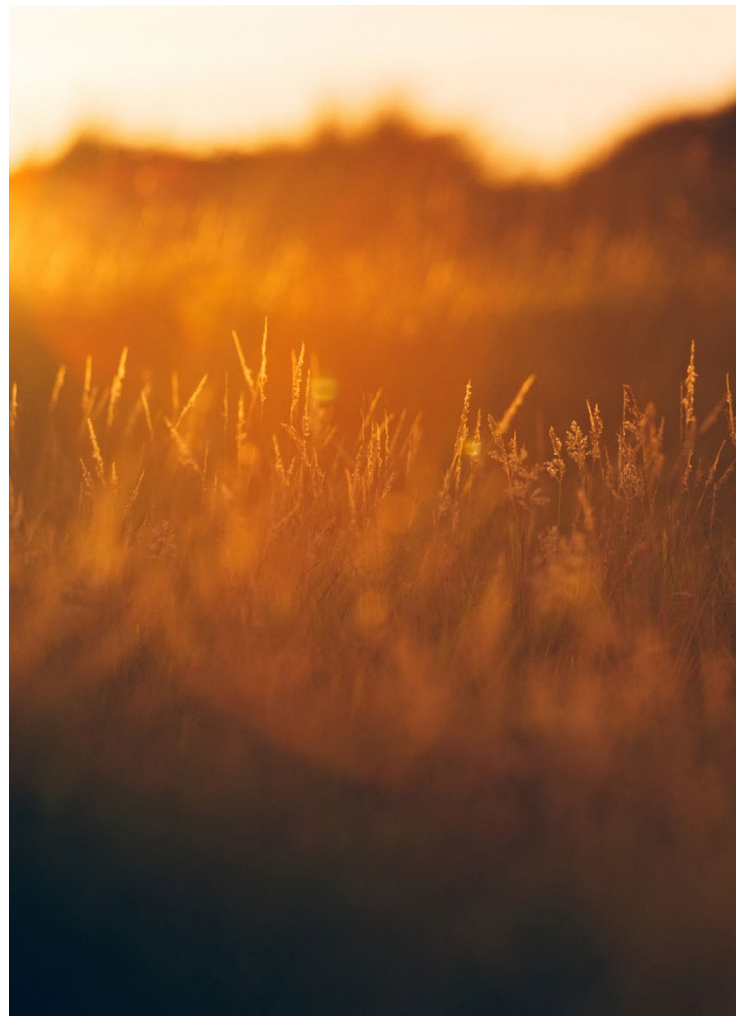


Environmental and Climate Cooperation Funded by Allocation 1:13

Annual Report for 2021

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Annual Report for 2021

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Preface

Sweden needs to engage in international cooperation to achieve the Swedish Environmental Quality Objectives and the Generational Goal, to contribute to the Sustainable Development Goals under Agenda 2030 and to meet the objectives of international environmental and climate conventions.

In this report the Swedish Environmental Protection Agency (Swedish EPA) presents the environmental and climate cooperation with strategic countries, regions and partner agencies, funded by a specific allocation of government funding for environmental cooperation with countries and regions that have a significant impact globally on the environment and climate. Other agencies participating in bilateral cooperation in addition to the Swedish EPA are the Swedish Agency for Marine and Water Management (SwAM), the Swedish Chemicals Agency (KemI), and the Swedish Meteorological and Hydrological Institute (SMHI). The Council of the Baltic Sea States (CBSS) and Stockholm Environment Institute (SEI) also hold activities funded by the allocation. The appropriation item for 2021 totalled SEK 34.4 million. The Swedish EPA, SwAM, KemI and SMHI participate in more forms of international collaboration than those described here. This report only covers cooperation funded by this allocation.

Sweden has used the allocated funds to engage with partner countries to reduce countries' negative impact on the environment, not least through reducing greenhouse gas emissions. The agencies under the allocation cooperates mainly with the major economies of Brazil, Russia, India, Indonesia, China and South Africa (BRIICS). These countries have extensive manufacturing industries that supply products both for domestic consumption and for the global market. These populous countries have a large impact on the use of global resources and emissions and are therefore important actors to cooperate with. Swedish agencies in the environmental field have skills and experience to share with others to accelerate the global transition to a sustainable society. In 2021, there has been a focus on marine spatial planning, transport-efficient communities, waste prevention and development of national chemicals legislation. During the year, the Swedish agencies under this allocation have collaborated bilaterally with Argentina, Brazil, India, Indonesia, China, Russia, South Africa, South Korea, the United States and Vietnam. Several activities have also been conducted within the Arctic Council, Barents Euro-Arctic Council, and the Council of the Baltic Sea States. This report concerns activities in 2021, and for activities from March 2022, all collaboration with Russia has been suspended until further notice due to Russia's invasion on Ukraine.

The Swedish agencies are contributing to activities of significant importance to promote sustainable development and to support environmental and climate efforts – both in Sweden and around the world. Our cooperation is based on openness, patience, and a long-term approach. The corona pandemic has contributed to the digital transition, with new methods and platforms for meetings and knowledge exchange. The rapid transition to digital ways of working has come with both challenges and opportunities for development. We are now better equipped to work in a more travel free manner – even though in-person meetings are still an important part of the projects for understanding local conditions.

The work of the Swedish EPA and of our colleagues and partners in Sweden and around the world is making a difference. This specific government funding came about in 2013, and since then, we have seen that strengthened environmental authorities, improved legislation and effective implementation are key to reaching the environmental objectives in Sweden and thus for limited climate change, improved quality of the environment and a more sustainable world.

Stockholm, September 2022

Björn Risinger
Director-General

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Bilateral cooperation

The four Swedish agencies under the government allocation 1:13 collaborate bilaterally with countries of strategic importance for global environment and climate. We present here collaborations during 2021 with Argentina, Brazil, Colombia, India, Indonesia, China, Russia, South Africa, South Korea, Taiwan, the United States and Vietnam.



Argentina

The Swedish Chemicals Agency (KemI)



KemI works together with Argentina to develop the country's chemicals legislation. Argentina is a major producer of agricultural products and a large user of biocides. The country is reviewing legislation in this area and taking note of Sweden's experience with biocides. In 2021, two digital seminars on biocide risk assessment focused on the use of environmental modelling. Those attending included individuals from public agencies and institutions in Argentina involved in the country's approval process, Swedish researchers at the Swedish University of Agricultural Sciences and experts from KemI. The exchange of knowledge strengthens the capability to assess biocide risks. The biocide approval process also provides more effective protection for health and the environment.



Brazil

Swedish Agency for Marine and Water Management (SwAM)



SwAM cooperates with Brazil on marine spatial planning and monitoring of threatened marine mammals. The collaboration on marine mammal protection, focusing on the Brazilian La Plata dolphin and porpoises in the Baltic Sea, formally concluded at the end of 2020. In 2021, several discussions took place to disseminate and discuss the results of the research project with a broader stakeholder group in Brazil and Sweden. The collaboration has contributed to greater understanding of conservation status and the need for protection for both species. In Brazil, the University of the Region of Joinville has continued to cooperate with agencies with the aim of applying the project results in the management and protection of the La Plata dolphin.

Brazil has started to develop marine spatial plans and SwAM is collaborating on several projects in this area. These include a planning initiative together with the Embassy of Sweden in Brasilia and UNESCO in the large coastal area belonging to Suape Port in the state of Pernambuco. SwAM assisted with preparatory work before the planning began during 2021.

