everyday work, mainly because I have a chance to work with interesting researchers in SEI Asia and many other scientists in the other SEI centres around the world. This has helped me greatly in developing

creative, outside-the-box thinking, learn new concepts and tools, and build new partnerships. I love to produce knowledge that is actionable, and immediately available as practical tools to support decision-making in water resources management. SEI continues to inspire me to bridge science, policy and practice, to influence water agendas at the global, regional and national levels. Looking back on my years so far at SEI, I am very proud of our research, and the tools and knowledge products that we have produced.

What are the key challenges you see for the region in the coming five years?

A key challenge for Asia, and in particular the Mekong Region, is to prevent the unsustainable use of water resources to fuel the region's socio-economic development. Other challenges include making transboundary water management more coordinated and based on science, managing risks from climate impacts, including floods and droughts, and tackling the degradation of ecosystems and our water quality.

Since 2013, for example, the water team in SEI Asia has had a strong focus on supporting the Government of Myanmar on environmental sustainability. Our work in the Chindwin River basin on "mainstreaming biodiversity and ecosystem values" into development pathways has raised awareness about critical biodiversity threats in Myanmar. And we have empowered and built capacity among local government agencies, civil society organizations and academic institutes in Myanmar, bringing evidence-based approaches into planning and decision-making on water resources.

Through multi-stakeholder engagement, raising public awareness and policy dialogue, we have made positive change in the knowledge, attitudes and practices of key stakeholders in the basin, who now work together on sustainable and ecosystem-based water resources management. This is a remarkable change from the past. Building long-term partnerships and trust is key to what we've achieved in Myanmar.

CASE STUDY: Trinity River Basin, USA INT. COLLABORATOR IC

Responsible partners: F. Douglas Shields

whose water-shed area is entirely largest river in Texas by average flow
ies (296 km) through the Klamath
a watershed area of nearly 3,000
and Humboldt Counties. Designated a
ing most of its course the Treaty flows
ertain measures
water, and reduction of flows in the
e ecology, its fisheries, and its ability to
in addition to the dam blocking salmon
during the 1980s and 1990s revealed
implication and a reduction of habitat

am is a multiple partner program with
Management Council (TMC), plus
main office is located in Weaverville,
working on the program across various



CASE STUDY: Chindwin River Basin, Myanmar INT. COLLABORATOR IC

Responsible partners: Thanapon Piman

Location and characteristics

The Chindwin River, a major tributary of the Ayeyarwady River, is the largest river in Myanmar. It has a drainage area of 114,112 km² comprised of 96% forest area and 14% farming area, mining, villages and a lands. 15 percent of area are in India. The length of the Chindwin from its headwaters to the Ayeyarwady confluence is approximately 1,400 km.

The rainfall over the basin is important source of water supply in Chindwin River Basin. The average rainfall over the catchment varies: 1,500 mm to 4,200 mm. The annual average flow of the Chindwin River is 4,500 m³/s.

The Myanmar National Water Policy, released in February 2014, mentions several concerns related to water security and challenges in water resource management to support rapid growth in water demands. Urbanization and economic development as well as adapting to climate change, particularly extreme floods and droughts.

Hydrological hazards

Flood events
Drought events

CONNECT

to learn more about concept and framework on Na

SEI in 2019

Highlights in research, policy and engagement

Knowledge-sharing for best practice at the Green Climate Fund

A knowledge-sharing agreement was announced between the Green Climate Fund (GCF) and SEI. As the GCF – the world's biggest climate fund – underwent governance reforms and raised money from donor countries, SEI and the Fund agreed to share knowledge on climate change mitigation and adaptation projects, and on institutional practices. "The GCF's Independent Evaluation Unit aims to use the best available evidence to review the fund's progress, and SEI can help provide evidence during this key phase of its evolution," said SEI's Kevin Adams. sei.org/featured/green-climate-fund-knowledge-sharing

Action on air pollution in Africa for health, food security and livelihoods

Facilitated by SEI, the Climate and Clean Air Coalition (CCAC) and the UN Environment Programme are developing an assessment process for Africa to determine how to reconcile development goals with limiting air pollution. A ministerial roundtable held in Accra, Ghana, brought together ministers from across the continent alongside UNEP, CCAC, the World Bank and others to focus on accelerated action to reduce air pollution, and to maximize associated benefits for air quality, well-being, food security and livelihoods. sei.org/events/africa-climate-week-air-pollution-and-climate-change

2019

January

Empowering Asia's youth to take action on the environment and future challenges

SEI contributed to the Global Environmental Outlook for Youth in Asia and the Pacific. The publication reaches out to young people in Asia, including students, young adults and early career professionals, to heighten their knowledge of the natural environment, human health, and the built environment. It also aims to empower young people in the region to take action and influence decision-making on the challenges they will face in the future.

sei.org/publications/global-environmental-outlook-for-youth-in-asia-and-the-pacific

February

New initiative breaks new ground on tackling climate risk

SEI, the Overseas Development Institute (ODI), and the Institute for Sustainable Development and International Relations (IDDRI), in association with Wilton Park and the Global Center on Adaptation, convened 40 stakeholders from 19 countries to discuss the emerging topic of transboundary climate risk. The workshop, the first of its kind, focused on how it is crucial to treat climate risk as a cross-border issue. The Wilton Park Outcome Statement says, "the principles of interdependence and common interest are important for the successful implementation of adaptation under the Paris Agreement. We believe that such a vision can help to inject new purpose and engender increased trust in global negotiations relating to adaptation."

sei.org/featured/transboundary-climate-risk-were-all-in-this-together

March

“The Production Gap report, which emerged last week from SEI, is one of the most important pieces of research in years.”

*Bill McKibben,
Climate author*

April

Collaboration on sustainable trade

SEI and the UN Conference on Trade and Development (UNCTAD) signed a memorandum of understanding. The agreement is an overarching mechanism for cooperation on trade and environment, backed up by the research and convening capacities of SEI and UNCTAD. The collaboration aims to combine the respective knowledge and experience of SEI and UNCTAD to promote sustainable development and ensure more equitable distribution of benefits and risks among actors in the global circular economy. [sei.org/featured/sei-and-unctad-to-cooperate-on-trade-and-environment](https://www.sei.org/featured/sei-and-unctad-to-cooperate-on-trade-and-environment)



May

Plaudits for water planning tool

Stantec's Andy Draper and Charles Young from SEI US were awarded the prestigious Hugo B. Fischer Award for their work on the Sacramento Water Allocation Model (SacWAM). The award recognizes professionals for the development or innovative application of computer models and the effective use of such models in planning or regulatory functions. California's State Water Resources Control Board has used SacWAM to assess potential revisions to regulations concerning the water system and to weigh trade-offs as it aims to strike a balance between protecting ecosystems and providing water for households and agriculture. The model was created in SEI's Water Evaluation and Planning (WEAP) system, which is also applied in developing countries worldwide. [sei.org/featured/sei-scientist-receives-prestigious-award-for-water-analysis](https://www.sei.org/featured/sei-scientist-receives-prestigious-award-for-water-analysis)

Women change the narrative in East Africa's transport sector

Women face difficult conditions working in the transport sector in East Africa, such as sexual harassment, violence, gender discrimination, and a lack of formal contracts, health insurance and other social protection. SEI supported the first Eastern Africa Women in Transportation Conference in Nairobi, bringing together public transport staff, policymakers and researchers working towards a more inclusive public transport sector. The findings inform the SEI project Women and Transportation in East Africa, which explores the links between sustainable urban planning, public transport, mobility and gender in East Africa. [sei.org/featured/women-in-east-africas-public-transport-sector](https://www.sei.org/featured/women-in-east-africas-public-transport-sector)



Landmark IPCC report on climate change and land

SEI's Francis X. Johnson was a lead author of the landmark IPCC Special Report on Climate Change and Land. The new report is the first comprehensive assessment of the land-climate interface. It sets out the evidence on the interlocking issues of land use and climate change, covers potential responses to the challenges, and details policies, programmes and instruments for meeting them. The report shows, said Johnson, "that there are very few feasible pathways to climate stabilization or resilience without significant new investments in sustainable land use." [sei.org/featured/what-land-can-and-cannot-do-about-climate-change](https://www.sei.org/featured/what-land-can-and-cannot-do-about-climate-change)

Aid Atlas creates a clear visual picture of aid flows, which will allow better correlation with development indicators – and, ultimately, make development finance more effective.

June

Transformative frameworks

SEI launched two new frameworks – Tandem and PLACARD Legacy. Tandem is a seven-step approach to help tackle the underuse of climate information. It aims to bring scientists and decision-makers together to tailor climate services to specific situations – such as in Lusaka, Zambia, to improve planning for the city's water services. PLACARD Legacy gives researchers, policymakers and practitioners tools to assess the impact of large research programmes and development interventions, and to help ensure that real results are left behind once they have ended.

[sei.org/publications/the-tandem-framework-a-holistic-approach-to-co-designing-climate-services](https://www.sei.org/publications/the-tandem-framework-a-holistic-approach-to-co-designing-climate-services)

[sei.org/publications/the-placard-legacy-framework-a-universal-approach-to-foster-long-term-impact](https://www.sei.org/publications/the-placard-legacy-framework-a-universal-approach-to-foster-long-term-impact)

August

UN Climate Action Summit

"Bring a plan, not a speech!" said UN Secretary-General António Guterres to world leaders ahead of the UN Climate Action Summit. At the Summit the prime ministers of Sweden and India launched the Leadership Group for Industry Transition. The Leadership Group aims to enable the transition of heavy industry towards net zero carbon emissions by 2050. SEI supported the creation of the initiative and hosts the secretariat. The Leadership Group brings together countries, including Sweden, India, UK, Finland, France and Germany, and companies, including SSAB, LKAB, Vattenfall, Scania, Dalmia Cement, and ThyssenKrupp, to tackle the challenge. [sei.org/featured/making-climate-action-work](https://www.sei.org/featured/making-climate-action-work)

September

Unprecedented transparency in beef supply chains

The Trase initiative, led by SEI and Global Canopy, released new data highlighting the deforestation linked to the beef and cattle industry in Brazil, and the responsibility of major markets and trading corporations. The new data drew much media attention to the damage being done in sensitive biomes, such as the Amazon and the Cerrado savannah, and brought unprecedented transparency to the industry's global supply chains. seio.org/featured/trase-brazil-beef-launch

In conversation with Greta Thunberg at COP25

At the COP25 climate talks youth climate activists Greta Thunberg and Luisa Neubauer hosted a conversation with leading climate scientists about the message from science to governments. The panel, titled Unite Behind the Science, echoes Thunberg's repeated appeals for world leaders to listen to the scientists. SEI's Sivan Kartha, who has a long track record of research on climate equity, joined the panel discussion. seio.org/events/sei-scientist-joins-event-with-greta-thunberg-at-cop25



October

Groundbreaking research puts fossil fuel production in the spotlight

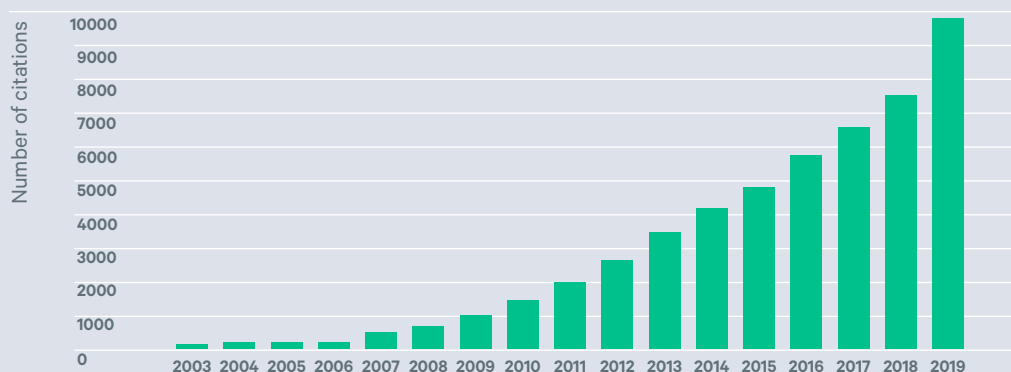
Building on its foundation of research and partnership, SEI, along with UNEP and four other research organizations, launched the Production Gap Report – and contributed to a shift in the global discourse on fossil fuels and climate (see page 40). The report sets out how the world is on track to produce far more fossil fuels than is consistent with limiting global warming to 1.5°C or 2°C. It also details how countries can limit fossil fuel production and what steps can be taken within the UN Framework Convention on Climate Change. The report gained worldwide media attention, with coverage in hundreds of print, radio and TV outlets, including [The Guardian](https://www.theguardian.com), [Reuters](https://www.reuters.com), [The Economist](https://www.economist.com), [CNN](https://www.cnn.com), and [National Geographic](https://www.nationalgeographic.com). Noted climate author [Bill McKibben](https://www.billmckibben.com) describes it as “one of the most important pieces of research in years”. seio.org/featured/the-fossil-fuel-production-gap-climate-goals

December

Aid Atlas – new tool for tracking development finance

Aid Atlas, a transformative online tool that makes data on development finance easy to visualize, was released as a beta version. The tool helps governments, researchers, funders, international organizations and others to more easily understand how development funding is being provided, where it is going, and what it is being used for. Data on development finance has up until now been opaque, which means it can be difficult to get a clear picture of whether the finance is being used effectively. Aid Atlas creates a clear visual picture of aid flows, which will allow better correlation with development indicators – and, ultimately, make development finance more effective. seio.org/featured/early-release-of-aid-atlas-development-finance-tracking-tool

Scientific impact in 2019



Citations of peer-reviewed articles with SEI authors, 2003–2019. Source: *Web of Science*.

Evidence is the bedrock of our engagement in policy and practice, and 2019 showed our performance in high-quality scientific publishing again exceed the previous year, with more papers published in top tier journals. Last year our researchers published more than 120 peer-reviewed articles, and our citation rate also increased substantially compared with 2018, from 7500 to 9652 (see graphic). Below is a selection of 10 of our most impactful and significant journal articles published in 2019.

On double-counting emissions cuts to meet Paris targets

Schneider, L., Duan, M., Stavins, R., Kizzier, K., Broekhoff, D., Jotzo, F., Winkler, H., Lazarus, M., Howard, A. and Hood, C. (2019). Double counting and the Paris Agreement rulebook. *Science*. 366(6462). doi.org/10.1126/science.aay8750

Article 6 of the Paris Agreement on carbon markets proved one of the trickiest areas to develop operational rules for. This paper draws together leading expertise to point out the risks of double-counting emissions reductions against the national targets set under the Paris Agreement. It identifies

specific risks and situations where double-counting may arise, as well as solutions for avoiding them. Published in a timely way before the COP25 in Madrid, it helped inform stakeholders in the debate on key risks and loopholes to be avoided.

