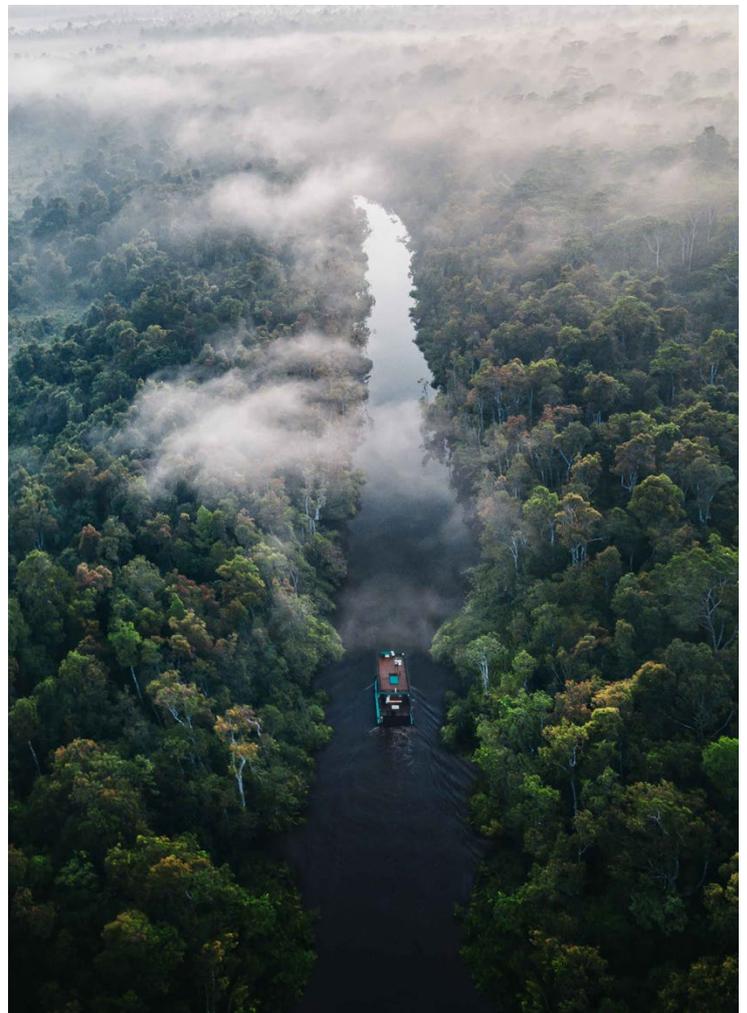


Environmental and Climate Collaboration Funded by Appropriation 1:13

Annual Report for 2022

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Annual Report for 2022

Editors: Hanna Roos and Alma Oddmar

Translation: Accent Språkservice AB

SWEDISH ENVIRONMENTAL
PROTECTION AGENCY

Order

Phone: + 46 (0)8-505 933 40

E-mail: natur@cm.se

Address: Arkitektkopia AB, Box 110 93, SE-161 11 Bromma, Sweden

Internet: www.naturvardsverket.se/publikationer

The Swedish Environmental Protection Agency

Phone: + 46 (0)10-698 10 00

E-mail: registrator@naturvardsverket.se

Address: Naturvårdsverket, SE-106 48 Stockholm, Sweden

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Foreword

Sweden needs to collaborate internationally on environmental and climate issues to achieve its Environmental Quality Objectives, to contribute to the UN Sustainable Development Goals and to contribute to countries' implementation of international environmental and climate conventions.

In this report, the Swedish Environmental Protection Agency (SwEPA) describes its collaborations with strategically important countries, regions and multilateral organisations funded in 2022 by the appropriation for international environmental collaboration (1:13). The report focuses on the results that the projects contributed to, but also includes a sector-specific part presenting the projects' contribution to such areas as gender equality. The primary organisations participating in the collaborations are the Swedish Environmental Protection Agency (SwEPA), the Swedish Agency for Marine and Water Management (SwAM), the Swedish Chemicals Agency (KemI) and the Swedish Meteorological and Hydrological Institute (SMHI). The Stockholm Environment Institute (SEI) has also received a grant from the appropriation. These public agencies and organisations participate in more international collaborations than those presented here.

Through this appropriation, Sweden has worked to support environmental ministries and agencies in other countries to effectively manage environmental issues and to achieve mutual benefit by exchanging expertise and experience. The projects within the collaborations often focus on strengthening institutions through capacity development, producing supporting documentation, guidance and support in different processes, data collection, creating platforms for collaboration among third-parties, support in developing legislation, contributing to discussions and talks on topics relevant for global negotiations. The projects include measures for reducing greenhouse gases, marine spatial planning, waste reduction, development of chemical legislation for various nations and more.

Interagency collaboration is an important element in the project execution of this appropriation. SwEPA, SwAM, KemI, and SMHI hold regular networking meetings with each other to share information, networks and lessons learned within each project. They also discuss cooperation possibilities with each other. For example, SwEPA and KemI are collaborating to introduce a pollutant release and transfer register (PRTR) in Indonesia. Together with the Ministry of Climate and Enterprise, the agencies also meet three times a year to share project updates, discuss strategic focuses and development initiatives for the appropriation's coordination, cooperations and projects. In 2022, SwEPA started an initiative for a more streamlined approach and a sharper focus on objectives, where the agencies have learned both from each other and from experts in the field.

SwEPA's and other Swedish agencies' initiatives along with our colleagues around the world make a difference. The 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 and a long-term approach. Since the advent of the appropriation in 2013, we have noted how strengthened environmental management, more stringent regulations and effective implementation played key factors in achieving environmental objectives – passing on to the next generation a society in which the major environmental problems have been solved.