**Convention
on Biological
Diversity (CBD)**

**United Nations
Framework
Convention on
Climate Change
(UNFCCC)**



The Swedish Chemicals Agency (KemI)



KemI has had a long-standing collaboration with Brazil, primarily the Ministry of Health, on developing the country's chemicals legislation. Due to political priorities of the opposition party collaboration is currently limited, and in 2021 the coronavirus pandemic also impacted the work. Planned training sessions could not be fully implemented, but representatives from KemI and the Swedish EPA conducted a digital seminar on health-related environmental monitoring. The seminar presented experiences from Sweden and the EU about organising and using monitoring and its role in preventive chemical control. KemI expects the exchange of experience to lead to improved health-related environmental monitoring in Brazil, which contributes to more effective preventive chemical control. In addition, good relations with officials of the ministry and public authorities in Brazil have been created and maintained.

Exchange of knowledge and experience on environmental monitoring is expected to contribute to improved health-related environmental monitoring in Brazil, enabling more effective preventive chemicals management in the country

Swedish Environmental Protection Agency (Swedish EPA)



The Swedish EPA has long collaborated with the Brazilian Ministry of the Environment, the federal environment agency and stakeholders in the private, academic and municipal sectors. Collaboration has focused on sustainable waste management and a resource-efficient society.

Two projects focusing on food waste were conducted in 2021. Through training, waste sample analyses and workshops, agencies, municipalities and individuals have learned more about food waste. This knowledge makes it possible to use food more efficiently and reduce food waste. For example, leftover food can be distributed to food banks and help reduce famine. At the same time, it contributes to the global goal of cutting per person food waste in half in shops and among consumers by 2030. Reducing food waste is also crucial for reducing emissions of the greenhouse gas methane, which occurs when food waste decomposes.

Brazilian law requires all municipalities to have a waste plan, and the Swedish EPA conducts training in waste planning for this purpose. In 2021, participants from 15 municipalities learned more about how to develop a waste plan. The course participants also learned how to train colleagues, known as training of trainers, and serve as intermediary providers of information. The effort has resulted in more municipalities in Brazil establishing waste plans and meeting the legal requirement. A waste plan, in turn, contributes to more resource-efficient waste management, which reduces the environmental impact of waste.

A larger number of municipalities in Brazil now have waste plans in place, contributing to reduced environmental impact from waste

Swedish Meteorological and Hydrological Institute (SMHI)



In Brazil, the SMHI works together with the municipality of Fortaleza on issues related to air quality and climate adaptation. As the climate continues to become warmer, tropical big cities in Brazil need to plan to reduce heat stress on populations from heatwaves, especially in marginalised neighbourhoods. Existing data shows how different types of urban planning approaches affect the climate and how green infrastructure can increase urban heat resilience. Urban planners have received better supporting data needed for creating an urban environment adapted to a warmer climate using green infrastructure and other measures that can reduce vulnerability to future heatwaves.

In the field of air quality, Brazil is in the process of introducing tougher legislation on permissible levels of fine particulate matter (PM_{2.5}), but it lacks information on the prevailing levels and what sources most need to be controlled. By collecting data and evidence, SMHI's collaboration has resulted in greater knowledge of how urban design affects the air pollutants to which the population is exposed, which sources contribute to particulate pollution and the current levels in Fortaleza. The goal is to make it possible to identify appropriate measures that contribute to reducing air pollution and contribute to efforts to ensure more sustainable tropical cities and communities.



Colombia

Swedish Meteorological and Hydrological Institute (SMHI)



In Colombia, SMHI cooperates with environmental authorities, industry and universities in the Cali metropolitan region in the state of Valle del Cauca on emissions of fine particles and soot's impact on air quality. The collaboration aims to develop a technique to demonstrate how different sources contribute to regional levels of fine particles and soot in the region. In the first half of 2021, SMHI was able to present an updated and more accurate model simulation to complete bilateral collaboration in the region. The results were presented in a digital seminar.

One overall conclusion is the necessity of focusing on industrial emissions in enacting measures to reduce emissions. Although traffic's contributions to total emissions is smaller in absolute terms, its contributions predominate in the densely populated metropolis of Cali. As a result, older vehicles producing large emissions should be phased out. Burning of sugar cane fields mainly affects outlying areas rather than inside Cali, but it should still be reduced because it results in significant absolute emissions. SMHI's three partners and other stakeholders, especially sugar cane farmers' interest groups and various universities, have shown great interest in the project and thanked SMHI and Sweden for their collaboration. The authorities have used SMHI's findings as a basis for changing the air environment monitoring system in the Cali region (SVCAC). SMHI has also been asked to make recommendations to the city of Barranquilla, which in 2022 will begin a project on soot measurements in the urban environment.





India

Swedish Environmental Protection Agency (Swedish EPA)

Sweden and India have had a memorandum of understanding in the environmental field since 2009. The Swedish EPA has been collaborating with the environmental organisation Centre for Science and Environment (CSE) since 2012 to train environmental officials from state level environmental agencies throughout India in environmental management and governance. The collaboration aims to contribute Swedish environmental expertise, increase the capacity of Indian environmental officials and ultimately contribute to more effective environmental work and a better environment. Through the training sessions in which representatives from the Swedish EPA lecture, environmental officials gain better knowledge of environmental management and can develop more effective and appropriate management methods. The Swedish EPA also strives to disseminate the good examples of environmental management to which the training contributes.

Through the training courses that the Swedish EPA provides to officials from environmental agencies throughout India, the officials gain better knowledge of environmental governance and can develop working methods for a more efficient and effective management



Indonesia

Swedish Agency for Marine and Water Management (SwAM)

Indonesia has expressed a desire to collaborate with SwAM on its blue economy strategy, having identified SwAM as an important Swedish participant. Initial talks on collaboration with Indonesia were held in 2021. SwAM participated during the Sweden-Indonesia Sustainability Partnership Week, when the public agency disseminated lessons learned from Sweden's work on the blue economy and water and marine spatial planning. The agency also participated during a state visit to Sweden

by Indonesia's Ministry of National Development Planning (BAPPENAS), when discussions took place on the blue economy theme. The meeting inspired continued discussions with an emphasis on mutual learning, and the intention is to accelerate collaboration in 2022.

Swedish Environmental Protection Agency (Swedish EPA)

In the field of environmental monitoring, Indonesia has inquired whether Sweden can assist in the development of an emission register. The collaboration is in the start-up phase. In 2021, the Swedish EPA had initial contacts with the Indonesia directorate for the management of hazardous and toxic substances under the Ministry of Environment and Forestry (MoEF). A first draft of a strategic roadmap for the development of an emission register has been developed in consultation with the directorate.



China

Swedish Agency for Marine and Water Management (SwAM)

SwAM collaborates with China through the China-Europe Water Platform (CEWP). The platform provides an important forum for water-related collaboration between the EU and China in policy discussions, research and business promotion. In 2021, the necessary international expertise and experience for the authority have been identified, which has fostered mutual learning.

SwAM heads a project within CEWP on sustainable hydropower that in 2021 led to increased exchange of knowledge and experience between the agency and other partners regarding sustainable hydropower and its role in the energy transition. The work on integrated water and marine management has expanded the exchange of knowledge and experience between the agency and the Chinese collaboration organisations involved in developing and implementing more holistic water resource management from source to sea. The authority's participation within the platform has been instrumental in developing broad collaboration with China for mutual learning. These issues have been a high priority in national efforts, and the platform has proven to be very valuable in enabling collaboration and discussions both with China and with other EU countries.





Swedish Environmental Protection Agency (Swedish EPA)

The Swedish EPA serves as the focal point for Sweden's participation in the think tank China Council for International Cooperation on Environment and Development (CCICED). The council is both a strategic international forum for the development of Chinese policy and a platform for Sweden's policy discussions and collaboration with China on the environment. In 2021, experts from the Swedish EPA and the Stockholm Environment Institute were involved in a study on sustainable production and consumption. Based on the study, recommendations were made to the government of China for expanded producer responsibility, life cycle analysis for products and emissions reduction in industry, among other things. The goal of studies of this type is to provide supporting data that can influence well-founded policy decisions in China. A current example is the commitment by China to cease its foreign investments in coal-fired power, which was one of the proposals of the policy study *Global Climate Governance and China's Role*.