On the impacts of soy grown in the Brazilian Cerrado on biodiversity

Green, J. M. H., Croft, S. A., Duran, A. P., Balmford, A. P., Burgess, N. D., Fick, S., Gardner, T. A., Godar, J., Suavet, C., Virah-Sawmy, M., Young, L. E. and West, C. D. (2019). Linking global drivers of agricultural trade to on-the-ground impacts on biodiversity. *PNAS*. 116(46). doi.org/10.1073/pnas.1905618116

Agricultural commodity production causes significant loss of biodiversity, yet our globalized supply chains mean that these losses are incurred far from the places of eventual consumption. Public and private sector actors are making an increasing number of commitments to reduce their environmental impacts. To date, however, we have had limited understanding of impacts at high spatial and taxonomic resolution, and consumption drivers and supply chain actors mediating trade

and consumption. Without these, it is difficult to devise solutions. This pioneering paper links three state-of-the-art models to provide practical insights on the impacts of soy grown in the Brazilian Cerrado, an exceptionally biodiverse savannah that hosts some 5% of the world's species.

On supply chain transparency

Gardner, T. A., Benzie, M., Börner, J., Dawkins, E., Fick, S., Garrett, R., Godar, J., Grimard, A., Lake, S., Larsen, R. K., Mardas, N., McDermott, C. L., Meyfroidt, P., Osbeck, M., Persson, M., Sembres, T., Suavet, C., Strassburg, B., Trevisan, A., West, C. and Wolvekamp, P. (2019). Transparency and sustainability in global commodity supply chains. *World Development*. 121. doi.org/10.1016/j.worlddev.2018.05.025

This paper synthesizes and develops research and practice on transparency as a tool to enhance sustainability of global commodity supply chains. It responds to three key questions: What is meant by supply chain transparency? What is the relevance of supply chain transparency to supply chain sustainability governance? What is the current status of supply chain transparency, and what are the strengths and weaknesses of existing initiatives? To move the debate and practice forward, the paper presents 10 propositions about realistic expectations of what transparency can achieve, what pitfalls it entails and how to ensure it has a transformative effect.

On falling costs of batteries for electric vehicles

Nykvist, B., Sprei, F. and Nilsson, M. (2019). Assessing the progress toward lower priced long range battery electric vehicles. *Energy Policy*. 124. doi.org/10.1016/j.enpol.2018.09.035
This paper follows up on an earlier highly influential study of rapidly falling

battery costs for electric vehicles, updating the analysis and showing when and at what price battery electric vehicles (BEVs) become cost competitive. It provides useful evidence to industry, investors and regulators. The authors find that a BEV with a 200-mile range is cost competitive for almost 50% of US car market segments by 2020. Overall, the paper illustrates how a transition to BEVs is conceivable and surprisingly close in time, given certain conditions, and that mid-priced long-range BEVs should be possible to produce in the near future. Combined with growing shares of renewable electricity, BEVs are an increasingly realistic option for climate change mitigation.

On citizen science for SDGs

Fritz, S., See, L. et al. (2019). Citizen science and the United Nations Sustainable Development Goals. *Nature Sustainability*. 2(10). doi.org/10.1038/s41893-019-0390-3

Citizen science approaches have been developed and tested in a range of applications in SEI research. This perspective paper synthesizes general experiences with citizen science and provides a roadmap for how they can be used for SDG follow-up in a robust and rigorous way. It discusses current data gaps, data quality issues and how citizen science can be used for the current Tier I, II and III indicators. The roadmap covers global, national and local levels of citizen science-generated data, and the role of social innovation is also highlighted.

On sustainability transitions

Köhler, J., Geels, F. W., Kern, F., Markard, J., Onsongo, E., Wieczorek, A., Alkemade, F., Avelino, F., Bergek, A., Boons, F., Fünfschilling, L., Hess, D., Holtz, G., Hyysalo, S., Jenkins, K., Kivimaa, P., Martiskainen, M., McMeekin, A., Mühlemeier, M. S., Nykvist, B., Pel, B., Raven, R., Rohrer, H., Sandén, B.,

Schot, J., Sovacool, B., Turnheim, B., Welch, D. and Wells, P. (2019). An agenda for sustainability transitions research: state of the art and future directions. *Environmental Innovation and Societal Transitions*. doi.org/10.1016/j.eist.2019.01.004

On the impact of hydropower in the Mekong

Hecht, J. S., Lacombe, G., Arias, M. E., Dang, T. D. and Piman, T. (2019). Hydropower dams of the Mekong River basin: A review of their hydrological impacts. *Journal of Hydrology*. 568. doi.org/10.1016/j.jhydrol.2018.10.045

On biodiversity and SDGs

Blicharska, M., Smithers, R. J., Mikusinski, G., Rönnbäck, P., Harrison, P. A., Nilsson, M. and Sutherland, W. J. (2019). Biodiversity's contributions to sustainable development. *Nature Sustainability*. 2. doi.org/10.1038/s41893-019-0417-9

On behavioural science in development interventions

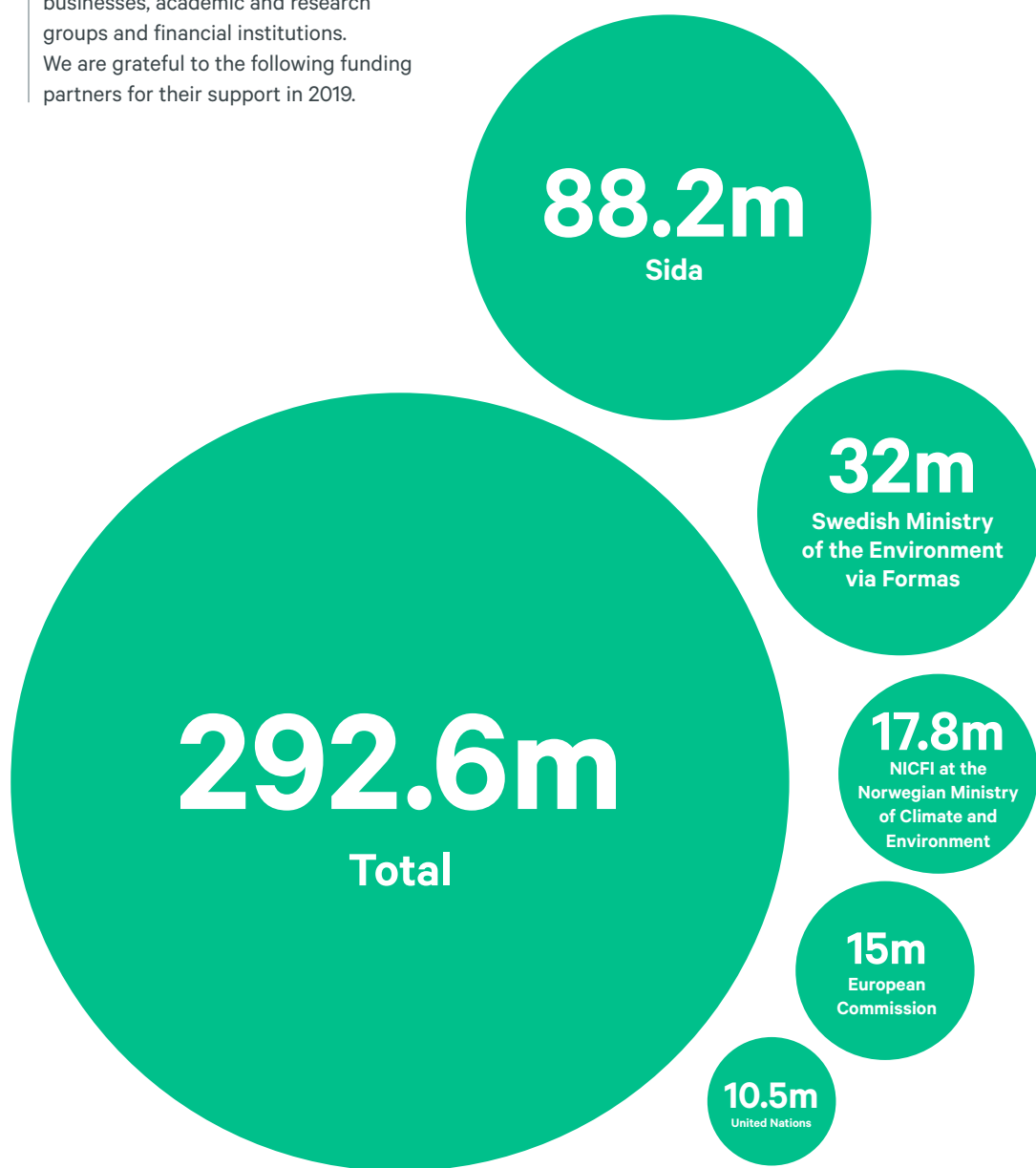
Lambe, F., Ran, Y., Jurisoo, M., Homlid, S., Muhoza, C., Johnson, O. and Osborne, M. (2019). Embracing complexity: A transdisciplinary conceptual framework for understanding behavior change in the context of development-focused interventions. *World Development*. 126. doi.org/10.1016/j.worlddev.2019.10.4703

On integrated policy assessment and SDGs

Van de Ven, D. J., Sampedro, J., Johnson, F. X., Bailis, R., Forouli, A., Nikas, A., Yu, S., Pardo, G., Garcia de Jalon, S., Wise, M. and Doukas, H. (2019). Integrated policy assessment and optimization over multiple sustainable development goals in Eastern Africa. *Environmental Research Letters*. 14(9). doi.org/10.1088/1748-9326/ab375d

Funding sources

As an independent research and policy organization, SEI receives funding from a wide variety of sources, including government departments, development agencies, non-governmental organizations, businesses, academic and research groups and financial institutions. We are grateful to the following funding partners for their support in 2019.



Total funding and top five funders.
All figures are in SEK millions.

Funding sources above SEK 50 000

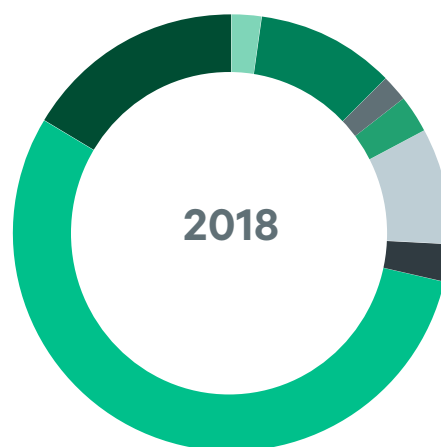
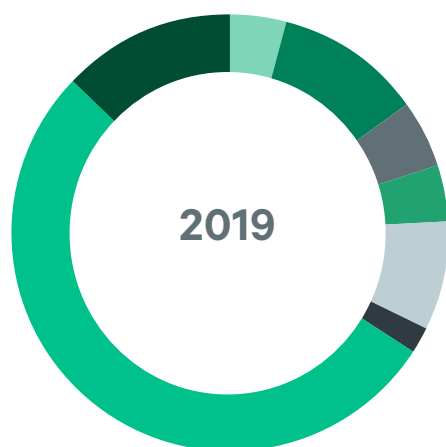
Africa Enterprise Challenge Fund	100 683	European Commission via Global Canopy	1 033 283
American Council of Learned Societies	168 591	European Environment Agency	80 794
ASEAN Center for Energy	105 376	Fabege	630 450
Asian Development Bank	242 749	Finnish Innovation Fund (SITRA)	101 179
Asian Disaster Preparedness Centre (ADPC)	1 113 279	Food and Agriculture Organization (FAO)	819 571
Asian Institute of Technology (AIT)	200 647	Formas, a Swedish Research Council for Sustainable Development	9 816 911
Asia-Pacific Network for Global Change Research (APN) via Brown University	70 899	Formas, a Swedish Research Council or Sustainable Development via Linköpings universitet	1 236 562
Bill and Melinda Gates Foundation	534 100	Formas, a Swedish Research Council for Sustainable Development via Stockholm Resilience Center	400 300
BioInnovate Africa via International Centre of Insect Physiology and Ecology	363 709	Formas, a Swedish Research Council for Sustainable Development via Swedish University of Agricultural Sciences (SLU)	66 257
Blue Moon Fund	230 998	Formas, a Swedish Research Council for Sustainable Development via Umeå universitet	61 786
Brown University	223 610	Forte Swedish Research Council for Health, Working Life and Welfare	357 043
California State Water Resources Control Board	8 083 620	GCRF via University of York	84 153
California State Water Resources Control Board via subcontract with ICF	626 579	Global Environment Facility (GEF) via World Wide Fund for Nature (WWF)	2 843 368
Carbon Limits (funds from Swedish Energy Agency)	112 923	Global Greengrants Fund	464 741
Climate and Clean Air Coalition via UNEP	288 960	Global Philanthropy Partnership	89 113
ClimDev via ATPS Network	70 430	Gordon and Betty Moore Foundation	10 097 510
Colorado Springs Utilities	625 872	Government of Nepal via Lahmeyer International GmbH	490 640
Conservation of Arctic Flora and Fauna (CAFF)	383 257	Government Office (Estonia)	506 294
Corpochivor	376 464	Green Technology Center	210 041
Critical Ecosystem Partnership Fund (CEPF)	774 540	Informa UK Limited	82 948
Department for International Development (DFID) via Global Canopy	1 337 018	Institute for Governance and Sustainable Development (IGSD)	139 207
Department for International Development (DFID) via University of Oxford	478 862	Inter-American Development Bank	663 961
Department for International Development (DFID) via WYG International Ltd	2 250 716	International Institute for Sustainable Development (IISD)	64 235
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	3 682 674	Islamic Development Bank	427 791
DICTUC	818 377	Korea Environment Institute (KEI)	329 940
Earthjustice	60 263	KR Foundation	288 131
Emerging Cooking Solutions (funds from Nordic Development Fund)	60 172	Kuwait Institute for Scientific Research	152 195
Estonian Association for Environmental Management (EKJA)	199 356	Lancang-Mekong Cooperation (LMC) Special Fund via Mekong Institute	1 545 181
Estonian Energy AS	373 995	Lithuanian Ministry of the Environment	101 072
Estonian Ministry of the Environment	1 068 969	Lunds universitet	137 928
Estonian, Latvian ja Lithuanian Environment OÜ	111 624	Marianne and Marcus Wallenberg Foundation	2 010 155
European Bank for Reconstruction and Development	150 790	Meridian Institute	136 700
European Commission	15 004 992		
European Commission via Ecofys Netherlands b.v.	101 500		