Stockholm, May 2023

Björn Risinger, Director-General

Innehåll

Foreword	3
Background and purpose	5
Bilateral collaboration	7
Brazil	7
India	9
Indonesia	10
China	11
Russia (on hold)	13
South Africa	13
South Korea	16
Taiwan	17
United States	17
Vietnam	19
Regional, multilateral and thematic collaboration	20
Arctic Council	20
Barents Council	20
Improved chemical and waste management	21
Classification and labelling of chemicals	22
Leadership Group for Industry Transition	23
Regional Climate Collaboration	24
Water management in the BRIICS countries	25
Western Indian Ocean	25
Council of the Baltic Sea States	26
Sector-specific results	27
Gender equality, equity and human rights	27
Sustainable project implementation and digitisation	29
Export promotion effects	31

Background and purpose

In this report, the Swedish Environmental Protection Agency (SwEPA) describes collaborations in 2022 with strategically important countries and organizations on environmental and climate issues, funded through the appropriation for international environmental collaborations (1:13).

Today's environmental challenges transcend borders and cannot be solved only within Sweden. The major economies of Brazil, (Russia¹), India, Indonesia, China and South Africa (BRIICS) have extensive manufacturing industries that supply products to both domestic and global markets. These countries have a major impact on global resource use and are important actors in global environmental and climate collaboration. They also have significant influence on other countries and multilateral organisations globally and regionally. In the environmental field, Swedish government agencies have sought-after skills and experience to share, which can accelerate the global transition to a sustainable society.

The Swedish Environmental Protection Agency (SwEPA), The Swedish Chemicals Agency (KemI), the Swedish Agency for Marine and Water Management (SwAM) and the Swedish Meteorological and Hydrological Institute (SMHI) collaborate with countries that have a major impact on the global environment and are strategically important for global environmental and climate work. The agencies also collaborate through multilateral organisations. Initiatives funded by the appropriation primarily help to achieve the UN Sustainable Development Goals, the Swedish Environmental Quality Objectives and the Swedish Generational Goal. Beyond these, gender equality and equity are integrated into the projects.

During the year, Sweden collaborated with Brazil, India, Indonesia, China, South Africa, South Korea, and the United States. Which countries the agencies cooperate with in the appropriation is based on the mission of the Swedish agencies, internal strategies, considerations and core expertise. The agencies choose to cooperate with countries with significant environmental impact and that have significant influence over other stakeholders both regionally and globally, where our work can have a wider impact. This makes the BRIICS countries particularly important. China and the United States for example, are the two countries with the highest emissions of greenhouse gases. To achieve the Paris Agreement's goals, every country must reduce its emissions, not least the largest emitters. International collaboration is a key to achieving this mutual goal.

Initiating collaboration can also be linked to a country's ratification or implementation of international environmental conventions, where the agencies can support the collaborating countries in their processes. The agencies focus on collaborations and projects that have the greatest impact and where collaboration with other projects in the region can result in even greater benefit. An example of this is SwAM's collaboration with the Nairobi Convention's Secretariat and the convention's 10 member states in the West Indian Ocean (WIO) within marine

¹ Since February 2022, all collaboration with Russia has been paused until further notice.

management and planning. The countries complement also SwAM's SIDA-funded programme SwAM Ocean on long-term sustainable marine management in East Africa.

A prerequisite for collaboration is that the collaborating countries are interested in and can set aside resources for working together with the Swedish agencies. The Swedish agencies focus on collaboration with sister agencies or environmental ministries in the collaborating countries, but also universities and organisations can be important partners. Multilateral organisations are also very important for the appropriation, since they impact a larger geographic area and involve more stakeholders. Cooperation with stakeholders geographically close to Sweden also has priority since the work can have a significant impact to achieving the Swedish Environmental Quality Objectives. Many of the collaborations are based on Letters of Intent or Memorandums of Understanding between Sweden and the other country.

SwEPA administers the appropriation, decides the grants and consults with the involved Swedish agencies and organisations on an ongoing basis. The appropriation for 2022 totalled SEK 34.4 million.



Bilateral collaboration

Within the appropriation, the four agencies collaborate bilaterally with countries of strategic importance for global environmental and climate work. This report presents collaborations with Brazil, India, Indonesia, China, Russia (paused), South Africa, South Korea, Taiwan, the United States and Vietnam in 2022. Next to the description of each collaboration, there are symbols that show which Sustainable Development Goals and conventions the collaboration directly contributes to achieving.



Brazil

Brazil is both a BRIICS country and a G20 country, with significant regional and global influence. The agencies working in the appropriation thus have an indirect impact on other stakeholders beyond Brazil. Since Brazil is a large country with a large production of goods for the global market, this generates greenhouse gas emissions. For this reason, the agencies cooperate with Brazil for climate mitigation. In addition, since Brazil has 15–20 % of the planet's biodiversity, SwAM collaborates with the country on protection of biodiversity.



Swedish Agency for Marine and Water Management (SwAM)

SwAM cooperates with Brazil within marine spatial planning and protection of marine mammals together with the University of Gothenburg, multiple universities in Brazil and with United Nations Educational, Scientific and Cultural Organization (UNESCO). The collaboration aims to achieve more effective marine environmental management through developed processes and expertise.



In 2022, SwAM contributed to initial work for a more focused management plan for Suape harbour in northern Brazil.