The Swedish EPA has provided input to recommendations for sustainable production and consumption to the China Council, which have been presented to the Chinese government

Discussions underway aim to identify and initiate future collaboration with China on issues like emissions trading, waste management and biogas. Sweden leads the way in using organic waste to produce biogas for vehicles. In the framework of collaboration with China, in 2021 the Swedish EPA inquired the Swedish Environmental Research Institute to produce a report in English summarising Swedish experiences, with a focus on policy and instruments in the biogas field. This could form the basis for continued work to identify collaboration in the field in 2022.



Russia

Swedish Agency for Marine and Water Management (SwAM)

SwAM's collaboration with Russia has contributed to coordination and development regarding the ongoing process of the Baltic Sea countries in developing national marine spatial plans. Several Baltic Sea countries have adopted a declaration to implement the UN's international guidelines for marine spatial planning. The declaration recommends Russia to include marine spatial planning in its existing coastal zone planning system and complete a detailed plan for marine spatial planning of its marine areas.

Commissioned by SwAM, a source-to-sea study was carried out in 2019 that focused on Russia's Luga River, which flows into the Baltic Sea. The Russian agencies have gained better knowledge of how source-to-sea management of the rivers flowing into the Baltic Sea can be planned and implemented to reduce the problems of eutrophication and emissions of environmentally hazardous substances. The results of the study were presented in the context of Baltic Sea Days, when the study's recommendations won broad support from Russian agencies and interest groups. As a result, two new project proposals have been developed to incorporate the recommendations.

Efforts to expand the number of marine protected areas in the Gulf of Finland have increased knowledge in the Russian Ministry of Natural Resources and the Environment about marine area protection and what measures should be implemented to reduce the risks of eutrophication from agriculture and emissions of environmentally hazardous substances from industries. The new knowledge has been applied in the planning of additional marine protected areas in the national waters of Russia and the exclusive economic zones of the other Baltic Sea countries concerned.



Swedish Environmental Protection Agency (Swedish EPA)



The Swedish EPA cooperated in 2021 with Russia's Ministry of Natural Resources and the Environment on several important environmental issues. In the area of climate, the Swedish EPA is conducting a project aimed at improving the ability of Russia and Sweden to achieve, through policies and instruments, the Paris Agreement's emission targets. In 2021 a joint webinar on air quality and climate impacts was held together with the Lipetsk and Moscow environmental administrations.

To reduce emissions from Russian industrial enterprises and increase their resource efficiency, for several years the Swedish EPA has been supporting the process of introducing best available technologies (BAT) as a necessary condition for issuing environmental testing permits in Russia. In 2021 Swedish experts lectured at Russian webinars and provided expert support in connection with the examination of permit applications at facilities. BAT training programmes have also begun to be rolled out for several companies and trade associations in Russia. The work has resulted in introduction of the Russian BAT-adapted examination of permit applications system at several companies and understanding of the system has begun to be established.

Following discussions on continued pilot activities concerning waste and sustainable urban development in Volgograd and Nizhny Novgorod counties, it was decided not to proceed with the projects. On the other hand, the Swedish EPA cooperates with the City of Moscow in the same area for greater involvement in C40¹ and other international networks for sustainable cities. The Swedish EPA has been a welcome participant at the recurring climate forum in Moscow and at other events with broad and significant interfaces for Russian climate discussions.

Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention)

Convention on Biological Diversity (CBD)

Convention on Long-Range Transboundary Air Pollution (CLRTAP)

United Nations Framework Convention on Climate Change (UNFCCC)

¹ C40 is a network of mayors from nearly 100 world-class cities working together to take climate action.



South Africa

Swedish Agency for Marine and Water Management (SwAM)



SwAM works with South Africa's agency for marine environment issues for joint learning in marine spatial planning, source-to-sea management and environmental monitoring. The collaboration was formalised in 2021 through a five-year technical partnership agreement aimed at providing the knowledge needed by the public agencies.

Through their collaboration, the maritime planning institutions of Sweden and South Africa have learned from each other's methods, technology and ecology. South Africa also actively participates in regional collaboration in the western Indian Ocean aimed at developing a regional version of Symphony, the Swedish cumulative environmental assessment tool.

In collaboration with the Stockholm International Water Institute, several workshops were organised in 2021 to disseminate and discuss the results of a completed study on the management of plastic pollution. This contributed to better understanding of how the source-to-sea approach can be used to enable more effective environmental work by SwAM and South African partners, especially in implementing the country's national action plan for the management of marine waste. In international forums, SwAM has also highlighted South Africa as an example of a country where the source-to-sea approach is used to deal with marine waste. A new study for completion in 2022 will calculate the economic and social costs of not dealing with plastic pollution, which currently lacks effective management in the country.

Nairobi
Convention



The Swedish Chemicals Agency (KemI)



KemI works with South Africa to strengthen the country's chemical controls and introduce the United Nations' Globally Harmonised System of Classification and Labelling of Chemicals (GHS) in legislation. The agency's work has contributed to South Africa's publication in March 2021 of the regulation introducing the seventh edition of GHS into health and safety legislation. In 2021, about a hundred South African officials in several departments attended three digital training sessions, leading to improved knowledge among occupational health and safety inspectors and employees, among others. The increased knowledge improves regulatory compliance and safety for employees at companies. Small and medium-sized companies receive the support they need to understand and apply the new rules. This in turn leads to greater acceptance and a higher level of regulatory compliance.

The UN Globally Harmonised System of Classification and Labelling of Chemicals, which is a cornerstone of good chemicals management, has now been incorporated into South Africa's legislation

The EU Chemicals Strategy highlights well-implemented chemical legislation and implementation of GHS as an overall factor in achieving the global Sustainable Development Goals. The long-term objective is to also introduce GHS in legislation by departments responsible for the environment, agriculture, transport and consumer health.

Swedish Environmental Protection Agency (Swedish EPA)



Since 2015, the Swedish EPA has cooperated on waste with South Africa's Department of Environment, Forestry and Fisheries (DEFF). In autumn of 2021, Sweden and South Africa signed a memorandum of understanding on the environment and climate. This formalised the collaboration.

South Africa lacks an organised system for collecting hazardous waste from households. As a result, the Swedish EPA is working on a pilot project with the city of East London in the Buffalo City Metropolitan Municipality to organise test collection of such waste. The project can form the basis for large-scale collection throughout the municipality and serve as a good example for other municipalities in the country. Planning for the test collection continued in 2021, and the launch is planned for February 2022.

During the year, the Swedish EPA supported South Africa on their development of a national strategy for hazardous household waste. A socio-economic analysis and two workshops have been conducted. These have since been the basis for defining the strategy. The work has resulted in a report that serves as the starting position of the project. In the long term, the project aims to reduce leakage of hazardous substances and chemicals into soil and water from landfill, contributing to sustainability goals linked to clean water and sanitation and to the goal of good health.

Basel
Convention

Minamata
Convention
on Mercury



Swedish Meteorological and Hydrological Institute (SMHI)

SMHI collaborates with South Africa's counterpart in the country, South African Weather Services (SAWS), to improve air quality in the country. One result of this effort has been improvement in South Africa's air quality models. SMHI has specifically worked on improvements to emissions of particles from natural sources and on methods to improve model results, despite a lack of measurement data. The agency has also analysed ways of estimating wood burning emissions and uncertainties in



the estimates. Understanding of the health effects of air pollution also has been enhanced. The agency has worked on comparing methodology for exposure estimates and epidemiological surveys for air pollution.