Ministry of Infrastructure and Water Management, The Netherlands	1 448 356
Moorland Association	321 938
National Science Foundation via subaward with University of Michigan	569 941
Natural Environment Research Council (NERC)	316 597
Net Positive	120 569
Network of African Science Academies	515 589
New Venture Fund	698 783
NICFI at the Norwegian Ministry of Climate and Environment	17 791 689
NIRAS Sweden AB	433 933
NordForsk via KTH Royal Institute of Technology	144 152
Nordic Council of Ministers via Finnish Innovation Fund Sitra	81 395
Oeko Institute	155 491
Oil Change International	312 991
Overlook Foundation	302 946
Oxfam	61 439
Port of Seattle	118 700
Royal Roads University	51 879
Santa Clara Valley Water District	1 340 837
Schmidt Family Foundation	1 397 565
Sida via Swedish Patent and Registration Office	58 684
Sida via Swedish University of Agricultural Sciences (SLU)	1 422 332
Sida via World Vision Kenya	638 637
Sierra Club	1 274 129
Simon Fraser University	185 640
SNV Netherlands Development Organisation	252 503
Sustainable Markets Foundation	673 701
Swedish Agency for Marine and Water Management	63 000
Swedish Civil Contingencies Agency (MSB) via Swedish Meteorological and Hydrological Institute (SMHI)	330 141
Swiss Development Corporation	218 512
Swedish Energy Agency	714 200
Swedish Energy Agency via HYBRIT Development AB	419 865
Swedish Environmental Protection Agency	3 290 303
Swedish Foundation for Strategic Environmental Research (Mistra)	8 196 072
Swedish Foundation for Strategic Environmental Research (Mistra) via Institute for European Environmental Policy	262 954
Swedish Foundation for Strategic Environmental Research (Mistra) via Stockholm School of Economics	681 653
Swedish International Development Cooperation Agency (Sida)	88 203 041
Swedish Ministry for Foreign Affairs	5 155 017

Swedish Ministry of the Environment	7 398 661
Swedish Ministry of the Environment via Formas	32 000 000
Swedish Research Council (Vetenskapsrådet)	52 257
Swedish Research Council (Vetenskapsrådet) via Lunds universitet	581 371
Swedish Research Council (Vetenskapsrådet) via SCORE, Stockholms universitet	170 093
Swedish University of Agricultural Sciences (SLU)	77 710
Tufts University	120 896
U.S. Army Corps of Engineers	214 950
U.S. Dept of Agriculture	692 530
U.S. Dept of Energy via subcontract with University of California, Berkeley	1 167 742
U.S. Environmental Protection Agency	200 654
U.S. Environmental Protection Agency via subcontract with NESCAUM	103 126
U.S. National Institutes of Health via subcontract with Implementation Science Network	114 873
UK Central Government	995 103
UK Research Councils	3 828 073
UNCCD	
via International Organization for Migration	180 221
UNCTAD via University of York	521 240
Unidad de Planeación Minero Energética (UPME)	402 447
United Nations	10 520 288
United Utilities Water Ltd	599 879
University of California, Berkeley	535 139
University of California, Lawrence Berkeley National Laboratory	65 220
University of California, Riverside	93 171
University of Oxford	96 654
USAID	106 130
USAID via Asian Disaster Preparedness Centre (ADPC)	1 688 183
USAID via National Academy of Sciences	167 447
USAID via subcontract with Abt Associates	1 217 797
USAID via subcontract with AECOM International	118 272
USAID via subcontract with Winrock	1 816 955
Vinnova (Sweden's innovation agency)	1 005 217
Vinnova (Sweden's innovation agency) via Jernkontoret	3 277 522
Vinnova (Sweden's innovation agency) via Svemin	711 680
WEAP and LEAP licenses and trainings	2 363 049
World Bank Group	1 529 339
World Resources Institute	874 941
Yolo County Flood Control and Water Conservation District	695 237
Yorkshire Water	686 528

SEI financial statistics

SEI global (pro forma) income, by centre

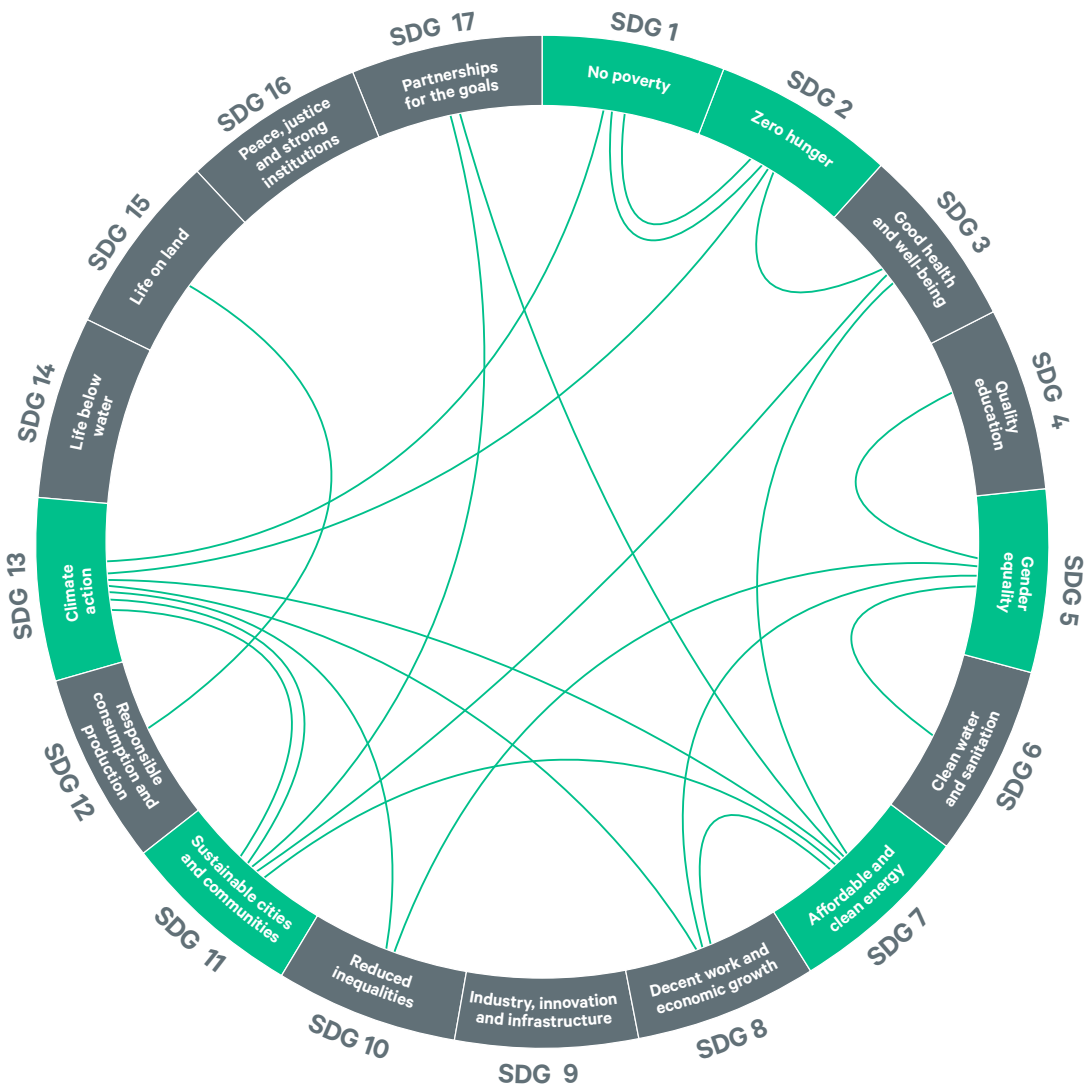


	%	RESEARCH volume in SEK millions
SEI Africa	4%	11.6
SEI Asia	11%	31.2
SEI Latin America	5%	15.0
SEI Tallinn	4%	10.4
SEI York	8%	23.0
SEI Oxford	2%	7.0
SEI Headquarters	53%	155.1
SEI US	13%	39.3
	100%	292.6

	%	RESEARCH volume in SEK millions
SEI Africa	2%	6.6
SEI Asia	10%	28.3
SEI Latin America	2%	4.8
SEI Tallinn	3%	8.1
SEI York	9%	23.5
SEI Oxford	3%	7.7
SEI Headquarters	55%	151.0
SEI US	16%	44.6
	100%	274.6

**SEI's focus is
on building trust,
empowerment,
and working with
partners to co-create
knowledge, resulting
in ownership of
results and sustained
action for the
2030 Agenda.**

Partnership for change



- SDGs to which the case studies most directly contribute
- Interactions with other SDGs

Each case presented in this section is linked to the SDG to which it most substantially contributes, shown here in green. The lines across the circle represent the many other connections that each case has to other SDGs, highlighting the co-benefits of our work.

In this section we present more highlights from our work where we have brought about change, and how in the process our efforts contribute to a range of Sustainable Development Goals.

But none of the Goals can be achieved without the vast number of activities and efforts to achieve them having some coherence with one another. For these efforts to succeed, both within and beyond government, partnerships are vital.

Goal 17, on Partnerships for the Goals, can be seen as the unsung powerhouse of the SDGs. It aims to “strengthen the means of implementation and revitalize the global partnership for sustainable development”. Superficially it can appear bureaucratic and abstract, dealing with policy coherence, partnership, finance, monitoring, and capacity building.

But what it really deals with is how to achieve the ambitions encapsulated in the other 16 SDGs.

Aligning vision and policy in Mongolia

Only six months after the 2030 Agenda was agreed in the UN General Assembly, Mongolia adopted a development strategy harmonized with it – the Sustainable Development Vision of Mongolia 2030. But while the strategy set out a vision, there was still much work to be done to align sectoral policies with the new agenda.

The process that began in 2017 focused only on water resources. Since then, the National Development Agency has launched policy reviews of 13 sectors and 40 sub-sectors, identifying key policy objectives. Using an adapted version of SDG Synergies, including the seven-point typology of goal interactions proposed by [Nilsson et al. \(2016\)](#), it explored interactions between these policy objectives in order to set priorities.

An amendment to the national Law on Development Policy and Planning due to come into force in 2020 will further institutionalize and integrated a systemic approach to policymaking inspired by SDG Synergies.

Our ability to work across sectors and siloed ministries was very well received by the government.

– *Suzanna Sumkhuu, Senior Development Policy and Planning Specialist of the National Development Agency of Mongolia*

Shifting mindsets, building consensus

Mainstreaming Mongolia’s version of SDG Synergies at a time when ministries are formulating national policies and programmes in line with the sustainability vision has forced them to reflect on how these will affect, and be affected by, progress in other sectors.

“In the sectors where SDG Synergies was applied, the process for organizing and facilitating meetings for drafting sectoral policy goals and objectives went from being a top-down to a consensus-based approach,” said Suzanna Sumkhuu, Senior Development Policy and Planning Specialist of the National Development Agency.

A stronger role for the National Development Agency

Adapting and applying the SDG Synergies approach has helped to establish the fledgling National Development Agency – founded only in 2016 – as an effective, influential force in Mongolian development planning and policy. The agency is bringing together diverse sectors to cooperate on policymaking. “Our ability to work across sectors and siloed ministries was very well received by the government,” said Suzanna Sumkhuu.

From its inception, the agency has been mandated as the lead agency in SDG implementation and improving policy coherence, but today, Sumkhuu said, “there is a greater willingness and capacity to use this mandate to further these agendas”.



Stakeholders at the recent workshop in Mongolia using SEI's SDG Synergies approach.

Beyond policy

In another creative application of SDG Synergies, the National Development Agency tasked more than 100 stakeholders from 17 sectors with identifying leverage points for implementing the SDGs. The outcomes were used to structure Mongolia's review of SDG progress, presented at the High-Level Political Forum in July 2019.

A unique approach with potential for scaling out

What made SDG Synergies such a good fit? First, it captures the subjective knowledge and views of stakeholders so outcomes reflect their day-to-day realities. Second, it can be used to examine not only vertical coherence – between global, national and local strategies, for example – but also how situations and interactions change over time. And last but not least is the way the process starts conversations and deepens understanding between sectors, turning competition into consensus.

For the same reasons, it has great potential to help other countries in delivering on the SDGs. SEI has already worked with the Colombian and Sri Lankan governments, as well as the European Environment

Agency, on applying SDG Synergies. And with the help of a soon-to-be-launched SDG Synergies website, we hope to inspire new partners towards similar outcomes in the coming years.

“It has been interesting to see how everyone has started to see their own sectors from the perspective of other sectors. ... It also reveals the lack of understanding of the complex and interdependent nature of the SDGs before we applied the Synergies framework,” observed Sumkhuu.

SDG 1

No poverty

We work to understand the confluence of factors – the social, environmental, political and economic circumstances – that keep people in poverty.

Connecting to the SDGs

Tracking of SDG 1 indicates that global poverty is declining, but not fast enough. More than 70% of the world's poor live in rural areas and rely on agriculture for a living, yet many of the technical solutions put forward to reduce rural poverty around the world look good on paper but fail to attract the intended users. SEI's engagement in far-flung areas in Indonesia directly addresses the mission of "leaving no one behind", a key principle underlying all SDGs. The work also contributes to SDG 2: Zero hunger, especially target 2.5, to maintain genetic diversity of plants and wildlife; and SDG 13: Climate action, specifically in terms of targets to strengthen resilience and adaptive capacity, and to improve education, raise awareness and build institutional capacity to respond to climate change.

SDG co-benefits



Combining indigenous knowledge and modern science

SEI's work in Bali brought together farmers' traditional knowledge and technical meteorological information for more effective climate adaptation.

SEI has built new relationships and greater understanding between Indonesian farming communities that rely on centuries of indigenous knowledge, and national Indonesian agencies that generate climate science and forecasts. Better relationships between users and providers of climate information is key to greater uptake of climate information and, in turn, greater resilience to climate risks.

Leveraging two distinct types of climate information

Farmers in the Jembrana District of Bali use the sky, sun and clouds as guides to decide when to plant, when to harvest, and when to dry crops. They listen to the sounds of insects and frogs, and track ant populations, which may indicate oncoming rain. They plan activities in the fields during the year according to the *sasih*, the traditional Balinese calendar, and conduct ceremonies to pay respect to the gods and to their environment.

Year on year they see the climate changing, noting, for example, that durian now flowers two or three times a year rather than once. Since the El Niño in 2015, they have observed changes in seasonal weather patterns, with more erratic rainfall and drought periods that wreak havoc with their farming schedules. How does this ancient trove of knowledge fit into the contemporary context of responding to climate change?