A web-based course has strengthened the capacity among partners in Brazil within international marine spatial planning. This course focused on skills development and networking for planning and managing the marine environment in Central and South America. SwAM contributed also to strengthened expertise of participants with marine mammals management by organising a webinar on sharing knowledge and experience for protecting and managing marine mammals in Brazil and Sweden. The webinar also identified the need for increased sharing of experience with protecting marine mammals in connection with large-scale expansion of ocean-based wind power.

A web-based course has strengthened the capacity among partners in Brazil within international marine spatial planning

The Swedish Chemicals Agency (KemI)



KemI collaborates with Brazil to develop the country's chemicals legislation. In 2022, KemI worked with the environmental agency in the state of São Paulo on preventive chemical inspections. Representatives from KemI participated in an online seminar about chemical safety, contaminated areas and health, where they shared knowledge and experience and case studies from Sweden and the EU on preventive chemical inspections and regulation of problematic substances.

The sharing of knowledge and experience contributes to the eventual improvement of preventive chemicals control in Brazil. In addition, good relations with Brazilian officials have been established and maintained.



The sharing of knowledge and experience between KemI and the environmental agency in the state of São Paulo contributes to the eventual improvement of preventive chemicals control in Brazil

Stockholm Convention

Minamata Convention on Mercury

Rotterdam Convention

Swedish Environmental Protection Agency (SwEPA)



SwEPA works with partners in Brazil primarily at the state and municipal levels. The collaboration is focused on sustainable waste management within prevention of food waste, municipal waste planning and the release of plastics into marine environments.



In 2022, projects focused on food waste were conducted. The long-term objective is to contribute to cutting food waste in the country in half by 2030. Training, workshops, support in quantifying waste and methodologies for waste sample analyses have provided expertise in managing of food waste among public agencies and municipalities in Brazil. The project has also contributed to an effective methodology for waste analysis, increased understanding of amounts and fractions of organic waste from food markets, prevention of food waste and increased coordination and knowledge-sharing between organisations and agencies. Through these projects, SwEPA contributes to a resource-efficient society and reduced climate impact since incineration and landfilling organic waste like food waste contributes to methane emissions.



Brazilian law requires all municipalities to have a waste plan, and SwEPA conducts training in waste planning for this purpose. In 2022, representatives from 15 municipalities learned more about how to develop a waste plan. The course participants also learned how to train colleagues and other municipalities, known

Global Methane Pledge

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.

Swedish Meteorological and Hydrological Institute (SMHI)

In Brazil, SMHI collaborates with the municipality of Fortaleza on issues related to air quality and climate adaptation. As temperatures are rising due to climate change, large tropical cities in Brazil need to plan to reduce the heat stress on residents from heatwaves, not least in marginalised neighbourhoods. Collected and analysed data show how different types of urban planning approaches affect the climate and how green infrastructure can increase urban heat resilience. A better understanding for this reduces susceptibility to heat waves.

Regarding air quality, Brazil is in the process of introducing tougher legislation on permissible levels of fine particles (PM_{2.5}). There is, however, a lack of knowledge about current concentrations and what sources should be monitored. By collecting data, 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 fine particle 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 efforts to ensure more sustainable tropical cities and communities.

The collaboration between SMHI and the municipality of Fortaleza has resulted in greater knowledge of how urban design affects the air pollutants, to which the population is exposed



India

India faces environmental and climate challenges such as emissions of pollutants that impact the environment, human health, and the climate. The country has the second largest population in the world. It is also a BRIICS and a G20 country, and it is the world's fifth largest economy. This gives India significant influence both regionally and globally.



Swedish Environmental Protection Agency (SwEPA)



SwEPA has been collaborating with the organisation Centre for Science and Environment (CSE) to support training of environmental officials from state-level agencies throughout India in environmental management and governance. In 2022, SwEPA contributed to two web-based courses, one on auditing water usage and one on environmental impact statement.

For the collaboration, Sweden provides environmental expertise, increasing the capacity of Indian environmental officials. Over time, the collaboration aims to contribute to participants applying their knowledge and ideas from the courses in their supervision and monitoring of industries and thus that existing environmental legislation in India is applied more effectively. The training sessions provide Indian officials knowledge on environmental management and can thus contribute to developing more effective environmental governance. SwEPA also strives to share the good examples of environmental management to which the training contributes.

The training sessions where experts from SwEPA contributes provide Indian officials knowledge on environmental management, and can thus contribute to developing more effective environmental governance

A June 2022 meeting in connection with Stockholm+50 identified other opportunities for additional collaboration areas that can be of interest for SwEPA and its Indian counterparts. Meetings have been held with India's Ministry of Environment, Forest and Climate Change, and the work is planned to continue during 2023.



Indonesia

Indonesia was the chair of the G20 in 2022 and chairs ASEAN in 2023. SwAM and Indonesia collaborate within blue economy, which has been a prominent theme during Indonesia's chair of the G20. SwEPA and KemI are working to introduce a Pollutant Release and Transfer Register (PRTR) in Indonesia. Eventually, the agencies are also planning to start a collaboration with Indonesia within climate and biodiversity. This is motivated in part by Indonesia being a megadiverse country, that is, one of 17 countries with the largest percentage of the planet's biodiversity.

Swedish Agency for Marine and Water Management (SwAM)

SwAM collaborates with Indonesia's Ministry of National Development Planning and with several UN organisations, with a focus on blue economy and marine issues. In 2022, SwAM contributed to increased expertise and awareness by sharing lessons from Sweden's work with blue economy, as well as input to Indonesia's roadmap for a sustainable blue economy. Through the collaboration, Indonesia's development of a blue sustainable economy has been inspired by Sweden's marine strategy. SwAM has also participated in two events linked to Indonesia's chairmanship of the G20, where presentations were made. Additionally, preparations have been made to develop a study for inclusion of gender equality and poverty perspectives in the marine spatial planning process.