SMHI cooperates with several water management stakeholders in South Africa. A new project in 2021 examined the release of pollutants into water from cities. SMHI also collaborates with SwAM on plastic waste initiatives. This collaboration has resulted in a better understanding of the sources of plastic littering, making it possible to design measures better adapted to reducing emissions. In addition, SMHI contributes technical support through a local management tool adapted to the Umgeni River and its immediate area and through a tool at the national level that contributes to large-scale planning and assessment. The latter tool supports the decision-making processes of the South African Department of Environmental Affairs, where it is used to develop scenarios for water shortages and droughts resulting from climate change. As such, it serves as decision-making support for national water and marine environment legislation.

Technical support from SMHI contributes to the design of climate adaptation measures for the South African Department of Environmental Affairs



South Korea

The Swedish Chemicals Agency (KemI)

South Korea has adopted new laws for chemicals and biocidal products that largely conform with corresponding EU legislation. KemI's collaboration with the South Korean Ministry of Environment primarily aims to provide support and contribute Swedish experience and expertise. The deputy director at the Chemical Products and Biocides Division at the Ministry of Environment has been granted a stipend to study Swedish policy and work in the field of chemicals. The stipend holder completed his internship at KemI in 2021. The intern has become well versed in Swedish environmental and chemical policy and Sweden's role in the EU and how KemI conducts work for safe chemical control.

Lessons from the internship will benefit both parties, including better equipping South Korea to implement its own chemicals legislation and safe chemical management nationally. In the longer term, the project contributes to improved chemical control globally by implementing effective legislation by a country with high chemical production and production of goods exported to other countries.

Experience and knowledge sharing from KemI will benefit South Korea in the implementation of its new laws on chemicals and biocidal products



Taiwan

The Swedish Chemicals Agency (KemI)

KemI cooperates with Taiwan, which has formulated a chemical law in recent years and formed a chemical agency. The agency wants to improve its procedures and processes in connection with the new legislation. It has identified a need to strengthen its competence in oversight, risk assessment and work on biocides. In 2021 the work consisted of an exchange of experience, and parts of a Swedish report on chemical supervision, organisation and funding have been translated into English and shared with the Taiwan agency.



Activities within the collaboration result in greater understanding among officials about how chemical control can be funded nationally and Sweden's views on the issue. Good relations with the agency are also maintained and developed through the collaboration. By sharing experience, the above initiatives aim both to increase Taiwan's understanding of preventive chemical control and to provide the conditions for designing good legislation in the field. This contributes to the reduction of risks from chemical use and, in the long term, to achieving national and international sustainability goals of a non-toxic environment and safe chemical management.



USA

Swedish Agency for Marine and Water Management (SwAM)



For two years, SwAM has cooperated on ocean history with partners in California, primarily the U.S. National Oceanic and Atmospheric Administration (NOAA). Sweden aims to work with ecosystem-based management. This can be promoted by better understanding historical interactions between humans and the ocean. As part of the collaboration, a report² was produced describing the how natural history can be used to strengthen maritime and water management. Open seminars were conducted in 2021 to disseminate the results. There were also several bilateral and national discussions on how to put the report's findings into practice. It was decided to complete an analytical framework, what was highlighted in the report, and apply it to several subject areas in Sweden, California and a couple of other parts of the United States.

In addition to direct collaboration with U.S. partners, the Swedish committee of the United Nations Food and Agriculture Organisation (FAO) has requested an article describing the potential of using knowledge about the history of the ocean for better management. The text, which was written in collaboration between SwAM and the Swedish Board of Agriculture, was published in the FAO committee's journal in conjunction with the UN's Stockholm+50 Conference in 2022.



² Link to the report: [On potential use of historical perspectives in Swedish marine management](#)

Swedish Environmental Protection Agency (Swedish EPA)



The Swedish EPA has cooperated with the state of California since 2017, when Sweden signed a letter of intent with the governor of California. With the overall objective of combating climate change, collaboration centres on the exchange of knowledge and experience in efforts to promote efficient emissions trading and a transport-efficient society.

Within emissions trading, six working groups were formed in 2021. Talks and exchanges of experience within the groups increase knowledge in such areas as the extent of emission trading; carbon capture and storage (CCS); monitoring, reporting and verification of emissions; incentives for a fossil-free industry; price and market stability; and biofuels. This involves important exchanges of experience within the Swedish EPA's analysis of the emission trade-related elements of the European Commission's "Fit for 55" package and the management of biofuels within California's emission trading system.

In the beginning of the year, the project commissioned a study on policy instruments to achieve a transport-efficient society. Both the Swedish EPA and its California partner discussed and benefited from the study's findings. For example, lessons from the study have been used by the Swedish EPA in connection with a government inquiry into coordination for increased and sustainable housing construction and within the Climate Law Inquiry on low-transport housing planning, where the Swedish EPA has an expert role. This work contributes to both national and international sustainability goals, such as goal 11 sustainable cities and communities.

Knowledge obtained through the Swedish EPA's cooperation with California on a transport-efficient society has been applied in a Swedish context



Vietnam

The Swedish Chemicals Agency (KemI)



KemI supports Vietnam's chemicals agency with development and practical implementation of the country's chemicals legislation. The aim is to achieve national and international sustainability goals of a non-toxic environment and safe chemical management. In 2021 work continued with a focus on updating chemicals legislation and the introduction of the United Nations Globally Harmonised System for Classification and Labelling of Chemicals (GHS). Discussions explored how Vietnam's chemicals agency plans to involve industry through seminars, questionnaires and other means. Supporting the agency in its implementation contributes to more effective legislation and more effective protection of human health and the environment. Eco-friendly management of chemicals and all types of waste throughout their life cycle and reduced emissions to air, water and soil minimise negative impacts on human health and the environment. Updating of GHS facilitates trade through harmonised classification and labelling.

Regional, multilateral and thematic collaboration

Regional collaborations in the Arctic and Barents region as well as the Baltic Sea aim to accelerate green transition in Sweden's immediate area, where emissions and environmental impacts can significantly affect Sweden's ability to achieve Sweden's environmental quality objectives. Collaborations also take place within other strategic platforms where our work is widely distributed.



Arctic Council

Swedish Environmental Protection Agency (Swedish EPA)

The Swedish EPA represents Sweden in three of the Arctic Council's six working groups: the Arctic Monitoring and Assessment Programme (AMAP) working group, the Conservation of Arctic Flora and Fauna (CAFF) biodiversity working group and the Arctic Contaminants Action Programme (ACAP) working group. Sweden's term as chair of AMAP and CAFF ended in 2021, and it was appointed vice-chair of ACAP and AMAP. Sweden's participation in AMAP and CAFF is mainly funded by other allocations than 1:13.

The Swedish EPA heads the work of ACAP's expert group on persistent organic pollutants and mercury and participates through experts in the working groups on waste and short-lived greenhouse gases. All ACAP's expert groups work on developing and implementing pilot action projects in the respective specialist area. A pilot action project to limit soot and methane emissions in the Russian Arctic was completed in 2021. The project contributed an analysis of the technological and climate potential and the regulatory conditions for reducing methane emissions and other greenhouse gases associated with natural gas extraction.

For several years within ACAP, The Swedish EPA has directed special support to the expert group for the Action Plan for Indigenous Peoples to combat environmental toxins and to support the Saami Council's participation in the group. In 2021, the clearing of illegal landfills around Saami settlements on the Kola Peninsula continued, as did preparations for oil spill clean-ups. The project of the Circumpolar Local Environmental Observer Network (CLEO) contributed a report to the 2021 Arctic Council Ministerial Meeting.