A platform to improve adaptation planning and decision-making

SEI addressed this question by working in partnership with a local think tank, su-re.co, with connections to vulnerable agricultural communities, and Indonesia's Ministry of Agriculture and the Agency for Meteorology, Climatology and Geophysics (BMKG), which has expertise and insight in setting up climate field schools for rice and other commodities. Through these partnerships, SEI ran eight climate field schools involving coffee and cocoa farmers, representatives of NGOs, and agricultural extension officers in Bali, Bajawa in Flores, and Kupang in West Timor.



Before, climate information was too general, and we didn't trust it. Now we know how to read it properly for our contexts.

– Local farmer in Jembrana, Bali, Indonesia

In 2019, these schools evolved into the School of Climate and Living Tradition (SaLT), a platform to help integrate indigenous knowledge and practices with conventional climate services. The resulting modules include an introduction to weather and climate, meteorological instruments, agro-ecosystem observations, and measures to enhance understanding of climate information and indigenous knowledge.

SaLT built partnerships, launched exploratory dialogues, built bridges between local and scientific communities, and enabled learning – helping farmers in vulnerable communities to interpret climate science, and teaching climate scientists at the national level about the needs of indigenous farmers.

Scaling up and out

The programme is scaling up to reach other indigenous communities throughout Southeast Asia. In October 2019, SEI, working with the Samdhana Institute, held a regional forum on the role of rights-based knowledge in sustainable development in Indonesia. Around 120 participants represented more than 20 indigenous

communities from Indonesia, the Philippines, Thailand, Myanmar, Cambodia, Timor-Leste, Vietnam and Taiwan. Participants released the [Yogyakarta Declaration](#), highlighting the importance of their indigenous knowledge and practices. The forum was supported by the human rights commissions of Indonesia, Philippines and Timor-Leste.

Fostering interaction

Farmers have begun to reach out to extension officers and BMKG for more information. In turn, extension officers and BMKG are disseminating information to farmers who previously had often been regarded as “too remote” to help.

SEI's work demonstrates that meteorologists and local farmers can work together to enhance adaptation planning and practice. The SaLT platform provides opportunities for indigenous people to articulate their agenda when responding to the challenges they face, and has the potential to scale up to help improve adaptation in agricultural settings across the wider region.

Staff from Indonesia's Ministry of Agriculture and the Agency for Meteorology, Climatology and Geophysics work with local farmers at the School of Climate and Living Tradition (SaLT). The school helps farmers in vulnerable communities to interpret climate science, and teaches climate science experts at the national level about the needs of indigenous farmers.



SDG 2

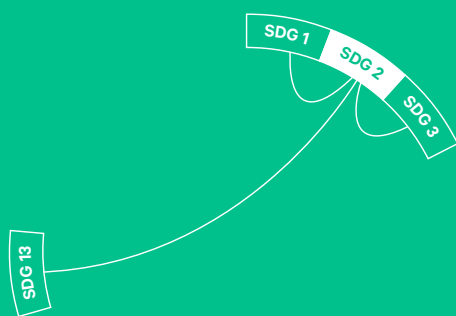
Zero hunger

How can we meet the nutritional needs and expectations of a growing world population? And how do we do it without compromising long-term sustainability? SEI research explores the transition to sustainable food and agricultural systems.

Connecting to the SDGs

A greater role for edible insect farming can generate alternative incomes and contribute to food security for smallholders, so contributing to SDG 1: No poverty and SDG 3: Good health and well-being. The value of edible insects as an additional resource in disaster recovery programmes means the work of AgriFoSe2030 also contributes to SDG 13: Climate action.

SDG co-benefits



Communication drives change in the edible insect sector

SEI led on communication and engagement in the AgriFoSe2030 programme, leading to better policy and practice around edible insect farming in Africa.

Edible insects have a small carbon and water footprint and use feed more efficiently than other sources of animal protein. They are often highly nutritious as well, and a thriving and sustainable market for edible insects can contribute to food security as well as jobs and income for small-scale farmers. Edible insects can also build resilience by being a food resource in disaster recovery programmes.

While there is a wealth of indigenous knowledge about edible insects in sub-Saharan Africa, there are few success stories of large-scale farming and use of insects for food and feed in the region, despite the potential benefits.

There is a need to better understand and promote these benefits, but the right information is not reaching the policy and business sectors in most African countries. SEI set out to tackle this problem, as a partner in the Sida-funded Agriculture for Food Security 2030 programme (AgriFoSe2030).

First Africa Conference on Edible Insects

Last year, as part of AgriFoSe2030, researchers in Zimbabwe and the Democratic Republic of Congo carried out a project to promote the integrated use of edible insects as food and feed in urban and peri-urban areas.

The project worked with scientists in the region to co-create communication strategies and translate scientific findings into messages that were tailored to local and regional policy- and decision-makers, private sector actors and others. The team also trained scientists in Zimbabwe and DRC on how to pitch to stakeholders, write compelling stories for the media, and formulate effective key messages.

SEI also helped plan the First African Conference on Edible Insects, which focused on the potential to develop the sector in Africa and was attended by policymakers and private sector actors from across the continent and beyond. SEI developed a social media and communications plan, produced multimedia content for the event, and contributed to strategic planning of the programme.

Targeted messaging brings change

Throughout the project, knowing how to reach and influence the right stakeholders at the right time was crucial for enabling change. For example, messages that centred on the health benefits of edible insects were more readily received by urban councils.

As a result, Chinhoyi Municipality in Zimbabwe donated land for construction of a model insect market. The market helps traders to sell larger quantities of insects, with improved handling facilities and much better hygiene standards.

“We never imagined that such small steps would bring the change to the world of smallholder traders in Chinhoyi urban market. Indeed, the new insect market built through AgriFoSe2030 touched the hearts of many traders that earn their livelihoods from selling insects in Chinhoyi,” said Timothy Maregere, Director of Housing and Community Services in Chinhoyi.

Other urban municipalities in Zimbabwe are following suit. And in DRC, the Mayor of Kintambo municipality donated a piece of land for the construction of a restaurant dedicated to insect-based products.

Scaling out

The participation of urban councils, traders and consumers in DRC and Zimbabwe in the project and the conference was critical. For instance, local traders have created associations to set up collectives around insect farming and trading. And a resolution was reached during the conference to create

It took us a long time to attract interest in the First African Conference on Edible Insects. The captivating messages that we developed with the help of the SEI communications team turned the fortunes of this conference around and brought the attention of the whole world towards this conference.

– Dr Robert Musundire, researcher at Chinhoyi University of Technology and project manager

stakeholder platforms for edible insects at the national level: there are now points of contact for these platforms in multiple countries in East and Southern Africa.

The conference also generated growing interest among funding agencies and business to support edible insect farming and trading. These include the World Bank Group, FAO, the International Centre of Insect Physiology and Ecology (icipe), the Rockefeller Foundation (East Africa Regional Office) representatives of the Government of Zimbabwe, and the Zimbabwean companies National Foods Pvt Ltd and Profeeds.



SDG 5

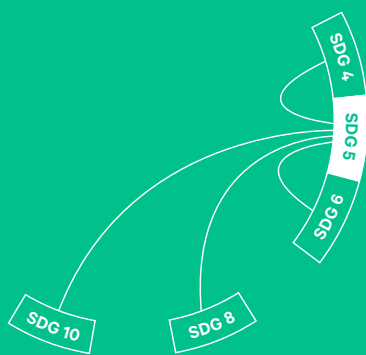
Gender equality

SEI's work explores the gender dimensions of vulnerability, and opportunities for women to play a greater role in shaping sustainable development.

Connecting to the SDGs

The Empowerment in WASH Index links SDG 5 and SDG 6: Clean water and sanitation, by making it possible, for the first time, to identify specific limitations in women's power to ensure their WASH needs are met. It fills a critical information gap in delivery of equitable access to WASH services in line with targets 6.1 and 6.2. By supporting women's empowerment, the Index also contributes to SDG 8: Decent work and economic growth, SDG 4: Inclusive and equitable education and SDG 10: Reduced inequalities.

SDG co-benefits



Making gender count in water, sanitation and health

The Empowerment in WASH Index, a new survey tool, makes gender disparities in water, sanitation and hygiene services visible and measurable.

Different segments of society can have very different experiences of WASH services. Biology, social power structures and cultural norms all play a significant role. For example, a two-mile walk to the nearest water source is a far bigger problem if you're expected to fetch water, cook, clean, look after children, and tend the family farm than if you spend your days out of the house as a waged labourer. And a shared toilet with no lock on the door may be a far riskier place for women and girls than for men.

Despite this – and an explicit call to pay “special attention to the needs of women and girls and those in vulnerable situations” in SDG target 6.2 on sanitation and hygiene access – the official SDG progress indicators for WASH services do not capture gender differences. Experience shows that as long as the drive for universal WASH access remains gender-blind, WASH services are unlikely to become more gender equitable.

The Index

The Empowerment in WASH Index is a new way of capturing differences in agency, participation and empowerment in relation to WASH services. Development of the Index is led by researchers at SEI in collaboration with Queen's University, Canada.

The Index combines a range of indicators of empowerment at three levels: individual, household and community. Data is gathered using a practical, survey-based tool targeting both men and women.

From index to impact

There is already a clear potential role for the Empowerment in WASH Index in terms of complementing metrics like the official SDG indicators for WASH to check how far “women and girls and those in vulnerable situations” are able to ensure their needs are met.

But it can also have far more direct impact. SEI and Queen's partnered with the WASH development

organization IRC to pilot-test the Index and its survey tool in Banfora, Burkina Faso, and Asutifi North, Ghana. In both districts IRC is working with local authorities to develop and implement master plans for providing universal access to safe and sustainable WASH services by 2030. Both processes had so far lacked a gender angle.

The Index not only revealed sharp differences in the overall levels of empowerment between men and women, but also the unique patterns of difference at individual, household and community levels. A series of workshops to disseminate the results gave stakeholders the chance to discuss priorities for addressing the specific imbalances during implementation of the master plans.

As for the future, a new iteration of the survey tool has been tailored for use in Bolivia, as part of the Bolivia WATCH project, which aims to integrate WASH with watershed management. The Index will also be used to assess the impact of a project in Burkina Faso to pilot SEI's Clean and Green approach – a certification scheme that recognizes villages' progress in sanitation,

hygiene and safe organic resource management as part of a large WaterAid-led sanitation intervention financed by Sida.

The word is spreading about the Empowerment in WASH Index, thanks to outreach efforts like a presentation at World Water Week 2019 and a dedicated website managed by SEI (www.empowerwash.org/). And organizations including USAID, the Gap Foundation, the Global Water Partnership, WaterAid, Simavi and Oxfam interested in applying the Index in their projects.

The Index is being tested in Banfora, Burkina Faso, and Asutifi North, Ghana to support local authorities in implementing master plans for universal access to safe and sustainable WASH services by 2030. Both processes had so far lacked a gender angle.



SDG 7

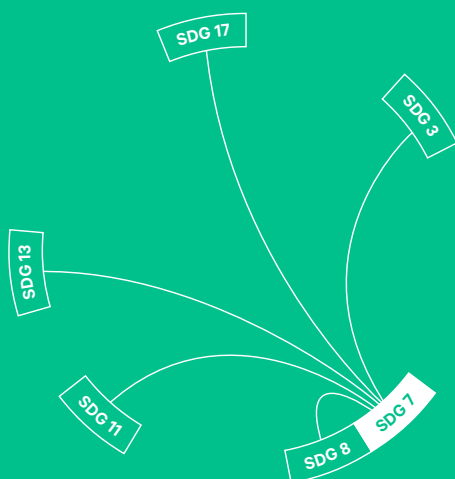
Affordable and clean energy

How we generate and distribute energy is one of the central questions of sustainable development. SEI explores options for a clean energy future, from global policy down to household cooking and heating.

Connecting to the SDGs

Since 2012, the growth of renewables has outpaced the growth of fossil-based energy production, yet still much greater deployment of clean energy is needed in order to meet climate and development goals. SEI's Long-range Energy Alternatives Planning (LEAP) tool enables policymakers around the world to envision clean energy futures and calculate the associated costs and benefits. Moreover, LEAP now has an add-on module – the Integrated Benefits Calculator – which translates LEAP's emissions scenarios into estimates of impacts from air pollution on human health, ecosystems and the climate. As well as delivering results for SDG 7, LEAP's capabilities contribute to SDG 3: Good health and well-being, SDG 11: Sustainable cities and communities, SDG 13: Climate action and SDG 8: Decent work and economic growth and SDG 17: Partnerships for the Goals, and to building capacity in countries' energy sectors.

SDG co-benefits



Kuwait plans a new energy future

SEI worked with the Kuwait Institute for Scientific Research to produce the country's first-ever energy outlook, which envisions a future less dependent on fossil fuels.

Oil is the backbone of Kuwait's economy. The oil industry accounts for 40% of the country's GDP, and, together with natural gas, meets almost all of the country's energy needs.

To ensure its continued prosperity in a low-carbon future, Kuwait needs to reduce its reliance on fossil fuels and foster economic diversification. In 2019, the Kuwait Energy Outlook (KEO) laid the groundwork for this transition, providing the first-ever economy-wide analysis of energy consumption and production in the country.

SEI was crucial to this effort, working with the Kuwait Institute for Scientific Research (KISR) to develop a scenario analysis in the Long-range Energy Alternatives Planning system. The result was detailed analyses of the residential, transportation, desalination and electricity generation sectors – and ideas for how Kuwait can transition to a more diversified, renewables-based energy system.

Using LEAP to map out a sustainable future

LEAP is SEI's flagship software tool for low emissions development planning. Both user-friendly and highly flexible, the system is the result of three decades of



continuous improvements, based on carefully listening to the needs of developing country policymakers. It now boasts over 40 000 users worldwide, with dozens of countries using LEAP to plan their climate pledges under the Paris Agreement.

LEAP's success is largely due to its user-centred design and continuous evolution. SEI focuses on the needs of developing country planners, not just expert modellers. While the capabilities of LEAP have dramatically improved over the years, equally as important has been the continual improvements to all aspects of the tool: its algorithms, its usability and its capabilities for visualizing results in a form that is highly meaningful to planners and highly policy relevant.

In Kuwait, KISR chose LEAP for the Energy Outlook “because of its balance between simplicity and usefulness”. Researchers were able to model Kuwait's entire energy system and break down emissions by the end-use sector.

Capturing the attention of policymakers

The Kuwait Energy Outlook makes the case for a new energy strategy, highlighting how a transition to a more diversified, energy-efficient and renewables-based system can help Kuwait reduce its per capita greenhouse gas emissions, which are currently among the highest in the world.

KISR reports that the Kuwait Energy Outlook “has captured the attention of policymakers”. A newly formed Supreme Energy Committee – endorsed in the report – will focus on developing policies to promote energy efficiency programmes and renewable energy integration, and to change consumer behaviour.