Swedish Environmental Protection Agency (SwEPA)



Since 2021, SwEPA has worked with Indonesia's Ministry of Environment and Forestry. In 2022, the development of a Memorandum of Understanding between Sweden and Indonesia continued. SwEPA and Indonesia planned a three-year initiative to establish a Pollutant Release and Transfer Register (PRTR) in Indonesia, based on a request from the country. Agreements have been made to reach stakeholders with key competencies, like KemI, United Nations Institute for Training and Research (UNITAR), United Nations Economic Commission for Europe (UNECE) and LeadIt. This work aims to contribute to expertise for Indonesian partners on chemical supply chains and chemical imports in the country, and a system for sharing environmental information among agencies at different levels and between different sectors such as the public sector, industry and the public.

During 2022 SwEPA and Indonesia planned a three-year initiative to establish a Pollutant Release and Transfer Register (PRTR) in Indonesia

Aarhus Convention

Minamata Convention on Mercury

United Nations Framework Convention on Climate Change (UNFCCC)



China

For many reasons, China is a high priority partner within environmental and climate issues. China is the country with most greenhouse gas emissions, making cooperation with China crucial for global climate efforts. The country has the world's second largest economy and is a member of the G20 and BRIICS, giving it significant influence over other countries and stakeholders. China has the world's fourth largest percentage of biodiversity and is rich in natural resources, but faces environmental challenges, not least since the country has large-scale production of goods that enter the global market. Furthermore, China has the world's largest population.

The agencies within the appropriation collaborate with China through bilateral projects, through EU projects and through the China Council, where countries can provide input on Chinese policy. A mutual exchange with China can contribute to positive changes in both China and Sweden, but also globally with China's increasing global influence, large-scale resources, and expertise within environmental and climate issues.



Swedish Agency for Marine and Water Management (SwAM)

SwAM works with China through the China-EU water platform *China Europe Water Platform* (CEWP) on issues related to integrated water and marine management ("source-to-sea"), sustainable hydroelectric power, and links between the sea and climate change. The platform provides an important forum for water-related collaboration between the EU and China in policy discussions, research, and business promotion. In 2022, SwAM concluded a project within CEWP on sustainability hydroelectric power in China and the EU, and has summarised the results and recommendations from this work. These were presented during an online workshop with partners, where the participants also discussed opportunities for continued collaboration in 2023. SwAM contributed to the production of a policy document on sustainable hydroelectric power in China and the EU based on the project, which is the basis for a declaration to be signed by China and EU member states.

Convention on the protection and use of transboundary watercourses and international lakes

By learning from each other, SwAM's collaboration with China has increased knowledge and capacity for more sustainable hydroelectric power in both China and Sweden. This contributes to improved aquatic environments and a more efficient transition to renewable energy systems in both countries. The work also leads to improved opportunities for continued collaboration within sustainable hydroelectric energy in the future.

By learning from each other, SwAM and China has increased their knowledge and capacity for more sustainable hydroelectric power in both China and Sweden

Swedish Environmental Protection Agency (SwEPA)

SwEPA serves as the focal point for Sweden's participation in the think tank *China Council for International Cooperation on Environment and Development* (CCICED or China Council). China 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 regarding environmental issues. The collaboration's overall purpose is to provide expertise for a green transition, for example within sustainable consumption. In 2022, the collaboration was challenging due to the effects and restrictions of the pandemic in China, since planned business trips were not possible during the year.

In 2022, SwEPA participated in working committees within China Council, and together with other members, contributed to recommendations within the environment and climate field to the Chinese Government. One achieved result has been formulations from a Swedish-run policy study having been included in China's five-year plan for sustainable consumption. The long-term objective of the collaboration is to support China in their work on limiting emissions of greenhouse gases, and discussing time limits to when China shall reach its emissions peak.

United Nations
Framework
Convention on
Climate Change
(UNFCCC)



SwEPA has also participated in the Swedish external group National Knowledge Centre on China (NKK) and contributed to highlighting environmental perspectives in NKK's work with the bilateral collaboration with China. SwEPA's participation in NKK has the long-term objective of gaining a better understanding of China as a partner country.



Russia (on hold)

Russia is the second largest country geographically and is facing many major environmental challenges, not least from pollution and emissions of greenhouse gases, which also impact the environment in Sweden's immediate area in the Baltic Sea and Arctic. SwEPA and SwAM have had an extensive collaboration with Russia within many areas related to the environment and climate. These collaborations have been paused since February 2022 due to Russia's invasion of Ukraine. Both SwEPA and SwAM are closely following the situation.

Swedish Agency for Marine and Water Management (SwAM)

SwAM's collaboration with Russia was paused in February 2022 due to Russia's invasion of Ukraine. SwAM had planned initiatives for 2022 linked to both marine and water management, marine area protection and cumulative environmental assessments. In 2022, SwAM had monthly meetings with SwEPA to keep each other updated on the situation and to coordinate a joint approach.

Swedish Environmental Protection Agency (SwEPA)

The collaboration was paused in February 2022 due to Russia's invasion of Ukraine. For this reason, only one of eight planned projects were conducted in 2022, however there was no contact with the country after February. In the beginning of 2022, SwEPA worked on a report about SwEPA's Best available technique (BAT) collaboration and examination of permit applications with Russia 1998–2022. SwEPA is carefully following the developments in Russia.