Stockholm Convention

Minamata Convention on Mercury

Convention on Biological Diversity (CBD)

United Nations Framework Convention on Climate Change (UNFCCC)

The Swedish EPA directs special support to the Saami Council's participation in the expert group for the Action Plan for Indigenous Peoples, which in 2021 continued the work of clearing illegal landfills around Saami settlements on the Kola Peninsula







Barents Council

Swedish Environmental Protection Agency (Swedish EPA)



In the Barents region, Finland, Norway, Russia and Sweden normally cooperate through the Barents Council's environmental working group. They aim to develop environmental management and identify investments and support projects to address the Barents region's environmental problems, particularly those linked to climate change, biodiversity loss and pollutants.

In the process of cleaning up particularly polluted areas, known as hotspots, work continued effectively in 2021. Independent experts from all countries have collectively reviewed and discussed environmental reports and designed support efforts linked to various hotspots. The Swedish EPA anticipate that at least two of them will be ready for removal from the hotspot list in 2023. Russian partners from the collaboration also plan to conduct continuing industry seminars on strengthening the capacity of industries in other parts of Russia as well. In doing so, the work has achieved a spill over effect in the country, contributing to the ultimate objective of emission reduction, cleaning up hotspots and systematic environmental work among environmental agencies and companies in the Barents region and throughout Russia.

Two ongoing nature conservation and water projects during the year concerned databases covering animal and plant species and invasive species, respectively, in the Barents region. The results of the initiatives will be disseminated in the future through networks and web pages. The Swedish EPA launched an effort in 2021 to support the implementation of the Barents climate plan. Through an enhanced emissions inventory at the regional level and knowledge sharing on policy instruments and action planning, the aim is to strengthen the Swedish and Russian Barents counties' abilities to establish and achieve emission targets in line with the Paris Agreement.

Convention on Long-Range Transboundary Air Pollution (CLRTAP)

United Nations Framework Convention on Climate Change (UNFCCC)

Basel Convention

Convention on Biological Diversity (CBD)

Strengthened chemical and waste management



In the 2020 spring budget and in the 2021 annual budget, initiatives in the area of chemical and waste management was earmarked. Some of these initiatives include:

The United Nations Institute for Training and Research (Unitar), together with The Swedish EPA, has developed a global e-course on waste management and circular economy. The course is free of charge and can be completed at participants' own pace. It will be available for two years and fulfils an important function within The Swedish EPA's current and future international cooperation with strategic countries on waste-related issues. A pilot course conducted before launching the course in November 2021 provided feedback on the design and content of the course. Before the launch, Unitar and The Swedish EPA also held a webinar to disseminate information about the course.³

KemI has a partnership with Unitar to prepare four e-training courses on preventive chemical control based on the KemI guidance document. In 2021, the manuscripts were completed for all courses and are expected to be published in early 2022. The courses will contribute to greater knowledge of preventive chemical control and

³ Link to the course: Waste management and circular economy

ultimately more effective chemical control. They can also be used in future activities, which promotes resource-efficient project implementation. These types of initiatives contribute to new contacts and support in future work and serve as a strategically important effort to effectively digitise parts of the activities.

The Swedish EPA gave a 2021 grant to the Swedish Waste Management Association, which disseminated good examples from Swedish waste management and the new signage system for sorting household waste, a common Nordic pictogram system. This was disseminated through workshops involving eight countries (the United States, Ukraine, South Africa, Rwanda, Russia, China, Costa Rica and Brazil) and the United Nations Development Programme. The workshops discussed ways the pictogram system could possibly be implemented in the countries. The free pictogram system is available digitally in several languages.⁴

The International Chemicals Secretariat, ChemSec, has received support for updating and expanding the ChemScore sustainability rankings for the world's largest chemical producers. Through the project, the number of companies ranked in relation to their work in reducing the production of harmful chemicals has increased from 35 to 50. Over half of the producers have confirmed that the rankings have influenced their internal management. The rankings have also gained a foothold among investors. Following the launch of the 2021 rankings, 23 investment firms sent a joint letter to all chemical companies to underscore their interest in ChemScore.



⁴ [Link to Pictograms: Common symbols for waste sorting](#)

Classification and labelling of chemicals

The Swedish Chemicals Agency (KemI)



The UN's Globally Harmonised System for Classification and Labelling of Chemicals (GHS) plays a key role in chemical controls, but implementation globally has been slow. KemI is involved in thematic work focused on the implementation of GHS and related issues of chemical management and has focused, through mapping and ongoing contacts with several countries in Asia, on the implementation of GHS in the regions. The agency has also investigated how information transfer works in the import/export of chemicals in Zambia and Vietnam. Finally, a study of GHS in existing trade agreements was carried out. This thematic work resulted in an improved picture of the implementation of areas concerned with GHS. Having an operational picture facilitates work towards a more efficient and harmonised implementation of GHS. Safe chemical management contributes nationally to many of the sustainability goals under Agenda 2030. Moreover, since chemicals spread through air, water and especially trade, it is important at a global level for as many countries as possible to practise safe management of hazardous chemicals. This is especially important in Asia, where several countries have a rapidly growing chemicals industry.

Leadership Group for Industry Transition

Stockholm Environment Institute (SEI)



The Leadership Group for Industry Transition (LeadIT) includes 16 countries and 19 companies working to set the pace for climate change in heavy industry. The goal is to achieve net-zero emissions of greenhouse gases by 2050.

In 2021 the group's member countries and companies became more knowledgeable about the phasing out of fossil fuels in heavy industry. Through a technical expert committee and the establishment of working groups, the members exchanged experiences and knowledge about how an industry transition can be achieved. The discussions also helped to identify the innovation, technology and policies needed to refocus heavy industry in harmony with competitiveness. As knowledge increases, roadmaps for transitioning, objectives and policies have been implemented with the aim of reducing greenhouse gas emissions. During the 26th meeting of the United Nations Climate Change Conference (COP26), LeadIT was mentioned in connection with several new industrial transition initiatives, and the secretariat assisted with analytical feedback on strategy papers, joint workshops and events throughout the year.

During the same period, LeadIT launched an interactive guide on how to develop roadmaps for industry transition⁵ and held its annual high-level meeting. The meeting's theme was measures to achieve profound reductions in greenhouse gases in all heavy industries and value chains over the next decade. The discussion resulted in an ambitious declaration in which LeadIT members committed to updating and developing long-term implementation plans and adopted several funding principles for industry transition. In connection with Stockholm+50, an initial report on progress will be provided. By coinciding with COP26, the high-level meeting also helped to highlight the issue of industrial transition during the meeting of the parties.

**United Nations
Framework
Convention on
Climate Change
(UNFCCC)**

⁵ Link to the guide: Road Planner

Regional Climate Collaboration

Swedish Meteorological and Hydrological Institute (SMHI)



Cordex (Coordinated Regional Climate Downscaling Experiment) is a global collaborative initiative aimed at providing and developing regional climate information: information on how the climate is changing and impacts that result from this.⁶ SMHI hosts the Cordex project office, which coordinates the work of Cordex globally and provides administrative, scientific and technical support. In this way SMHI can build important regional networks in Africa, Asia and Latin America and strengthen access to and use of reliable climate information in the areas. By collaborating through Cordex, SMHI and its partners incrementally increase regional and local capacity. They also contribute to evaluation reports, such as IPCC reports, helping to produce reliable data and make it readily available. Good decision-making and a greater understanding of climate challenges enable more informed urban planning and decisions that support the achievement of global, regional and national environmental objectives, open data principles and national climate adaptation plans.