The report also emphasizes the need for improved data collection, recommending that Kuwait scale up its institutional capacity for data collection, planning and analysis. With more data, KISR and SEI could conduct more detailed LEAP analyses in time for the next Outlook, already scheduled for 2022.



The Kuwait Energy Outlook has captured the attention of policymakers in the State of Kuwait. The first edition endorsed the formation of the newly formed Supreme Energy Committee, which will focus on developing policies to promote energy efficiency programmes and renewable energy integration, and to change consumer behaviour. LEAP and its ability to perform cost-benefit analysis is a vital tool for helping explore which energy efficiency programmes will benefit Kuwait the most.

– Yousef Al-Abdullah, PhD,
Kuwait Institute for Scientific Research



SDG 11

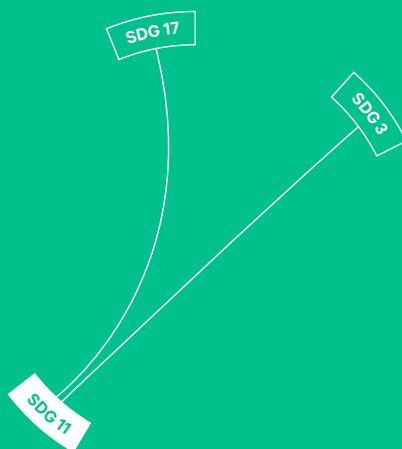
Sustainable cities and communities

More than 65% of the world's population is projected to live in urban areas by 2050, with major implications for resource use, energy, water and sanitation, and health and well-being. At the same time urbanization can bring benefits, especially efficiency gains. SEI examines these challenges in the round to advance sustainable urbanization.

Connecting to the SDGs

SDG 11 makes clear that the participation of civil society in urban planning is central to achieving sustainable city environments. The i-CMiiST project has taken innovative steps to involve stakeholders in urban decision-making, particularly vulnerable or marginalized groups. It also contributes to the target under SDG 3: Good health and well-being to halve the number of global deaths and injuries from road traffic accidents by 2020. And partnerships were at the heart of the work, meaning it also contributes to SDG 17: Partnerships for the Goals.

SDG co-benefits



Partnership, poetry and play make for safer cities in East Africa

With locals in Kampala and Nairobi, SEI has been using the arts in a range of initiatives to increase road safety and participation in urban planning.

In Uganda, 400 schoolchildren die in road accidents on their way to and from school annually, according to official statistics. The World Health Organization says road traffic injuries are the leading cause of death in the country for children and young adults aged five to 29 years.

An SEI project, Implementing Creative Methodological Innovations for Inclusive Sustainable Transport Planning (i-CMiiST), set out to co-produce bottom-up solutions to improve road safety and increase mobility for vulnerable users of urban streets in Nairobi and Kampala. The project also wanted to see if co-producing these solutions with city transport planners would change their ideas on the value of co-production.

In Kampala, SEI engaged a group of artists to help pupils from two schools – Buganda Road primary





(Facing page) SEI worked with drama, art and song with two schools in Kampala using to increase awareness of road safety issues.

(Left) Luthuli Avenue in Nairobi, which has been redeveloped as a result of SEI's engagement.

(Below) A 3D zebra crossing in Kampala. Getting buy-in from local people and stakeholders, and listening to their concerns, is critical for effective urban planning.



and Bat Valley – to become safety champions in their schools. Poetry, cartoons, drama and song were used to make messages about road safety more compelling and memorable.

The approach has been picked up by the Kampala Capital City Authority which plans to expand it to more Ugandan schools.

Redevelopment benefits mobility, health and local businesses

In Nairobi, another of the project's successes was the permanent redevelopment of Luthuli Avenue, chosen by the project as a case-study street. SEI demonstrated, using various creative methods to engage local people such as "placemaking", time-lapse video and 3D modelling, how the street could look and function for improved mobility, health and safety, and to boost local business. The decision to go ahead with the redevelopment was helped by winning support for the scheme from local traders and users of the street by raising awareness of its benefits. This was a direct result of the way that the project, supported by UN-Habitat, worked to engage stakeholders. The Mayor of Nairobi has since approved the redevelopment.

Africa's first pop-up zebra crossing

Close collaboration with Kampala Capital City Authority was also key in gaining permission for the project to test a mobile 3D zebra crossing that presents drivers

with the optical illusion of raised bars across the road to highlight the need to slow down and give way to pedestrians. The crossing showed the power of play in changing behaviour, and owing to its success the idea is now being rolled out at several other sites around central Kampala.

Collaboration and participation are key

One of the SDG targets for more sustainable cities is to increase participation in urban planning. And central to the successes of the project was working closely with local people, NGOs, government officials, city council officers and industry representatives. These groups were not only participants in the creative approaches but also, crucially, helped to identify how the outputs from creative engagement could influence change.

The toolkit of methods developed by SEI as part of the i-CMiST project has been included by the United Nations in its guidance for increasing its regional impact.

The decision to go ahead with the redevelopment of Luthuli Avenue was helped by winning support for the scheme from traders and local people.



SDG 13

Climate action

SEI focuses on effective, equitable ways to mitigate and adapt to climate change for a safer climate for all. Adaptation to climate change is a key area of our research. In particular, we look at adaptation policy and finance under the UN Framework Convention on Climate Change, vulnerability assessments, capacity building and community-based adaptation.

Connecting to the SDGs

The partnership between SEI Tallinn and the Government of Estonia has propelled action to reach carbon neutrality and inspired it to support similar ambitions across the EU. And efforts to meet climate targets have a positive impact on the attainment of a range of other SDGs. Decarbonizing the waste, agriculture, transport and energy production sectors contributes to SDG 7: Affordable and clean energy and SDG 11: Sustainable cities and communities, and ultimately to SDG 8: Decent work and economic growth.

SDG co-benefits



Course set for net zero in Estonia

For a long time Estonia has relied on oil shale – which has a even higher carbon intensity than coal – for electricity production. An SEI study commissioned by the Government of Estonia is guiding the country's efforts to reach climate neutrality by 2050.

The overarching conclusions of the [report](#), authored by SEI and Finantsakadeemia OÜ, are that it is technically possible to reach climate neutrality in Estonia by 2050 if all sectors in society contribute and clear targets are set. The analysis outlines a pathway for reaching net zero, demonstrating how climate neutrality can be potentially profitable in the long term, creating new jobs and spurring innovation.

The study uses a 2017 baseline for emissions across five key sectors – waste, industry, agriculture, transport and energy production – against which projections were made for reductions that could and would need to be made to reach net zero.

If the measures in SEI's analysis were implemented in full, total emissions in 2050 are projected to reach 2.25 Mt CO₂-equivalent, with the energy sector contributing close to zero emissions, mainly by replacing oil shale energy with wind, solar, new balancing capacities and potentially nuclear. Under the pathway, reductions would need to be complemented by some carbon sequestration through afforestation, conversion of peatlands to grassland, and liming of soils.

While the transition is achievable and economically feasible, social impacts must be taken into account. The northeast of the country is economically dependant on oil shale, and plans to reach net zero must include a dedicated package to ensure the transition will be positive for communities affected by the transition. The transition must be a just one.

Analysis gives government the confidence to act

The Government of Estonia said that the SEI report gave the country the confidence to take the step of committing to climate neutrality by 2050 thanks to its thorough analysis and research.

“I am convinced that every euro that we invest in halting climate change and new technologies will return manyfold in terms of both wealth and quality of life. This was demonstrated also by the [report] by SEI Tallinn... we have a roadmap for how to invest smartly in halting climate change,” said Jüri Ratas, Prime Minister of Estonia.

The report generated heightened awareness in wider society on going climate neutral, opening up public discussion and changing perceptions, which was reflected in political decision-making. It also encouraged Estonian government support for the EU's vision of A Clean Planet for All, setting 2050 as the target year for achieving climate neutrality across the European Union.

Estonian EU Commissioner for Energy

The publication of the report and the wider debates it sparked also coincided with the process of choosing new EU commissioners. Estonia's efforts to endorse and reach climate neutrality was a factor in the nomination of Estonian politician Kadri Simson as the next EU Commissioner for Energy, who was subsequently approved for the role by the European Parliament. Simson will play a key role in setting the European agenda on energy and climate issues, in particular the European Green Deal, which will be critical at the European and global level for years to come.

I am convinced that every euro that we invest in halting climate change and new technologies will return manifold in terms of both wealth and quality of life. This was demonstrated also by the [report] by SEI Tallinn... we have a roadmap for how to invest smartly in halting climate change.

– Jüri Ratas, Prime Minister of Estonia



SDG 13

Climate action

SEI focuses on effective, equitable ways to mitigate and adapt to climate change for a safer climate for all. Adaptation to climate change is a key area of our research. In particular, we look at adaptation policy and finance under the UN Framework Convention on Climate Change, vulnerability assessments, capacity building and community-based adaptation.

Connecting to the SDGs

SEI advances knowledge on the emissions implications of fossil fuel production, and on policies that restrict fossil fuel supply. It does this through both research and by helping build a “community of practice” on the connections between fossil fuel supply, climate change, and development. This work not only addresses SDG 13, but also SDG 11: Sustainable cities and communities. SEI research has also shown that equity in climate action is a practical necessity in meeting Paris Agreement goals. This work thus addresses SDG 10: Reduced inequalities.

SDG co-benefits



The Production Gap Report brings fossil fuel production to the centre of climate policy debate

SEI has spent years shifting norms around fossil fuel production and its role in global climate policy. This effort reached a turning point in 2019, when SEI and partners released the Production Gap Report, which garnered worldwide coverage and the attention of government ministers, UN negotiators, journalists, civil society and high-profile activists.

Coal, oil and gas are the central drivers of climate change, but they are rarely the subject of international climate policy and negotiations. The phrase “fossil fuels” never appears in the Paris Agreement – and yet such fuels account for more than 75% of global greenhouse gas emissions.

SEI has worked for years to change this climate discourse, with a clear-cut message: the world must wind down fossil fuel production to keep global warming to “well below” 2°C. A wealth of SEI analyses, publications, op-eds and events have steadily shifted norms and built a community of practice around the idea that climate policy must target both fossil fuel consumption and production.

The Production Gap Report gains worldwide attention

In November 2019, SEI released the report in partnership with UNEP, the International Institute for Sustainable Development, the Overseas Development Institute, CICERO Center for International Climate Research, and Climate Analytics. It coined the term production gap, meaning the difference between government plans for fossil fuel production, and global production levels consistent with climate goals.

The authors found that the world is on track to produce far more fossil fuels than is consistent with limiting global warming to 1.5°C or 2°C. They also detailed how countries can limit fossil fuel production, and what steps can be taken within the UN Framework Convention on Climate Change.

The report gained worldwide media attention, with coverage in hundreds of print, radio and TV outlets, including [The Guardian](#), [Reuters](#), [The Economist](#), [CNN](#),



This important report shows that governments' projected and planned levels of coal, oil and gas production are dangerously out of step with the goals of the Paris Agreement on climate change.

– Lord Nicholas Stern, IG Patel Professor of Economics and Government, LSE; and Chair of the Grantham Research Institute on Climate Change and the Environment

and [National Geographic](#). Noted climate author Bill McKibben called it “one of the most important pieces of research in years”.

Policymakers endorsed the report and emphasized the importance of its message, including UNFCCC Executive Secretary [Patricia Espinosa](#), UN Secretary-General [António Guterres](#), Spain’s minister for ecological transition [Teresa Ribera](#), and Sweden’s Deputy Prime Minister and Minister for Environment and Climate [Isabella Lövin](#).

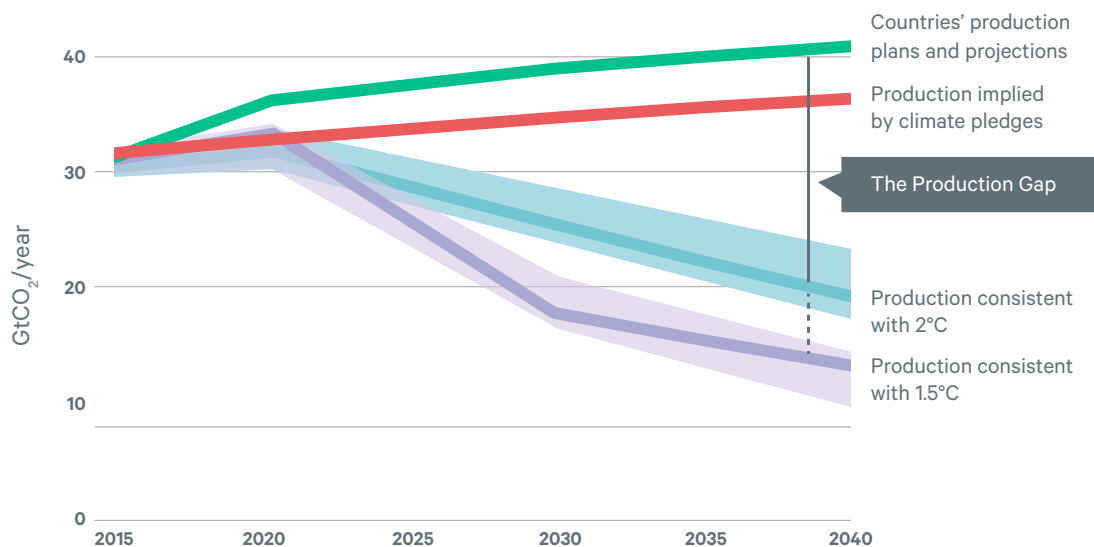
The report also sparked conversations in government circles that oversee fossil fuel production. Citing the report, the Norwegian Parliament submitted a formal question to the Minister of Oil and Energy, Kjell-Børge Freiberg, asking what the government would do to address its production gap. The US congressional delegation to COP25 – including House Speaker Nancy Pelosi – met with NGOs and [discussed the report in a briefing](#). The US Congress is expected to consider

legislation to increase lease rates and slow production of coal, oil, and gas on federal lands, which could lead to testimony related to the report.

A powerful framing for climate action gains steam

The Production Gap Report tapped into a growing realization – among politicians, civil society and the public – that countries need to directly address the supply of fossil fuels to meet climate goals.

But awareness is only the first step. The Report is built to be an annual institution, much like the UNEP Emissions Gap Report. While some countries are limiting oil and gas expansion, divesting from fossil fuels, and planning equitable transitions, much more needs to be done. Part of the solution is transparency and tracking – and the Production Gap Report will continue to keep tabs on supply-side progress.



The fossil fuel production gap – the difference between national production plans and low-carbon pathways (1.5°C and 2°C) as expressed in fossil fuel carbon dioxide (CO₂) emissions – widens between 2015 and 2040.