South Africa

South Africa is both a BRIICS country and a G20 country, with significant influence both in its region and globally. The country's southern coast is 3000 km along the Atlantic and Indian Oceans, which makes marine management an important part of South Africa's environmental management. SwAM is collaborating with South Africa within marine spatial planning, environmental monitoring and source-to-sea management, with the primary purpose of reducing the release of plastic pollution to the sea. KemI collaborate with South Africa within chemical controls and to introduce GHS (the UNs' Globally Harmonised System of Classification and Labelling of Chemicals). SwEPA collaborates with South Africa for managing and reducing hazardous waste, which contributes to a more resource-efficient society and reduced climate impact.

Swedish Agency for Marine and Water Management (SwAM)



Since 2021, SwAM worked with South Africa's agency for marine environment issues for joint learning in marine spatial planning, source-to-sea management and environmental monitoring. In 2022, SwAM worked to develop a regional version of the environmental assessment tool Symphony and trained South African officials in using the tool to enable South Africa to incorporate it into its marine spatial planning process. The tool also allows assessment of the environmental impact from different factors and contributes to developing marine spatial planning using an ecosystem approach.

The tool also allows assessment of the environmental impact from different factors and contributes to developing marine spatial planning using an ecosystem approach

In 2022, SwAM also produced a report together with the Minister of Forestry, Fisheries and the Environment in South Africa about the costs for not taking measures to stop the spread of plastic waste. The report contributed to increased understanding for the financial and social costs caused by plastic pollution and how the sea and land interact regarding littering. The report presents proposals for future measures for installation of refuse collection systems that can collect plastic and other waste in the Umgeni River in South Africa.

**Nairobi
Convention**

The long-term objective with this project is to achieve national marine and coastal management in both Sweden and South Africa that also includes great knowledge of how land-based activities impact the marine environment. Marine spatial plans are being developed in both countries that build on inclusive collaboration processes with an ecosystem approach. The collaboration is expected to lead to improved conditions for working holistically with water and marine management and targeted measures for addressing plastic pollution.

The Swedish Chemicals Agency (KemI)



In 2021, KemI contributed to incorporating GHS in South Africa's legislation. In 2022, KemI continued to support officials in several departments, leading to improved knowledge in GHS among occupational health and safety inspectors and employees. KemI, together with the South African government, conducted two courses in GHS for South African officials. These courses ultimately contribute to small and medium-sized companies receiving the support they need from officials to understand and apply the new rules, which in turn leads to a greater acceptance and a higher degree of rule compliance.

KemI, together with the South African government, conducted two courses in GHS for South African officials. These courses ultimately contribute to small and medium-sized companies receiving the support they need from officials to understand and apply the new rules, which in turn leads to a greater acceptance and a higher degree of rule compliance

The EU Chemicals Strategy highlights well-implemented chemical legislation and implementation of GHS as overall factors in achieving the Sustainable Development Goals. The strategy also notes that implementing GHS is a way of identifying hazardous chemicals and reducing risks when these are used. In South Africa, GHS is currently mandatory only within industry, but the long-term objective is that the departments responsible for the environment, agriculture, transport and consumer health will also implement GHS in each of their sector's legislation. For this reason, they also participated in the training courses conducted in 2022.

**Stockholm
Convention**

**Minamata
Convention
on Mercury**

**Rotterdam
Convention**

Swedish Environmental Protection Agency (SwEPA)



The collaboration between SwEPA and South Africa is focused on creating a resource-efficient society and reducing climate and health-impacting emissions through preventive measures in the management of hazardous household waste.

South Africa does not have an organised system for collecting hazardous waste from households. As a result, SwEPA is working on a pilot project with the city of East London in the Buffalo City Metropolitan Municipality to organise test collections of such waste in three socioeconomic vulnerable areas, which in 2022 was followed by a sample analysis. The project contributed to increased awareness of safe management of hazardous waste among municipal employees and residents of the three residential areas. 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. In the long term, the project is expected to result in less hazardous waste that gets buried in landfills from households, which reduces both health risks and pollution risks to soil and water.

In 2022, the development of a national strategy for hazardous household waste in South Africa was completed. This was done by producing background information on legislation and landfills in the country and an implementation and communication plan. In the long term, the project aims to reduce leakage of hazardous substances and chemicals into soil and water from waste dumps by all municipalities in South Africa beginning to collect hazardous waste.

**Minamata
Convention
on Mercury**

**Basel
Convention**

In 2022, the development of a national strategy for hazardous household waste in South Africa was completed



Swedish Meteorological and Hydrological Institute (SMHI)



SMHI collaborates with its counterpart SAWS within air quality in South Africa. In 2022, SMHI and SAWS have begun developing a study that investigates how a restart of closed coal power plants impact human health in the country. This is expected to lead to increased knowledge that can contribute to reducing air pollutants for more sustainable tropical cities and communities.

There are challenges in South Africa to secure safe drinking water for its growing population. Different sources of pollution impact water quality while climate change is altering access to water. Good tools and decision support systems are necessary for effective water management with a focus on comprehensive solutions. SMHI's collaborations in South Africa focus on source-to-sea and water management, with a link between water quantity and water quality.

Together with SwAM, SMHI is working with South Africa's Department of Environmental Affairs related to chemicals and waste, source-to-sea, plastic to the sea, water management and providing knowledge and data to policy development. Data on plastics in South Africa has been collected where critical sources of plastic pollutants have been identified. This has improved the understanding between sources and coastal pollution, which leads to an improved ability to plan effective measures. Eventually, this aims to contribute to clean water and sustainable cities. SMHI has also a collaboration with SwAM on risk-based monitoring. Swedish tools for marine management have been presented for South Africa's Department of Environmental Affairs, and the South African needs have been assessed. This has resulted in a cooperation plan for how South African monitoring systems can utilise a risk-based system with the help of hydrologic tools, which eventually are expected to contribute to a more effective monitoring system.