Through SMHI's hosting of Cordex project offices, they contribute to strengthening access to and use of reliable climate information in Africa, Asia and Latin America

Within Cordex Africa, meetings and workshops have contributed to expanded networks and exchanges among individual researchers, institutes, sectors and regions. Exchanges of experience and practical training have resulted in greater knowledge and understanding of climate information and its use and increased communication among climate information producers and users between regions. The University of Cape Town has cited support from Sweden as essential for its successful work. For example, participants have contributed several articles to the latest report of the United Nations Intergovernmental Panel on Climate Change (IPCC). In Latin America networks and regional research teams have been established, and collaboration has expanded in 2021. The enhanced collaboration has fostered discussions on scientific issues and methods and promoted dialogue among researchers and between regions, increasing capacity in the regions and the use of Cordex data for impact and risk studies.

In East and Southeast Asia, Cordex has also expanded its network with new partners and stakeholders. This included organising a hybrid format workshop in which more than 1 000 participants were trained to download, analyse and use climate data. This effort increased the target group's knowledge of how climate information models work and can be used in urban planning. In South Asia (India, Nepal and Bangladesh), Cordex networks have evolved, and the exchange of climate information among regions and sectors has expanded. An in-person workshop in Bangladesh provided new researchers and students with a basic understanding of how climate models work and can be used. This type of activity has increased the capacity and understanding of regional and local climate challenges.

United Nations
Framework
Convention on
Climate Change
(UNFCCC)

⁶ Cordex was created after the UN Climate Panel's fourth climate report in 2007, which made it clear that there was a lack of detailed regional information on climate developments in the world.

Water management in the BRICS countries

Swedish Meteorological and Hydrological Institute (SMHI)



Hype, SMHI's water management calculation tool, is used for water quality assessment and reporting. Among other things, the tool can be used to forecast flood, drought and other impacts of climate change. During the year, SMHI organised an international course on how the tool can be used. The online course included participants from the BRICS countries: Brazil, Russia, India, China and South Africa. Before the course, SMHI actively recruited women and participants from other underrepresented groups. Participants learned more about scientific forecasting and warning services in water management, which resulted in more of the participants being tested on working with Hype in local or regional areas. During the training, participants share their knowledge from a local perspective, information that SMHI also uses to improve Hype.

West Indian Ocean

Swedish Agency for Marine and Water Management (SwAM)



SwAM and the Nairobi Convention, with its 10 member countries along the western Indian Ocean, collaborate on maritime management and marine spatial planning. The convention's emerging countries – Kenya, Seychelles, Mauritius and South Africa – complement the agency's Sida-funded programme SwAM Ocean, focusing on developing countries and on long-term sustainable maritime management in East Africa. Bilateral environmental and climate collaboration with emerging countries aims to provide countries with access to knowledge and collaboration platforms that benefit engagement in the region in fisheries, the marine environment, development and stability. The collaboration focuses on two areas: the development of a regional tool for cumulative environmental assessment, the WIO Symphony web tool and the exchange of experience in marine spatial planning. In 2021 significant progress has been made in collaboration on WIO Symphony. Representatives from the member states of the Nairobi Convention have helped develop data warehouses to ensure the quality of national data used and that the tool addresses the needs of the countries. More than 30 additional regional experts, both from public agencies and academia, also participated in open workshops on three occasions in 2021.

**Nairobi
Convention**

**Convention
on Biological
Diversity (CBD)**

**Benguela Current
Convention (BCC)**

The work resulted in regional involvement and the opportunity to build capacities in marine environment management based not only on Swedish exchanges but also exchanges among the region's countries. There are now well-established collaborations with the Nairobi Convention regional body and the UNESCO Intergovernmental Oceanographic Commission, IOC-Africa, ensuring regional representation and interconnection with policy work. The collaborations have directly contributed to increasing capacity for more sustainable management of the marine environment. In addition, through early planning efforts, the activity has contributed to improved quality in several of the agency's other activities in the region.

The collaboration between SwAM and the Nairobi Convention, with its ten member countries along the Western Indian Ocean, and UNESCO IOC-Africa has directly contributed to an increased capacity for a more sustainable governance of the marine environment in the region



Council of the Baltic Sea States

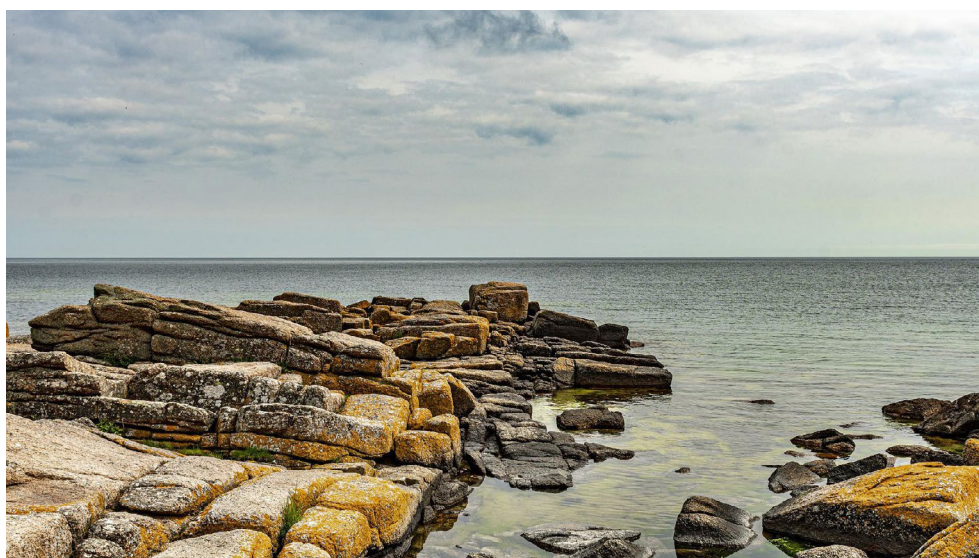
The Council of the Baltic Sea States is an organisation for regional collaboration among the countries of the Baltic Sea region. The environmental collaboration allocation, through the Council of the Baltic Sea States, supports sustainability efforts in the region based on Agenda 2030 and, in particular, the inclusion and involvement of Russian stakeholders in the collaboration. Within the framework of the collaboration, a report presented in November 2021 evaluated the performance of each country in relation to the five most challenging global sustainability goals in the region.⁷ The report makes several recommendations for further cross-border work.

Collaboration on sustainable shipping and tourism continued in 2021, although the coronavirus pandemic led to the postponing of activities concerning marine spatial planning. A network of marinas has been established to promote sustainable guest harbours and eventually sustainable local tourism. The Council of the Baltic Sea States has also played an active role in the inclusion of young people, especially from Russia, in a project on sustainable tourism in the region. Transnational youth teams have jointly identified priorities for tourism in the Baltic Sea region, taking into account the sustainability goals, and submitted concrete proposals for further development of tourism in the region.

The participation of Russian experts in collaboration within the Baltic Sea region gained new momentum in the spring of 2021, thanks to collaboration between the Council of the Baltic Sea States and the Swedish Institute. They jointly developed a collaboration programme aimed at strengthening collaboration between Northwest Russia and EU countries in the Baltic Sea region in the environmental field, among other things. Agenda 2030 will be an integral part of the programme, which will draw up a joint action plan for sustainable development in the Baltic Sea region. Efforts by the Council of the Baltic Sea States to connect, recruit and engage participants from Russian regions has been crucial to the success of the initiative.

Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention)

United Nations Framework Convention on Climate Change (UNFCCC)



⁷ Goal 8 *Decent work and economic growth*; Goal 11 *Sustainable cities and communities*; Goal 12 *Sustainable consumption and production*; Goal 13 *Climate change*; and Goal 15 *Life on land*.

Sector-specific results

Gender equality, equality and human rights

Sweden pursues a feminist foreign policy, which also permeates our international collaboration on environmental issues. Through gender integration in the projects, the environmental effects are strengthened as the two sectors gender and environment are interlinked.