The SEI Foundation Annual Report

The SEI Foundation in Sweden (Stiftelsen The Stockholm Environment Institute) consists of SEI Headquarters, SEI Asia, SEI Africa, SEI Latin America and SEI Oxford. SEI Tallinn, SEI US and SEI York are separate administrative entities within SEI with separate reporting requirements.



SEI Executive Director's report

SEI Foundation
Stiftelsen
The Stockholm
Environment
Institute
802014-0763

Operations

SEI is an international and independent non-profit research institute established in 1989 by the Swedish Parliament. SEI's vision is "A sustainable, prosperous future for all", and its mission is "To support decision making and induce change towards sustainable development around the world by providing integrative knowledge that bridges science, policy and practice in the field of environment and development". SEI has its headquarters in Stockholm (Sweden) and centres in Bangkok (Thailand), Boston, Davis and Seattle (US), Oxford and York (UK), Tallinn (Estonia), Nairobi (Kenya), and Bogotá (Colombia).

The SEI Foundation includes SEI HQ, SEI Asia, SEI Africa, SEI Latin America and the subsidiary SEI Oxford Office Ltd (registered in UK under company No. 4404220, not consolidated). The global institute also includes SEI Tallinn (The Estonian Institute for Sustainable Development, established in 1992 and registered in Estonia as an independent non-profit foundation with reg. No. 90000966), SEI US (Stockholm Environment Institute U.S., Inc. registered 2006 in Massachusetts with EIN 20-4659308 as a 501c3 non-profit organization) and SEI York (SEI York, Environment Department, The University of York).

The financial statements on the following pages refer to the SEI Foundation only, registered in Sweden with organization number 802014-0763.

Key developments in 2019

The annual core funding from the Swedish Government and the five-year agreement with Sida jointly provide the financial basis for our operations. This core funding, which constituted approximately 34% of the SEI Foundation's turnover in 2019, enables SEI to maintain a high level of professionalism, accountability and effectiveness in core functions, as well as invest in strategic research where SEI can set the agenda. It also enables us to adapt our programmes to respond to emerging challenges around the world.

In 2019, the government core support was SEK 32 million, of which SEK 9 million were dedicated to co-funding. Co-funding enables SEI to carry out

research programmes that require matching funds, while also strengthening the financial sustainability of the SEI centres.

The agreement with Sida supports our activities in developing countries via our centres and the SEI Initiatives, and enables us to respond rapidly to requests from, for example, developing country governments that may not have the means or resources to develop project-funding mechanisms for smaller interventions.

The total revenue of the SEI Foundation in 2019 was SEK 242 million, with a net income of SEK 2.2 million.

SEI experienced another year of growth with a gradually increasing portfolio of externally funded project work, in particular through grants. To support the Institute's core functions, SEI received SEK 32 million in core support from the Swedish Government and additional core support from Sida. Still, a majority of the turnover is project income from research council grants, commissioned research, and international collaboration projects, among other sources.

In 2019 SEI re-integrated its headquarters and the former Stockholm Centre. The aim of this organizational adjustment was to make the organization flatter, more cost-effective, and more agile in decision-making. This led to efficiency gains as well as clearer strategic direction and workflow at headquarters. Senior management has made progress on organizational development by further enhancing the institute-wide SEI Project Model, establishing a new framework for organizational risk management and a new structure for organizational learning, including a new Intranet, and updating and strengthening SEI's environmental policy, supported by annual action plans.

In 2019, SEI was ranked as the number one think tank in the world on environment policy in the annual index compiled by the University of Pennsylvania's Think Tanks and Civil Societies Program. It is the sixth year in a row that SEI has been ranked in the top two.

The SEI strategy

Reaching objectives and goals

This Annual Report presents examples of SEI's research activities and outcomes, and provides evidence of how the SEI Foundation fulfils its objectives according to its statutes, which state the following:

The primary objective of the Foundation shall be to initiate, carry out and disseminate studies and other research on the assessment and development of technologies, policies and related environmental

management techniques and strategies for an environmentally sustainable development of society. Within its field of activities, the Foundation shall co-operate with organizations, public authorities, institutions, companies and individuals world-wide.

The objectives as described in the statutes are elaborated in the SEI Strategy, which is the main guiding document for the Institute, and operationalized through annual work plans for each SEI centre. 2019 was the final year of SEI's previous strategy, which ran from 2015. In 2019 SEI developed a new strategy for 2020–24 (see below).

The 2015–19 strategy clustered SEI's strategic goals under seven areas, split into three results areas and four enabling areas. The results areas are:

- **Scientific research:** to enhance the quality and impact of our problem and solution driven scientific research.
- **Policy engagement:** to provide effective decision support and engage in key policy arenas.
- **Capacity development:** to strengthen the capacity of individuals, organizations and institutions to make decisions that promote sustainable development.

Four areas enable the delivery of results, as follows:

- **Communications:** to produce and share knowledge more effectively, in partnership with decision-makers.
- **Tools, platforms and ICT:** to advance the technical development, accessibility, and application of our tools, platforms, and ICT environment.
- **Organization and finance:** to be a diverse, attractive and financially robust organization where the best researchers and professionals can thrive.
- **Monitoring and learning:** to be a learning organization that – alongside our partners – continuously takes stock and learns from experience to deliver ever better results.

Under each area, a set of organizational goals is assessed annually through results reports, impact stories and a small set of key performance indicators (KPIs).

In 2019 SEI worked to reach its objectives in five main ways:

- through research initiatives and projects that address specific areas, issues and questions.
- through policy engagement and cooperation with government authorities in Sweden and elsewhere (e.g. the Swedish Ministry of the Environment, the Swedish Ministry for Foreign Affairs, Sida, the EU, UN agencies, and multilateral development organizations) and with a range of other institutions, agencies and the private sector.

- through greater cooperation within the SEI global organization and strengthened research and policy capacity and competence.
- through outreach, including publications (e.g. scientific and policy oriented) media presence, conferences, seminars and webinars, and social media.
- through capacity development, including training and dedicated events (e.g. linked to SEI's tools) and within SEI Initiatives and projects.

2019 marked the final year of the 2015-2019 strategy. Transitioning into a new strategy period, 2019 finalized the multi-year, core-funded SEI Initiatives, under which special investments were made to put SEI at the cutting edge of research for policy impact in selected strategic areas. 2019 also entailed intensive preparation and development of a new set of SEI Initiatives, cutting across SEI centres and research teams, and a concerted effort across SEI to develop the next Strategy, for 2020-24.

The new strategy was adopted by the SEI Board in October 2019. It was prepared on the basis of a thorough participatory process across the whole organization, as well as taking in results from two major institutional evaluations carried out by external teams in late 2018. It brings in new features, including a stronger focus on SEI's identity and values, its outcomes and ultimate impacts in society, an articulation of its organizational theory of change, and other features considered critical to be effective in supporting change over the coming years. Preparations for operationalizing the Strategy, including new approaches to annual work plans and results reporting, were carried out towards the end of 2019.

Impact stories in the previous section of this report provide concrete examples of SEI's work and achievements in 2019.

In 2019, further progress was made towards achieving strategic goals on strengthening scientific research at SEI by the end of the 2015-2019 strategy cycle. The scientific impact of SEI's work shows a positive and sustained trend over time, using the standard indicator of how widely cited SEI's work is in others' publications. SEI strives towards having more SEI authors as first authors on high impact papers. 2019 showed significant strengthening of SEI's academic journal publishing, not least with multiple contributions to high impact journals in Nature Group journals and PNAS, for example. The total number of citations of articles with SEI authors rose by 28%, from 7500 in the previous year to 9792, in line with the strategic goals.

In 2019, tools developed and supported by SEI registered a large number of interactions with users.

Using an index with 2015 as a baseline the tools WEAP, LEAP, weADAPT and NETpositive have all gained a growing number of users over the past five years.

SEI engages with its main target audiences (policymakers, policy actors in civil society, the academic community and the private sector) using a range of communication products and channels. The number of visitors to the SEI website increased by 8.8% from 2018 to 2019. Social media is important for reaching target audiences. SEI's content strategy aims to increase engagement and reach on all social media channels. Followers of SEI Twitter accounts (@SEIresearch and @SEIclimate) increased by 10.5% from 2018 to 2019.

SEI has continued to invest institutional resources in research on key issues around sustainable development that it is particularly well placed to address. The SEI Initiatives, which are developed through a competitive, bottom-up internal process, function as drivers and hubs for research supported by both core and external project funding. They support SEI's further development and growth and catalyse additional, external funding as well as further recruitments.

2019 saw significant advances in terms of institutional partnerships. We initiated partnerships with the UNEP, UNCTAD, the Green Climate Fund and the Green Technology Centre-Korea. We also partnered with IEEP (Institute for European Environmental Policy) to more effectively engage with and support EU policymaking. Our agreement with KTH Royal Institute of Technology was elevated by KTH to a "strategic partnership", and the agreement with Stockholm University was renewed for another three-year period.

In October 2019, SEI celebrated its 30th anniversary and the 10th anniversary of SEI Africa in Nairobi, Kenya, where the occasion was marked by holding our seventh annual SEI Science Forum. The Science Forum, hosted every second year in Stockholm and every second year by one of our centres, provides opportunities to build relationships between researchers from across the global organization, develop new ideas, strengthen our engagement with key partners and audiences, and to carry out key planning and management meetings.

Key developments after the year's end

On 1 January 2020 the new SEI Strategy 2020-24: Knowledge for Action, went live. The strategy includes ramped up efforts on strategic policy engagement in international agendas such as the 2030 Agenda, climate, oceans, and biodiversity; the launch of a new generation of core-funded SEI Initiatives, and increased

efforts to reduce our environmental impact (see below). In February and March, the biennial global employee survey was carried out.

Expected developments in 2020

There is a risk that the outbreak of COVID-19 will have a negative effect on the financial results for 2020. The extent of this effect is very uncertain at the present time, but there is a risk of a reduction in grant income to the organization. The SEI Board of Directors and Management are following the developments closely

and taking necessary measures to limit the effects. The core support from the Swedish Government through Formas is at the same level as in 2019, with the addition of SEK 2 million earmarked for the Leadership Group for Industry Transition, where SEI provides the secretariat and technical support.

SEI is preparing for a new agreement with Sida during early 2020, based on the new strategy.

Further investments will be made in a new monitoring, evaluation and learning framework, including a knowledge management hub built within a new Intranet, earmarked for launch in March 2020.

Financial overview

Key figures for the SEI Foundation	2019	2018	2017	2016	2015
Total revenue (million SEK)	242.3	221.1	201.3	161.3	133.3
Net income (million SEK)	2.2	0.9	1.5	1.8	1.7
Total assets (million SEK)	149.0	117.7	103.8	106.7	83.5
Equity (million SEK)	22.9	20.7	19.8	18.3	16.5
Equity ratio (%)	15%	18%	19%	17%	20%
No. of staff at end of period	174	152	141	123	117

Environmental impact

SEI tackles complex environment and development challenges and does so using a highly collaborative approach with partners across the globe. The nature of our work means there will always be some requirement to travel, which comprises a major part of the Institute's environmental footprint. At the same time, we strive to carry out our work as sustainably as possible, and to do so we have put in place global policies, effective centre processes and more effective use of technologies and software for remote meetings.

In 2019, SEI set an emissions reduction goal for work-related air travel. The goal is to reduce emissions by 25% per capita by 2024 compared to 2017 levels. Taking further steps to meet this goal, SEI is developing an internal reporting system across all centres that:

- allows individuals to self-report and monitor their own air travel emissions and targets
- encourages reflection on the reasons and justification for travel, and
- provides a consistent record across all SEI centres that allows for rapid assessment of trends in air travel emissions for internal management processes and external reporting.

It is mandatory for all centres to monitor and report emissions from air travel. Since 2019, this data is also analysed to inform future decision-making on travel.

All centres are required to submit an internal environmental action plan annually to chart progress on environmental sustainability targets and set out their plans for the coming year.

Where appropriate, online meetings and remote participation at events are prioritized as the primary mode of international collaboration. This is fundamental not only to minimize our travel emissions, but also to extend our reach to wider audiences. We invest in ICT and software on an ongoing basis to improve online meeting experiences.

The SEI Foundation's flight emissions in the past four years are summarized in the table below.

Year	Emissions from travel (tons CO ₂ e)	Kilometres travelled	Travel emissions per employee (full-time equivalent)
2015	530	3.2 million	5.76
2016	517	3.4 million	4.92
2017	561	3.7 million	4.96
2018	583	3.9 million	4.40
2019	543	3.6 million	4.00

Total CO₂e emissions from air travel decreased by 7% from 2018 to 2019, from 583 tons to 543 tons. In relation

to the total number of employees (full-time equivalent), the emissions decreased by 9%.

Human resources

In 2019 the SEI people agenda and leadership model were developed into institute-wide policies to support the growth of the organization. The work was conducted in dialogue with the HR Global Network to ensure that the policies had buy-in across all centres. A compensation and benefit policy were introduced and implemented across the organization.

During the year several training workshops were carried out in the Africa, York and Oxford centres on topics such as performance management, stress and coaching. In addition, an external salary benchmark was conducted in the SEI Africa in dialogue with the host organization (ICRAF) to support local discussions and understanding.

A global follow-up of SEI's equity, gender and diversity policy was conducted, which included annual targets that were presented in a webinar for all SEI employees. A new global mentorship programme was implemented, in which all centres participated. The ambition of the programme is to provide the best possible support for new and early career employees to foster individual and professional growth.

A new performance evaluation system was implemented at SEI HQ, resulting in improved and GDPR-compliant storage of performance and development reviews. This system will be evaluated and offered to other centres in 2020–21.

In order to minimize risks, the payroll service at HQ was outsourced at the end of 2019. In addition, International SOS has been implemented globally in order to safeguard employees when they travel.

Significant risks and uncertainties

In 2019 SEI started an organization-wide process to develop a risk management framework in order to identify potential threats to the organization and define a strategy for eliminating or minimizing the impact of these risks, as well as mechanisms to effectively monitor and evaluate this strategy.

Significant areas of risk are financial risk, brand risk, political risk and project risk.

In terms of funding, although we receive project funds from many different organizations, there remains a dependence on Swedish Government funding for core support. SEI uses the core funding to leverage additional external funding. This is clearly articulated as a goal, not least for the SEI Initiatives.

The potential negative impacts of Brexit are still being monitored, in particular the risk that SEI centres based in the UK will not be eligible to participate in projects funded by the European Commission.

The activities of SEI are exposed to currency risks related to fluctuations in expected and contracted payments in projects.

SEI carries out research and engagement with partners around the world. This involves exposure to risks related to project management and delivery which may ultimately affect the SEI brand. Such risks are regularly addressed through risk management and quality assurance procedures in project planning and implementation. Continuous improvements and investments in competence development – such as developing the institute-wide SEI project model and training in project management – are made to minimize these risks over time.