United Nations Framework Convention on Climate Change (UNFCCC)

Convention on Long-Range Transboundary Air Pollution (CLRTAP)

Stockholm Convention

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



South Korea



The Swedish Chemicals Agency (KemI)

South Korea is a G20 country and the tenth largest economy in the world. Thus, South Korea has a significant influence both regionally and globally. KemI collaborates with South Korea to implement chemical legislation for biocide products, which leads to the introduction of fewer products that cannot be handled safely. The collaboration is based on mutual benefit, as South Korea also holds great expertise that can benefit Sweden's chemicals management.

Sweden provides support and expertise to South Korea's Ministry of Environment on implementing chemical legislation in the country, particularly on biocide products. The collaboration's objective is to promote sustainability and health by reducing the population's and nature's exposure to biocide products. In 2022, KemI together with experts from South Korea's Ministry of Environment held five webinars with discussions and exchange of experiences on processes for approval of active substances, biocide products and supervision. South Korea's and the EU's laws have many similarities, and biocide products are often the same or closely related. The exchange of experience between experts contributes in the long run to unsafe biocide products not entering the market and that biocide products on the market can be handled safely.

Stockholm Convention

Minamata Convention on Mercury

Rotterdam Convention



Taiwan

The Swedish Chemicals Agency (KemI)

KemI collaborates with Taiwan on implementing chemical legislation, which is expected to reduce risks from the use of chemicals. Due to staff vacancies at KemI and continued pandemic restrictions in Taiwan, large parts of the activities planned for 2022 were unable to be take place. In recent years, Taiwan has formulated chemical legislation and formed a chemical agency (TCSB). The collaboration with TCSB is based on sharing of experience between the agencies and is intended to increase the expertise among staff at TCSB. Issues addressed include implementing chemical legislation, which is expected to reduce risks from the use of chemicals. The collaboration is expected to resume in 2023.



United States

The United States is a G7 country, has the world's largest economy and is one of the most influential countries globally. The United States is the country with the second highest level of greenhouse gas emissions and holds the world's third largest population, making cooperation with the country crucial for global climate efforts. Also, the Biden administration has raised the country's environmental and climate ambitions significantly, creating a momentum for collaboration.

SwEPA collaborates with the state of California for climate mitigation and SwAM on marine history for ecosystem-based environmental and fishery management. California has the largest subnational economy in the world and the fifth largest economy globally. California's progressive stance on environmental and climate issues has led other states and the federal level to take after California's measures and policy instruments. This allows the work of the Swedish agencies to have a greater impact. Also, through the collaborations Sweden learns from California, for example to improve Swedish policy instrument for climate mitigation efforts and marine and water management. In 2022, SwEPA began a tentative effort on a future collaboration with the United States at the federal level.

Swedish Agency for Marine and Water Management (SwAM)

SwAM cooperates with the state of California on marine history for ecosystem-based environmental and fishery management, primarily with the National Oceanic and Atmospheric Administration. The core activity has been developing guidance for incorporating marine history in processes for ecosystem-based management. New methodologies can allow a marine history perspective to improve management of fisheries and marine environments and make management more sustainable and effective in the long term. This knowledge is planned to be used in designing Swedish marine spatial plans in a way that benefits the desired expansion of ocean-based wind power without significantly reducing opportunities for small-scale professional fishing. This is particularly



New methodologies that has been developed through the collaboration between SwAM and the National Oceanic and Atmospheric Administration in California can allow a marine history perspective to improve management of fisheries and marine environments, and make management more sustainable and effective in the long term

relevant in connection with the government assignment from 2022 to increase the potential for sea-based wind power in Swedish marine spatial plans. During the year, SwAM has also spread lessons learned from the interaction between the wind power industry and professional fishermen. SwAM and partners have developed a better understanding for how historical and archaeological perspectives can be used in marine and fishery management.



Swedish Environmental Protection Agency (SwEPA)



The purpose of SwEPA's collaboration with California is to reduce greenhouse gas emissions by sharing knowledge and experience at expert level within emissions trading system (the EU ETS and Californian Cap-and-trade Program) and transport efficiency. Eventually, California and Sweden are expected to incorporate this new knowledge into strategies for development of respective emissions trading systems, and policy instruments for increased transport efficiency. These exchanges can increase the pace of reducing emissions by the partners drawing lessons from each others' successes as well as to stimulate innovation.

In 2022, new points of contacts were appointed at California Air Resources Board and Governor's Office for Planning and Research. During the year, planning has been made for upcoming joint activities. For results to have greater impact, SwEPA had discussions on collaboration with other Swedish stakeholders working with California on environmental and climate issues, including Green Transition Initiative and Vinnova.

Discussions with the US Environmental Protection Agency also took place in 2022, for a possible collaboration between Sweden and the United States on the federal level. Several scoping meetings were held. The collaboration initially aims to focus on sharing knowledge and experience among expert groups within several areas.

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

**Convention on
Long-Range
Transboundary
Air Pollution
(CLRTAP)**



Vietnam

Swedish Chemicals Agency (KemI)

KemI collaborates with Vietnam for more effective national chemical legislation, to contribute to a more effective protection of human health and the environment, as well as facilitating trade through harmonised classification and labelling. Due to staff vacancies at KemI and lack of resources in Vietnam, many of the activities planned for 2022 were unable to be carried out. The collaboration is planned to continue in 2023, when both KemI and Vietnam's chemical agency are expected to be able to allocate more resources for the collaboration. The collaboration is focused on KemI introducing GHS to Vietnam and supporting to update the country's chemical legislation.