The agencies under the government allocation aim for creating an equal gender balance through the projects. This can be regarded as an important first step, particularly in countries where gender equality is not regarded as an important issue. As a result, constant training is required to incorporate the gender perspective in each stage of Sweden's initiatives with collaborating countries. In 2021 project managers and coordinators within the allocation conducted training on how gender equality can be integrated into project activities. Having gained knowledge and concrete tools for gender integration, participants are now better equipped to promote gender equality and equality in upcoming projects. An evaluation shows that participants have already used knowledge and tools from the initiative in their work. The initiative will further be followed up in 2022.

Project managers and coordinators have been trained in gender integration in 2021 and are now applying the knowledge and tools from the course in their projects



Swedish Agency for Marine and Water Management (SwAM)

In collaboration with China, Russia, South Africa and the Western Indian Ocean, SwAM has strived to achieve an equitable gender balance among participants, speakers and researchers in the various activities that have been organised. In collaboration with Russia, the agency has also called on the national agencies directly concerned to include young people and women in the implementation of current pilot projects. Work to address marine plastic waste in South Africa's river system emphasises the need to create collaborations and exchanges of experiences with the people living along the Umgeni River, which has been studied.

Equality and poverty issues in marine spatial planning is a new area of collaboration that began in 2021 in South Africa. For example, the South African ministry's focal points for marine spatial planning participated in a seminar on gender and poverty perspectives in marine planning organised by SwAM. A framework for how gender equality can be understood has been shared with South African partners. Together with IOC-Africa, three case studies were conducted using the framework for how to apply gender equality and poverty. One of these case studies was conducted in Kenya.

The Swedish Chemicals Agency (KemI)

Exposure and susceptibility to hazardous chemicals varies between genders due to biological and social differences. KemI's support for effective preventive chemical controls includes and argues for the need to consider these differences in risk assessments, in regulatory development, in allocating resources and in decision-making processes. Chemical controls are intimately intertwined with human rights, including the right to information, which also impacts a good working environment. Equal protection for all people in society is considered in the risk assessment of chemicals and in regulations.

Swedish Environmental Protection Agency (Swedish EPA)

In The Swedish EPA's projects with South Africa and Brazil, gender analyses are a key tool in communication initiatives. In the collaboration with China, gender equality was an integral part of the work on the Sustainable Production and Consumption Report, which included recommendations to the Chinese government. The public's right to environmental information and participation is an important aspect in enhancing gender equality. By including those involved in what is referred to as "informal waste management" within the Brazilian waste collaboration, everyone affected by a measure has an opportunity to be involved in the development of waste management. In the projects linked to nature conservation and environmental protection (examination of permit applications) in Russia, the right to environmental information and co-determination are integral components.

The Arctic Council and its working group give high priority to participation by indigenous people. The Swedish EPA collaborates with the secretariat of the Arctic Monitoring and Assessment Programme (AMAP) and supports the Saami Council's participation in the group. Accessing information in their native language strengthens both the ability to participate in the planning of new projects and opportunities to contribute expertise. Translating reports into the Sámi language increases the opportunities for Sámi-speaking people to obtain information about the state of the environment in the Arctic, which in turn strengthens their opportunities for

influencing the planning process. Within ACAP and the expert group on indigenous people's environmental toxic substances programme, The Swedish EPA supports the Saami Council's efforts to strengthen their involvement in the work and include Sámi perspectives in projects pursued by the expert group.

Swedish Meteorological and Hydrological Institute (SMHI)

SMHI actively works to enable and ensure broad representation when selecting lecturers, participants, locations and platforms for initiatives involving capacity development or exchange of experiences. For example, participation in initiatives in Brazil, South Africa and at SMHI in the air environment and water management fields has an equal gender balance. Reaching out to and engaging certain groups presents a challenge from time to time, but SMHI consciously works to improve this. An example is collaboration within Cordex, which has a stated goal of being inclusive and "leaving no one behind". SMHI actively works to include representatives from indigenous people and to find ways to enable participation for these groups. Equality also involves access to information and knowledge, which forms the basis for SMHI's collaborations.

Women and children may be particularly affected by poor air, heat stress and polluted water, particularly in socio-economically marginalised areas. This makes better basic data about air quality and radiation temperature in these neighbourhoods is very valuable. Air and water quality and heat stress have a direct impact on health, and deficiencies primarily affect vulnerable groups such as children, older adults and those who are ill. This underscores the importance of these issues from an equality and rights perspective. Surveying emissions and pollution in relation to population statistics can highlight risks for different groups and eventually define measures to reduce negative environmental and health impacts.

Sustainable project implementation and digitisation



The agencies under the government allocation 1:13 aim to reduce the environmental impact of the initiatives, for example, by turning to more digital and travel-free working methods.

Swedish Agency for Marine and Water Management (SwAM)

In 2021 virtually no long-distance travel took place within SwAM's collaborations. Resources have been reallocated to hold digital meetings and workshops as much as possible. In cases where in-person meetings benefit relationship and network building, in-person meetings have been scheduled for a later date.

A good example is collaboration with Russia, where digital development has progressed rapidly in both countries and allowed a larger share of the meetings to be organised through various digital systems. On-site meetings have been planned only when launching new collaborative projects. Collaboration with the Western Indian Ocean on developing the WIO Symphony tool will improve the availability of digital data. This will reduce the need for travel to obtain data and benefit the digitisation process in the region.



The Swedish Chemicals Agency (KemI)

The coronavirus pandemic has continued to affect work in 2021 and hastened the pace of digitisation. It has not been possible to travel during the year. KemI usually attempts to ensure that travel is well motivated, can be coordinated as much as possible in a region and uses modes of travel that place a minimal burden on the environment.

The Swedish authorities and organizations within the government allocation 1:13 aim to ensure that travel is well justified, coordinated as much as possible within a region and that the most sustainable travel option is used

Swedish Environmental Protection Agency (Swedish EPA)

In all projects in the various collaborations, the Swedish EPA seeks ways of limiting the environmental impact of projects, such as by holding travel-free meetings, seminars and workshops through various digital meeting platforms. In 2021 digital meetings have been widely used in all collaborations which has reduced the environmental impact of projects. Experience with digital working methods during the pandemic has resulted in distance meetings now becoming a matter of course in many collaborations, such as within the Arctic Council and Russia. There is a need to make good use of these new ways of working in the future as they can both save many unnecessary trips, reduce greenhouse gas emissions and improve and enhance collaboration by making it easier to develop and maintain relations with fewer in-person meetings.

In collaboration with India, previous annual study visits to Sweden had a relatively high environmental impact through emissions from travel. To reduce the climate footprint, the study visits will be carried out only every three years in the future. A major evaluation of the collaboration from previous years has demonstrated the great value of study visits, so they should not cease completely.

Swedish Meteorological and Hydrological Institute (SMHI)

Collaborating and exchanging knowledge are primarily done digitally to reduce greenhouse gas emissions. SMHI has long arranged both digital and in-person meetings, because some practical training needs to be in-person. A preliminary review of what works in different regions and countries has resulted in online and offline collaborations and in hybrid meetings. An example is the workshop held in Southeast Asia within Cordex, where 355 people participated via a meeting platform, and more than 1 000 people followed the event via YouTube. Simultaneously, a smaller group, mostly local organisers, participated in-person at a hub. The hybrid variant also helps to increase equality, because it gives participants from less affluent organisations an opportunity to connect and exchange experiences digitally and on-site within a reasonable travel distance. SMHI minimises environmental and climate impacts through a combination of in-person and digital meetings and still increases participation.

Export promotion initiatives



Activities within the government allocation 1:13 should be consistent with Sweden's export strategy. Strengthened regulations and systems in collaborating countries can improve the capacity of ordering Swedish knowledge, Swedish system solutions and technical solutions. Sharing Swedish experiences and methods can also generate interest and awareness of Swedish expertise and environmental and climate technology. Close dialogue with Sweden's embassies in collaborating countries and interactions with other relevant Swedish stakeholders further strengthens the work.