Appropriation of results

Appropriation of accumulated results (amounts in SEK)

The equity of the SEI Foundation at the beginning of 2019	20 725 420
Net income for the year 2019	2 170 253
Final balance	22 895 673

Financial statements

Income statement

Amounts in SEK	Note	2019	2018
Government grant		32 000 000	32 000 000
External project funding	2	210 250 554	188 577 100
Sundry income	3	24 243	517 450
Total revenues		242 275 798	221 094 549
Personnel costs	4	-99 935 070	-97 842 420
Travel costs in operations		-413 479	-851 373
External costs in projects	5	-116 198 957	-102 309 385
Other costs	5, 6	-20 633 997	-17 321 268
Depreciation	7	-1 471 557	-1 155 228
Operating income		3 622 737	1 614 875
Result from financial investments			
Interest income and similar profit items	8	1 496 145	2 541 686
Interest expense and similar loss items	8	-2 182 899	-2 864 094
Income before tax		2 935 984	1 292 466
Tax on the result for the year	9	-765 731	-387 324
Net income		2 170 253	905 143

Balance sheet

	Note	2019	2018
Assets			
Fixed assets			
Intangible fixed assets		1 006 113	1 195 542
Tangible fixed assets		2 673 626	2 012 431
	7	3 679 739	3 207 973
Financial assets			
Investments in group companies	10	1 439	1 439
Other long-term receivables	11	1 250 000	1 250 000
		1 251 439	1 251 439
Total fixed assets		4 931 178	4 459 412
Current assets			
Current receivables			
Accounts receivable, customers		3 897 925	5 935 285
Preliminary tax paid		2 052 094	1 487 966
Other receivables		547 618	896 018
Prepaid expenses and accrued income	12	8 224 854	6 342 820
		14 722 491	14 662 090
Cash and bank balances		129 357 759	98 536 727
Total current assets		144 080 250	113 198 817
TOTAL ASSETS		149 011 428	117 658 229
Equity and liabilities			
Equity			
Balance brought forward		20 725 420	19 820 277
Net income for the year		2 170 253	905 143
		22 895 673	20 725 420
Current liabilities			
Advance payments for work in progress	13	96 442 502	68 387 051
Accounts payable, suppliers		9 223 314	11 143 807
Liabilities, SEI centres/affiliated companies abroad	14	6 005 526	4 858 240
Other liabilities		3 555 623	3 666 114
Accrued expenses and deferred income	15	10 888 789	8 877 597
		126 115 755	96 932 809
TOTAL EQUITY AND LIABILITIES		149 011 428	117 658 229

Cash flow statement

	Note	2019	2018
Net income from operations		2 170 253	905 143
Non-cash items (depreciation)	7	1 471 557	1 155 228
Net cash generated (used) in operating activities before changes in operating assets and liabilities		3 641 810	2 060 371
Increase (-) / decrease (+) in short-term receivables		-60 401	-788 361
Increase (+) / decrease (-) in short-term liabilities		29 182 946	12 984 301
Cash flow before investments		32 764 355	14 256 311
Investing activities			
Deposited as collateral with the landlord	11	-	-
Capital expenditures (acquisition of equipment)	7	-1 943 323	-1 818 283
Proceeds from the sale of equipment		-	-
Net cash provided by investing activities		-1 943 323	-1 818 283
Net cash flow after investing and financing activities		30 821 032	12 438 028
Cash at beginning of year		98 536 727	86 098 698
CASH AT END OF YEAR		129 357 759	98 536 727

Notes to the financial statements

Note 1: General accounting principles

The financial statements have (since 2014) been prepared in accordance with BFNAR 2012:1 Annual Report guidelines (K3) issued by the Swedish Accounting Standards Board.

Accounting currency

The Annual Report is presented in Swedish kronor (SEK) and the amounts are in SEK unless otherwise stated.

Valuation principles

Assets and liabilities have been valued at acquisition value if not otherwise stated below.

Revenues

Percentage of completion method is applied to all those projects whose outcome can be satisfactorily calculated. Revenues from projects carried out on a current account basis are recognized in the income statement at the pace of completion. The degree of completion of a project is determined by comparing costs incurred to date with the estimated total contract costs. If it is probable that total project costs will exceed total contract revenue, the expected loss is immediately recognized as an expense in full. If there is significant uncertainty regarding payment or associated costs, no revenue is recognized.

Fixed assets

Fixed assets are recognized as assets if it is probable that economic benefit will accrue at a future date and if the acquisition value of the asset can be measured reliably. Fixed assets are recognized at cost less accumulated depreciation based on estimated economic useful life.

The following principles for depreciation have been used:

Computers	36 months
Other tangible fixed assets	60 months
Intangible fixed assets	60 months

Leasing

All leasing agreements are classified as operational leasing which implies that lease payments are expensed on a straight-line basis over the lease term.

Asset impairment

The carrying values of the Foundation's assets are reviewed at every closing date to determine whether there is any indication of impairment. If any such indication exists, the asset's recoverable value is estimated. An impairment loss is charged to the income statement. The recoverable value is the greater of fair market value less costs to sell and value in use.

Income tax

As a Foundation under Swedish law the Foundation is liable for income tax at a current rate of 21,4% (reduced from 22% in 2018).

Receivables

Receivables have been individually assessed and are reported at the amount expected to be received.

Receivables and liabilities in foreign currency

Receivables and liabilities denominated in foreign currencies are translated to the accounting currency at the exchange rate prevailing at the balance sheet date. Exchange differences arising on translation are recognized in the income statement.

Employee benefits

The Foundation's pension plans include both defined contribution pension plans and defined benefit pension

plans. Obligations for all pension plans are recognized as expenses in the income statement as incurred.

Group accounting

The Foundation, as a parent company to SEI Oxford Office Ltd according to Note 7, does not set up group accounting, applying the 3§, chapter 7 of the Annual Accounts Act.

Estimates and assumptions

In the preparation of the financial statements it is necessary for management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, revenues and expenses. Actual results may differ from these estimates. Those estimates and assumptions that can imply a risk for significant adjustments in accounted values are primarily valuation of work in progress in projects.

Incurred events within the Foundation or its environment may make it necessary to revise these estimates and assumptions. On an annual basis a review is made to determine whether there is any indication that the value of assets is lower than the accounted value. In such a case the asset's recoverable value is estimated, equal to the greater of fair market value less costs to sell and value in use.

Note 2: External project funding

External project funding received from the following sources:	2019	%	2018
Swedish International Development Cooperation Agency (Sida)	88 203 040	41.95%	72 904 793
NICFI at the Norwegian Ministry of Climate and Environment	17 791 689	8.46%	-
Gordon and Betty Moore Foundation	10 097 510	4.80%	5 418 737
United Nations	9 850 835	4.69%	4 862 980
Formas, a Swedish Research Council for Sustainable Development	9 816 911	4.67%	13 210 069
European Commission	9 550 358	4.54%	10 086 661
Swedish Foundation for Strategic Environmental Research (Mistra)	8 196 073	3.90%	21 706 609
Swedish Ministry of the Environment	7 398 661	3.52%	4 256 064
Swedish Ministry for Foreign Affairs	5 155 017	2.45%	3 477 376
Swedish Environmental Protection Agency	3 290 303	1.56%	3 111 233
Vinnova (Sweden's innovation agency) via Jernkontoret	3 277 522	1.56%	94 293
Global Environment Facility (GEF) via World Wide Fund for Nature (WWF)	2 843 368	1.35%	5 326 458

External project funding received from the following sources:	2019	%	2018
Department for International Development (DFID) via WYG International Ltd	2 250 716	1.07%	2 050 401
Marianne and Marcus Wallenberg Foundation	2 010 155	0.96%	1 149 166
USAID via Asian Disaster Preparedness Centre (ADPC)	1 688 183	0.80%	1 149 006
Lancang-Mekong Cooperation (LMC) Special Fund via Mekong Institute	1 545 181	0.73%	178 898
Netherlands Ministry of Infrastructure and Water Management	1 448 356	0.69%	67 688
Sida via Swedish University of Agricultural Sciences (SLU)	1 422 332	0.68%	1 647 668
Department for International Development (DFID) via Global Canopy	1 337 018	0.64%	257 633
Formas, a Swedish Research Council for Sustainable Development via Linköpings universitet	1 236 562	0.59%	–
Asian Disaster Preparedness Centre (ADPC)	1 113 279	0.53%	124 275
European Commission via Global Canopy	1 033 283	0.49%	1 098 970
Vinnova (Sweden's innovation agency)	1 005 217	0.48%	371 255
Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)	944 884	0.45%	561 516
Critical Ecosystem Partnership Fund (CEPF)	774 540	0.37%	1 728 091
Swedish Energy Agency	714 200	0.34%	2 066 461
Vinnova (Sweden's innovation agency) via Svemin	711 680	0.34%	736 388
Swedish Foundation for Strategic Environmental Research (Mistra) via Stockholm School of Economics	681 653	0.32%	682 819
Sida via World Vision Kenya	638 637	0.30%	–
Fabege	630 450	0.30%	–
Swedish Research Council (Vetenskapsrådet) via Lunds universitet	581 371	0.28%	120 098
Bill and Melinda Gates Foundation	534 100	0.25%	6 609 902
UNCTAD via University of York	521 240	0.25%	–
Network of African Science Academies	515 589	0.25%	219 189
Government of Nepal via Lahmeyer International GmbH	490 640	0.23%	173 587
Department for International Development (DFID) via University of Oxford	478 862	0.23%	1 693 119
Global Greengrants Fund	464 741	0.22%	–
Inter-American Development Bank	449 667	0.21%	–
NIRAS Sweden AB	433 933	0.21%	–
Swedish Energy Agency via HYBRIT Development AB	419 865	0.20%	491 305
Unidad de Planeación Minero Energética (UPME)	402 447	0.19%	–
Formas, a Swedish Research Council for Sustainable Development via Stockholm Resilience Center	400 300	0.19%	385 786
Conservation of Arctic Flora and Fauna (CAFF)	383 257	0.18%	307 043
Corpochivor	376 464	0.18%	–
BioInnovate Africa via International Centre of Insect Physiology and Ecology	363 709	0.17%	–
Forte Swedish Research Council for Health, Working Life and Welfare	357 043	0.17%	–
Swedish Civil Contingencies Agency (MSB) via Swedish Meteorological and Hydrological Institute (SMHI)	330 141	0.16%	516 812
Korea Environment Institute (KEI)	329 940	0.16%	68 071

External project funding received from the following sources:	2019	%	2018
DICTUC	294 346	0.14%	–
Climate and Clean Air Coalition via UNEP	288 960	0.14%	4 400 646
Swedish Foundation for Strategic Environmental Research (Mistra) via Institute for European Environmental Policy	262 954	0.13%	–
SNV Netherlands Development Organisation	252 503	0.12%	577 901
Asian Development Bank	242 749	0.12%	–
World Bank Group	231 731	0.11%	620 912
Blue Moon Fund	230 998	0.11%	276 489
Green Technology Center	210 041	0.10%	–
Asian Institute of Technology (AIT)	200 647	0.10%	–
Simon Fraser University	185 640	0.09%	–
UNCCD via International Organization for Migration	180 221	0.09%	–
Swedish Research Council (Vetenskapsrådet) via SCORE Stockholms universitet	170 093	0.08%	–
USAID via National Academy of Sciences	167 447	0.08%	–
European Bank for Reconstruction and Development	150 790	0.07%	–
NordForsk via KTH Royal Institute of Technology	144 152	0.07%	480 660
Institute for Governance and Sustainable Development (IGSD) Lunds universitet	139 207	0.07%	99 516
USAID	137 928	0.07%	–
USAID	106 130	0.05%	1 322 055
European Commission via Ecofys Netherlands b.v.	101 500	0.05%	183 470
Finnish Innovation Fund Sitra	101 179	0.05%	–
Africa Enterprise Challenge Fund	100 683	0.05%	–
University of Oxford	96 654	0.05%	0
U.S. Department of Energy	93 500	0.04%	103 497
GCRF via University of York	84 153	0.04%	521 876
Informa UK Limited	82 948	0.04%	–
Nordic Council of Ministers via Finnish Innovation Fund Sitra	81 395	0.04%	–
European Environment Agency	80 794	0.04%	495 800
Swedish University of Agricultural Sciences (SLU)	77 710	0.04%	–
Asia-Pacific Network for Global Change Research (APN) via Brown University	70 899	0.03%	–
ClimDev via ATPS Network	70 430	0.03%	371 212
Formas, a Swedish Research Council for Sustainable Development via Swedish University of Agricultural Sciences (SLU)	66 257	0.03%	–
International Institute for Sustainable Development (IISD)	64 235	0.03%	–
Swedish Agency for Marine and Water Management	63 000	0.03%	–
Formas, a Swedish Research Council for Sustainable Development via Umeå universitet	61 786	0.03%	–
Sida via Swedish Patent and Registration Office	58 684	0.03%	139 545
Swedish Research Council (Vetenskapsrådet)	52 257	0.02%	665 987
International Institute for Environment & Development (IIED)	48 663	0.02%	–
CICERO Center for International Climate Research	40 375	0.02%	121 643
International Water Management Institute (IWMI)	40 020	0.02%	–
Other	625 975	0.30%	9 285 475
Total	210 250 554	100.00%	188 577 100

Note 3: Sundry income

	2019	2018
Reimbursement of travel and other expenses	92 903	171 736
Miscellaneous	-67 660	345 713
Total	25 243	517 450

Note 4: Employees and personnel expenses

Average number of employees (FTE)	2019	2018
Sweden	82	84
(of which men)	44%	45%
Thailand	34	32
(of which men)	40%	47%
Kenya	10	12
(of which men)	44%	38%
Colombia	10	6
(of which men)	52%	45%
Total	136	133
(of which men)	44%	45%

Board of Directors and management	2019	2018
Board of Directors, number of members	4	6
(of which men)	25%	50%
Global Management Committee, number of members	18	15
(of which men)	56%	53%

Salaries, other remunerations and social fees	2019	2018
To the Board members and Executive Director	1 286 500	1 245 500
To other employees	73 067 717	69 986 667
Total	74 354 217	71 232 167
Social fees	26 853 197	27 275 259
(of which pension costs)	(7 670 698)	(8 250 733)
SEK 457 371 of the pension costs relate to the Executive Director		

Salaries and other remunerations by country	2019	2018
Sweden	47 836 852	49 703 728
Thailand	18 057 392	14 635 922
Kenya	5 192 230	5 433 950
Colombia	3 267 742	1 458 567
Total	74 354 217	71 232 167

Terminal benefit

The Executive Director is entitled to a severance settlement amounting to one year's salary.