Regional, multilateral and thematic collaboration

Part of the appropriation is used for regional collaboration in the Arctic, Barents and Baltic Sea regions to accelerate the green transition in Sweden's immediate geographic area, where emissions and environmental impacts can significantly affect Sweden's ability to achieve the Environmental Quality Objectives. This work has largely been paused due to Russia's invasion of Ukraine.



Arctic Council

Swedish Environmental Protection Agency (SwEPA)

SwEPA 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 participation in the work programmes of AMAP and CAFF is mainly funded by appropriations other than 1:13.

Since March 2022, the work within the Arctic Council has been paused due to Russia's invasion of Ukraine. Therefore no new project results have been achieved during the year. Until March, SwEPA provided expertise to ACAP's expert groups and led the work in ACAP's POP's and mercury expert group. For projects not involving Russian participation, work resumed informally and to a limited extent during autumn 2022. ACAP's pilot projects refers to the right to clean air, clean water and a food chain free from environmental contaminants, particularly for residents in the Arctic, as well as effective measures to avoid climate change and climate adaptation.



Barents Council

Swedish Environmental Protection Agency (SwEPA)

Due to Russia's invasion of Ukraine, the Barents cooperation was suspended in March 2022, after a joint decision from the Finnish, Norwegian and Swedish ministries of foreign affairs. In summer 2022, the three Nordic Barents countries decided to continue an environmental collaboration at the regional Nordic level. Each of the three Nordic Barents countries have formulated their own project for collaboration for environmental protection. These are related to regional climate inventories and measures planning to achieve the Paris Agreement's objectives (Sweden), sustainable battery production throughout the entire production and recycling chain (Finland) and reducing the use of plastics and fighting the spread of microplastics in the Barents region (Norway).

Prior to the collaboration with Russia being paused, the subgroup for nature and water in the Barents Council held a webinar on large predators with a focus on wolves. Around 50 participants attended the webinar from all four Barents countries. Two projects were concluded by SwEPA and the Swedish University of Agricultural Sciences (SLU), one on databases of flora and fauna in the Barents region and one on invasive alien species, and their final reports were submitted in 2022. Parallel with this, the Norrbotten County Administrative Board resumed large parts of its EU-funded project EXPERT, which SwEPA has also contributed to financially. This project is expected to be concluded in 2023, when it will publish training materials for restoration of waterways used for timber floating, barriers to fish migration and wetlands.

Improved chemical and waste management

In the 2020 spring budget and in the 2021 and 2022 annual budgets, SwEPA received additional appropriation funding for projects related to chemical and waste management. Beyond bilateral projects, additional funding has also been allocated to the following initiatives.

Swedish Environmental Protection Agency (SwEPA)

The United Nations Institute for Training and Research (Unitar), in cooperation with SwEPA, have developed a free of charge global e-course on waste management and circular economy, which was launched in 2021. In 2022, work began to translate the course to Spanish and Portuguese, languages spoken in regions where SwEPA is conducting several projects within the appropriation. The course content will then be available to additional target groups and can be combined with existing work within waste-related issues.



International Chemicals Secretariat

Stockholm
Convention



The International Chemicals Secretariat (ChemSec) has received a grant from the appropriation for updating and expanding the ChemScore² sustainability rankings for the world's largest chemical producers. The purpose of the project is to have investors make chemical producers stop producing toxic chemicals, particularly persistent substances. ChemScore provides investors and credit rating agencies with a target-oriented tool for assessing the chemical companies' production, management and phasing out of toxic substances, and the development of safer alternatives and circular products.

ChemSec collects data to rank the 54 biggest chemical companies based on their efforts to reduce the negative health and environmental effects of chemical use. The ranking has had wide-spread international media reach. A cooperation initiative with investors also begun in 2022, in which ChemSec trains investment companies to discuss with chemical producers how to phase out toxic chemicals and to help improve their transparency.

ChemSec's data collection to rank the 54 biggest chemical companies has had wide-spread international media reach. The ranking is based on the companies' efforts to reduce negative health and environmental effects of chemical use

Classification and labelling of chemicals

Swedish Chemicals Agency (KemI)



KemI works with the United Nations Institute for Training and Research (UNITAR) to develop courses on the UN's Globally Harmonised System of Classification and Labelling of Chemicals (GHS). GHS has a central role in chemical controls since it can effectively contribute to safer chemical management globally, and thereby contribute to achieving several of the Sustainable Development Goals. In 2022, KemI started a project based on developing communication materials that describes and argues for GHS as a fundamental part of chemical controls. The material is intended for use in influencing decision-makers in countries that have not implemented GHS. The target group is primarily officials at ministries and authorities working with preventive chemicals controls, but also civil society organisations, media, academia and others.

KemI also cooperates with the Association of Southeast Asian Nations (ASEAN) on introducing GHS in the legislations in ASEAN countries. In a report, KemI has surveyed and analysed an introduction of GHS in these countries, which has contributed to highlighting the need of introducing the system in national legislation. The report also notes the need for allocating resources and prioritising operationalisation of the legislation, for the rules to be implemented. The target group for the project are decision-makers and experts in ministries and authorities in the ASEAN countries.