Swedish Agency for Marine and Water Management (SwAM)

Throughout SwAM's collaborations, the aim has been to transfer Swedish knowledge and management solutions that will result in greater environmental awareness, improved management, stricter environmental requirements and legislation in China. Ultimately, this may lead to increased demand for Swedish products and technologies in the environment and climate sectors.

In collaboration with China, the link with export promotion is particularly notable because it is a central aspect of the China-Europe Water Platform. The collaboration also contributes to improved opportunities for business exchanges between relevant private stakeholders from China and Sweden in the water sector. SwAM has participated in developing a plan for business promotions with China in 2021. In addition, close discussions continue with several promotional stakeholders in Sweden, such as IVL Swedish Environmental Institute, to enable and facilitate their participation in the China-Europe Water Platform's promotional activities.

The Swedish Chemicals Agency (KemI)

KemI's collaborations have indirectly promoted Swedish exports through stricter requirements for reduced use of hazardous substances. The stricter requirements have resulted in a need to replace hazardous substances with alternatives or through technical solutions. In many cases, Sweden and Swedish companies have implemented this transition and have solutions to offer. Trade also is promoted by harmonising the classification and labelling of hazardous chemicals.

Swedish Environmental Protection Agency (Swedish EPA)

The Swedish EPA's collaborations contribute both directly and indirectly to Sweden's export promotion goals. For example, The Swedish EPA collaborates with China in export promotion groups, such as Team Sweden China, for information exchanges. In Brazil, the agency assists with experience transfer from Sweden's experience with legislation, policies, data collection and analysis and work on behavioural changes through communication. These changes towards a circular economy also create a need for new system solutions and green technologies, where Sweden is at the forefront. Through collaboration with the United States, Swedish knowledge and policies regarding emissions trading and transportation-related instruments have been exported to California. This has stimulated interest in Swedish expertise and solutions within the climate field and sustainable society, such as the further development of emissions trading in Europe/Sweden and the management of biofuels.

Strong synergies exist in the Russian collaboration with a variety of areas of Swedish environmental and climate technology, especially air and water purification technology, energy conservation, waste management and recycling. The projects often result in a need to learn more about Sweden and the participants involved. Through the work with Russia on three different platforms, collaboration within the Arctic Council and the Barents Council can also promote exports in a similar way.

Swedish Meteorological and Hydrological Institute (SMHI)

SMHI's air quality projects promote capacity development and provide an introduction of Swedish environmental technology in the recipient countries. SMHI can see how this could lead to continued collaborations in joint consultancy and research projects. The water management tools and methods that SMHI tests and implements can also be used in consultancy and capacity development in many countries. By testing SMHI's tools in different countries, tools can be improved and adapted to different environments.

SMHI and Sweden have good reputations within Cordex and regional climate information. Tools and methods produced by SMHI, for example, are widely utilised and can be shared even more broadly. By conveying Swedish expertise, making available climate information produced in Sweden and sharing methods, tools and good examples, SMHI contributes to the high level of confidence the world often has in Sweden on environmental issues.

Challenges during the coronavirus pandemic

The pandemic has entailed a major transition in initiatives under the government allocation 1:13. Since the spring of 2020, all travel has been cancelled, and working methods have been adapted to become digital. Other initiatives have been postponed as a result of the pandemic.

Swedish Agency for Marine and Water Management (SwAM)

For all collaborations, the pandemic has led to cancellation or postponement of scheduled in-person meetings or the substitution of digital status meetings and digital workshops. Digital forms of collaboration may continue to replace in-person meetings, although some in-person meetings are considered necessary. Some countries have had problems connecting to digital meetings, which has affected the joint activities. Digital workshops have numerous advantages because they are more cost-effective, produce less carbon emissions and can reach more people, particularly from countries with limited finances and time to travel. However, not meeting physically can be problematic in the long run, since there is a need to create stronger networks and support in collaborations as well as a greater understanding of different contexts and challenges. Consequently, in the future SwAM believes that both types of meetings are needed. A good mix of methods allows both engagement and effectiveness to be maintained.

The Swedish Chemicals Agency (KemI)

During the coronavirus pandemic, KemI's already established collaboration have been managed through a digital approach. One of KemI's conclusions after the pandemic is that digital solutions facilitate closer contacts and complement, but cannot fully replace, in-person meetings. For example, in-person meetings are usually required when creating new collaborations. As a result of the coronavirus pandemic, KemI has developed digital training that can be widely used in the partner countries, which is part of the effort to effectively digitise parts of the operation.

Swedish Environmental Protection Agency (The Swedish EPA)

In 2021, The Swedish EPA's collaborations continued despite the coronavirus pandemic. This is thanks to a transition to digital and hybrid solutions that in many cases have worked well. In China, meetings were conducted in-person for domestic participants and digitally for international ones. In collaboration with Russia, the Barents Council and the Arctic Council, the transition to digital meeting platforms were facilitated through such solutions as simultaneous interpretation. In Brazil, digital meetings along with educational films served as a good addition to in-person meetings and proved advantageous in facilitating participation and reaching out to more people. However, this requires good internet connections, which do not always exist.

In-person meetings are still considered to play an important role in future collaborations with The Swedish EPA, especially regarding in-depth discussions and relation-building activities. In the past, networking in

The activities under the government allocation 1:13 have largely continued in 2021 despite the corona pandemic, thanks to a shift to digital and hybrid solutions

association with the annual meeting has played an important role in the in-person annual meetings of the China Council. Without in-person meetings, it is difficult to build trust in each other within the projects and presents a challenge in developing new projects. In China it has been difficult to proceed with new initiatives.

Swedish Meteorological and Hydrological Institute (SMHI)

For SMHI, the coronavirus pandemic has entailed challenges and required adaptation, particularly regarding the transition to productive digital meetings and activities. The discovery of the Omicron variant in South Africa, for example, resulted in a very rapid conversion of a workshop to a slightly smaller meeting online, while the in-person part was postponed until 2022. SMHI has learned to quickly adjust so that at least some of the activities can be carried out. Within Cordex, SMHI has long arranged both in-person and digital meetings, but some components are more challenging to perform online and some collaborators have major problems with accessibility and data capacity, which complicates the sharing of knowledge. A first review of various regions and countries has led to different solutions for online and offline digital collaboration and for hybrid variants, where some can meet in-person and connect with digital participants.

Another challenge has been the fact that SMHI's South African air quality partner received different assignments as a government expert on statistics and health in relation to Covid-19. As a result, it has not been able to work to the same extent with regular data on air pollution. However, this has led to in-depth knowledge of public health and epidemiology that may be useful in the continuing project.



Environmental and Climate Cooperation Funded by Allocation 1:13

Annual Report for 2021

In this report the Swedish Environmental Protection Agency (Swedish EPA) presents the environmental and climate cooperation with strategic countries, regions and partner agencies, funded by a specific allocation of government funding for environmental cooperation with countries and regions that have a significant impact globally on the environment and climate. Other agencies participating in bilateral cooperation in addition to the Swedish EPA are the Swedish Agency for Marine and Water Management (SwAM), the Swedish Chemicals Agency (KemI), and the Swedish Meteorological and Hydrological Institute (SMHI). The Council of the Baltic Sea States (CBSS) and Stockholm Environment Institute (SEI) also hold activities funded by the allocation. During 2021 the Swedish agencies under this allocation have collaborated bilaterally with Argentina, Brazil, India, Indonesia, China, Russia, South Africa, South Korea, the United States and Vietnam. Several activities have also been conducted within the Arctic Council, Barents Euro-Arctic Council, and the Council of the Baltic Sea States.