Note 5: Audit fees

	2019	2018
Audit fee statutory audit (Mazars SET)	244 529	199 225
Audit fees project audits (Mazars SET)	278 084	89 957
Total	522 613	289 182

Note 6: Leasing agreements

Leasing costs	2019	2018
Office premises Stockholm	5 894 544	4 863 740
Office premises Bangkok	1 141 379	694 603
Office premises Nairobi	478 191	448 757
Office premises Bogotá	237 815	228 663
Copy machines	68 080	58 849
Total	7 820 009	6 294 612

Additional information on leasing agreements

Office premises Stockholm

New base office rent from January 2019 is SEK 4 255 200 per year for a total space of 1182 sqm. The agreement includes a clause on index regulation, and is valid until 31 December 2021. There is a fixed discount of SEK 354 600 in 2019 and SEK 177 300 in 2020. Total costs in the agreement include heating, cooling, waste disposal, electricity, archive rent, and property tax. At 31 December 2019 contracted nominal future payments are SEK 9 560 649 excl. VAT and index adjustment.

Office premises Bangkok

New rent from April 2019 is THB 450/month/sqm for a total space of 817.79 sqm. The agreement is valid until 31 March 2024. At 31 December 2019 contracted nominal future payments are THB 18 768 281 (= SEK 5 816 290).

Office premises Nairobi

Rent is USD 31/month/sqm for a total space of 132.13 sqm. The agreement is valid until 30 June 2023. At 31 December 2019 contracted nominal future payments are USD 172 033 (= SEK 1 602 851).

Office premises Bogotá

Rent is COP 49 753/month/sqm for a total space of 145 sqm. The agreement is valid until 30 November 2022. At 31 December 2019 contracted nominal future payments are COP 252 494 200 (= SEK 714 559) excl. index adjustments.

Copy machines

The agreement is SEK 3930 per month excl. VAT. The agreement is valid until November 2020. At 31 December 2019 contracted nominal future payments are SEK 43 230 excl. VAT.

Note 7: Fixed assets

	2019	2018
Gross value		
Opening balance	13 033 630	11 270 867
Acquisitions	1 943 323	1 762 763
Sale	-	-
Discarded	-	-
	14 976 953	13 033 630
Accumulated depreciation		
Opening balance	-9 825 657	-8 725 948
Sale	-	-
Adjustment	-	55 520
Depreciation charged	-1 471 557	-1 155 228
	-11 297 214	-9 825 657
Net book value	3 679 739	3 207 973

Note 8: Result from financial investments

	2019	2018
Interest revenue and expense		
Interest revenue	44 730	47 403
Interest expense	-6 572	-5 915
	38 158	41 488
Exchange rate gains and losses		
Exchange rate gains on balance items	1 451 411	2 494 283
Exchange rate losses on balance items	-2 176 327	-2 858 179
	-724 916	-363 897

Note 9: Tax

	2019	2018
Current tax	-765 731	-387 324
Deferred tax	-	-
Total	-765 731	-387 324
Theoretical tax		
Income before tax	2 935 984	1 292 466
Tax at current tax rate 21.4% (2018 = 22%)	-628 300	-284 343
Reconciliation of effective tax		
Effect of non-deductible expenses	-137 431	-102 981
Effect of tax-exempt income	-	-
Utilization of tax value of loss carryforwards not previously recognized		
Adjustment for taxes pertaining to previous years	-	-
Total	-765 731	-387 324

Note 10: Investments in group companies

Companies/corporate identity number/registered office	Nominal value one share	Number of shares	Share (%)	Book value
SEI Oxford Office Ltd, 4404220, Oxford	£1	100	100	1 439

Note 11: Other long-term receivables

Deposit according to the contract with SEI's landlord Vasakronan Fastigheter, for the duration of the lease of the office premises (currently until 31 December 2021). The deposited amount will earn interest* income which belongs to SEI and will be repaid to SEI together with the deposited amount upon termination of the lease.

*The amount deposited with Vasakronan's bank account with Handelsbanken, with interest currently STIBOR T/N minus 0.6%.

Note 12: Prepaid expenses and accrued income

	2019	2018
Prepaid rent	1 525 364	1 416 708
Advance payments to project partners	5 962 653	3 932 530
Other prepayments	736 836	993 583
Total	8 224 854	6 342 820

Note 13: Advance payments for work in progress

	2019	2018
Work in progress, costs incurred	-761 989 967	-646 343 303
Accrued interest revenue on advances (specified per project)	21 937	44 295
Deductible: advance payments	858 410 532	714 686 059
Total	96 442 502	68 387 051

The balance is reported as a liability, since the advance payments are higher than the accrued income. Interest income, accrued as a general liability on advance payments, is included in Other Liabilities. The advance payments liability includes an amount of SEK 1 146 173 which is part of the Government core grant earmarked

for co-funding (SEK 5 million in 2013, SEK 7 million in 2014, SEK 7 million in 2015, SEK 8 million in 2016, SEK 9 million in 2017, SEK 9 million in 2018, and SEK 9 million in 2019) and allocated to projects but not yet fully utilized according to the principles of accrual.

Note 14: Liabilities SEI centres/affiliated companies abroad

	2019	2018
SEI Tallinn	20 400	626 774
SEI US	3 893 874	3 125 603
SEI Oxford	2 091 251	1 105 862
Total	6 005 526	4 858 240

Note 15: Accrued expenses and deferred income

	2019	2018
Accrued holiday pay	4 601 317	3 425 514
Accrued salaries and social charges	4 018 640	3 934 982
Sundry accruals	2 268 833	1 517 101
Total	10 888 789	8 877 597

Note 16: Pledged assets and contingent liabilities

Pledged assets	2019	2018
Floating charge	1 000 000	1 000 000

Contingent liabilities

According to the agreement* signed with the University of York, describing the co-operation between the SEI Foundation and the University, which is hosting the SEI York, the SEI Foundation undertakes to underwrite all eligible costs of the SEI York, including contribution towards University's administrative costs as agreed. Revenues of SEI York will be set against eligible costs at the end of each academic year and, in the event of shortfall, the SEI Foundation will make payment to the University. The terms of the agreement limit the aggregate liability to GBP 350 000.

* Agreement valid for an initial period of 1 August 2016 to 31 July 2017, and continuing thereafter unless and until terminated by one party giving to the other party not less than 12 months' notice.

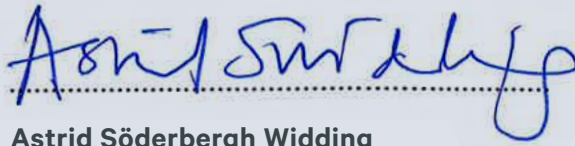
Stockholm 2020-03-24



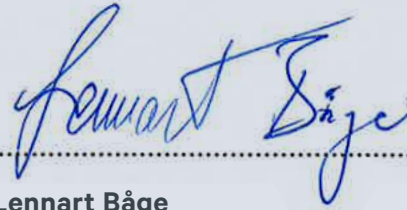
Kerstin Niblaeus
Chair



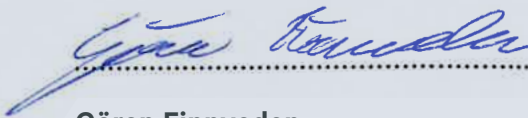
Ingrid Petersson



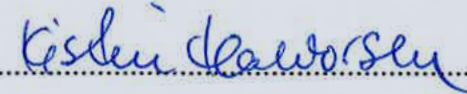
Astrid Söderbergh Widding



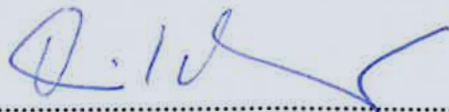
Lennart Båge



Göran Finnveden



Kristin Halvorsen



Dirk Messner

Our audit report was submitted 2020-05-28



Håkan Sten
Authorized Public Accountant



Fredrik Gunnarsson
The Swedish Research Council (Vetenskapsrådet)

AUDITOR'S REPORT

To the board of Foundation Stockholm Environment Institute
Corporate identity number 802014-0763

Report on the annual accounts

Opinions

We have audited the annual accounts of Foundation Stockholm Environment Institute for the year 2019. The annual accounts of the foundation are included in the printed version of this document on pages 42-62.

In our opinion, the annual accounts have been prepared in accordance with the Annual Accounts Act and present fairly, in all material respects, the financial position of Foundation Stockholm Environment Institute as of 31 December 2019 and its financial performance and cash flow for the year then ended in accordance with the Annual Accounts Act.

Basis for Opinions

We conducted our audit in accordance with International Standards on Auditing (ISA) and generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the *Auditor's Responsibilities section*. We are independent of Foundation Stockholm Environment Institute in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Other Information than the annual accounts

The Board of Directors and the Executive Director are responsible for the other information on pages 1-39. The other information comprises of SEI Global Annual Report.

Our opinion on the annual accounts does not cover this other information and we do not express any form of assurance conclusion regarding this other information.

In connection with our audit of the annual accounts, our responsibility is to read the information identified above and consider whether the information is materially inconsistent with the annual accounts. In this procedure we also take into account our knowledge otherwise obtained in the audit and assess whether the information otherwise appears to be materially misstated.

If we, based on the work performed concerning this information, conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of the Board of Directors and the Executive Director

The Board of Directors and the Executive Director are responsible for the preparation of the annual accounts and that they give a fair presentation in accordance with the Annual Accounts Act. The Board of Directors and the Executive Director are also responsible for such internal control as they determine is necessary to enable the preparation of annual accounts that are free from material misstatement, whether due to fraud or error.

In preparing the annual accounts, The Board of Directors and the Executive Director are responsible for the assessment of the

foundation's ability to continue as a going concern. They disclose, as applicable, matters related to going concern and using the going concern basis of accounting. The going concern basis of accounting is however not applied if the Board of Directors and the Executive Director intends to liquidate the foundation, to cease operations, or has no realistic alternative but to do so.

The authorized auditor's responsibility

My objectives are to obtain reasonable assurance about whether the annual accounts as a whole are free from material misstatement, whether due to fraud or mistakes, and to issue an auditor's report that includes my opinions. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs and generally accepted auditing standards in Sweden will always detect a material misstatement when it exists. Misstatements can arise from fraud or mistakes and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these annual accounts.

As part of an audit in accordance with ISAs, I exercise professional judgment and maintain professional scepticism throughout the audit. I also:

- Identify and assess the risks of material misstatement of the annual accounts, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for my opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of the foundation's internal control relevant to my audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the foundation's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors and the Executive Director.
- Conclude on the appropriateness of the Board of Directors' and the Executive Director's use of the going concern basis of accounting in preparing the annual accounts. We also draw a conclusion, based on the audit evidence obtained, as to whether any material uncertainty exists related to events or conditions that may cast significant doubt on the foundation's ability to continue as a going concern. If I conclude that a material uncertainty exists, I am required to draw attention in my auditor's report to the related disclosures in the annual accounts or, if such disclosures are inadequate, to modify my opinion about the annual accounts. My conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the foundation to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the annual accounts, including the disclosures, and whether the annual accounts represent the underlying transactions and events in a manner that achieves fair presentation.

I must inform the Board of Directors of, among other matters, the planned scope and timing of the audit. I must also inform of significant audit findings during my audit, including any significant deficiencies in internal control that I identified.

Lay auditor's responsibility

I have conducted the audit in accordance with generally accepted auditing standards in Sweden. My objectives are to obtain reasonable assurance about whether the annual accounts are prepared of the annual accounts and that they give a fair presentation in accordance with the Annual Accounts Act.

Report on other legal and regulatory requirements

Opinions

In addition to our audit of the annual accounts, we have also audited the administration of the Board of Directors and the Executive Director of Foundation Stockholm Environment Institute for the year 2019.

In our opinion the Board Members and the Executive Director have not acted in contravention of the Foundations Act, the Foundations Ordinance or the Annual Accounts Act.

Basis for Opinions

We conducted the audit in accordance with generally accepted auditing standards in Sweden. Our responsibilities under those standards are further described in the *Auditor's Responsibilities section*. We are independent of Foundation Stockholm Environment Institute in accordance with professional ethics for accountants in Sweden and have otherwise fulfilled our ethical responsibilities in accordance with these requirements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions.

Responsibilities of the Board of Directors and the Executive Director

The Board of Directors and the Executive Director are responsible for the administration under the Foundations Act and the Foundations Ordinance.

The authorized auditor's responsibility

My objective concerning the audit of the administration, and thereby my opinion about discharge from liability is to obtain audit evidence to assess with a reasonable degree of assurance whether any member of the Board of Directors or the Executive director in any material respect:

- has undertaken any action or been guilty of any omission which can give rise to liability to the foundation, or
- in any other way has acted in contravention of the Companies Act, the Annual Accounts Act or the Articles of Association.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with generally accepted auditing standards in Sweden will always detect actions or omissions that can give rise to liability to the foundation.

As part of an audit in accordance with generally accepted auditing standards in Sweden, I exercise professional judgment and maintain professional scepticism throughout the audit. The examination of the administration is based primarily on the audit of the accounts. Additional audit procedures performed are based on my professional judgment with starting point in risk and materiality. This means that I focus the examination on such actions, areas and relationships that are material for the operations and where deviations and violations would have particular importance for the foundations situation. I examine and test decisions undertaken, support for decisions, actions taken and other circumstances that are relevant to my opinion concerning discharge from liability.

Stockholm 2020-05-28



Håkan Sten
Authorized Public Accountant



Fredrik Gunnarsson
Lay Auditor

Image credits

Cover Getty | Sean Gallup/Staff.

Page 02 Getty | Monty Rakusen.

Page 07 Getty | Nazar Abbas Photography.

Page 09 Getty | Hadynyah.

Page 09 Noraset Kunjara Na Ayudhya.

Page 10 SEI.

Page 11 Surajet Chingnawan.

Page 13 Getty | Khadija Farah.

Page 14 Getty | Spencer Platt.

Page 22 Getty | Thomas Winz.

Page 27 Karina Barquet.

Page 29 Natalia Biskupska.

Page 29 Natalia Biskupska.

Page 31 Anneli Sundin/SEI.

Page 33 Sarah Dickin.

Page 34 Charles Heaps.

Page 35 Charles Heaps.

Page 36 Alon Mwesigwa.

Page 37 Howard Cambridge.

Page 37 Alon Mwesigwa.

Page 39 Getty | Kristoffer Vaikla.

Page 41 Getty | Agnormark.

Page 42 Getty | Ruben Earth.

The Stockholm Environment Institute is an international non-profit research and policy organization that tackles environment and development challenges.

We connect science and decision-making to develop solutions for a sustainable future for all.