In a report, KemI has surveyed and analysed an introduction of GHS in the ASEAN countries, which has contributed to highlighting the need of introducing the system in national legislation

² See ChemScore (chemsec.org).

The long-term objective is for chemical users to receive tailored information on hazardous characteristics of the chemicals they use, and information on measures for managing risks with these chemicals.

Leadership Group for Industry Transition

Stockholm Environment Institute

United Nations
Framework
Convention on
Climate Change
(UNFCCC)



The Leadership Group for Industry Transition (LeadIT) includes 18 countries and 18 companies working for the green climate transition of heavy industry. The main objective is to contribute to achieving net-zero emissions of greenhouse gases by 2050. LeadIT offers a forum for political discussions and a platform for countries, companies and financial institutions to share knowledge. This facilitates technology transfer and low carbon dioxide innovations while demonstrating opportunities for a just industrial transition without risking competitiveness.

In 2022, the ambition has been to increase membership in LeadIT to represent different geographic areas. The LeadIT secretariat has supported diplomatic efforts to recruit new members, and after several meetings, South Africa and Japan joined the initiative in 2022. The secretariat has also allowed LeadIT members to market LeadIT's mission through a video published on the website.

At the UN climate conference COP27 in Sharm El-Sheik, LeadIT hosted the third LeadIT Summit. The Summit delivered a statement with collective appeals and commitments by LeadIT members to increase the pace of the transition for industry during the year. Ahead of the Stockholm+50 conference, LeadIT and the World Economic Forum also hosted *Industry Transition Dialogue*, a high-level meeting that brought together CEOs and ministers from LeadIT member countries and companies. The participants argued that an increased use of technologies that do not produce carbon dioxide and a just climate transition are some of the priorities for the coming years. The online database *Green Steel Tracker* was updated in 2022, which tracks investments in projects aimed at a transition for reduced carbon dioxide emissions in the global steel industry. The most recent update compiles a total of 73 projects from around the world with ambitious objectives to reduce carbon dioxide emissions. The *Industry Transition Tracker* was also updated and demonstrated the need for investments in technologies for reducing carbon dioxide emissions. Additionally, *The Green Cement Technology Tracker*, which identifies low-carbon dioxide cement production projects, was developed in 2022 in cooperation with the Global Cement and Concrete Association (GCCA).

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 on how the climate is changing and its impacts.³ SMHI hosts the Cordex project office, which coordinates Cordex globally and provides administrative, scientific and technical support. In this way SMHI can establish important regional networks in Africa, Asia and Latin America and strengthen access to and use of reliable climate information in the areas. 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.

In 2022, the studying of effects of different levels of climate warming was expanded to include more countries and more societal sectors in southern and south-eastern Africa. A three-day workshop was organised in Johannesburg attended by climate modellers and experts in effects and adaptation from several countries. Participants discussed which sectors should be prioritised in different parts of Africa, what the most pressing local and regional climate challenges within different societal sectors are, as well as strategies, coordination and platforms for collaboration. A hybrid workshop was organised in Oslo on providing regional climate information to the public. Knowledge of and understanding for how climate models work and can be used in the partner countries can be achieved through an expanded network and a long-term cooperation and exchange between regions, countries and sectors. This is expected to lead to increased regional and local capacity and communication between researchers and users, and improved intergovernmental cooperation to develop expertise and production of data for sustainable local and regional planning. In the long term, the project aims to enable the use of its findings for well-considered decisions that support global environmental and sustainability goals and national plans for climate adaptation.

Several workshops have been conducted in the collaboration between SMHI and South and South-East Asia. The workshops focused on local and regional climate challenges and human impact on the monsoon system, where SMHI has held a session on regional climate modelling in Asia. In the Latin America region, SMHI has held workshops in Buenos Aires that have expanded a network, improved exchanges between users and researchers, and increased the ability to implement climate models in their own regions.

United Nations Framework Convention on Climate Change (UNFCCC)

Stockholm Convention

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

Knowledge for how climate models work and can be used in the partner countries of Cordex is expected to lead to increased regional and local capacity and communication between researchers and users, and improved intergovernmental cooperation to develop expertise and production of data for sustainable local and regional planning

³ Cordex was created after the Intergovernmental Panel on Climate Change's (IPCC) fourth assessment report on climate change 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 BRIICS countries

Swedish Meteorological and Hydrological Institute (SMHI)



The Hydrological Predictions for the Environment (HYPE) model is SMHI's water management calculation tool, which is used for water quality assessment and reporting. Among other things, the tool can be used to forecast flooding, drought, and other impacts of climate change. During the year, SMHI organised an international course on using the tool. The online course included participants from the BRIICS countries (excluding Russia). Prior to 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 participants deciding to test using Hype in local or regional areas. During the training, participants shared their knowledge from a local perspective – information that SMHI also uses to improve Hype.

United Nations
Framework
Convention on
Climate Change
(UNFCCC)

Western Indian Ocean

Swedish Agency for Marine and Water Management (SwAM)



SwAM and the Nairobi Convention, 10 member countries along the western Indian Ocean (WIO), collaborate on marine management, marine spatial planning and marine protection. The convention's emerging countries – Kenya, Seychelles, Mauritius, and South Africa – complement SwAM's SIDA-funded programme *SwAM Ocean* on long-term sustainable marine management in East Africa. Bilateral environmental and climate collaboration with the convention's emerging countries aims to provide 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 online tool, and the exchange of experience in marine spatial planning. The development of WIO Symphony is based on the Swedish tool Symphony, which is used in Swedish marine spatial planning. WIO Symphony was requested by the Nairobi Convention's secretariat and member nations. The tool covers environmental impact from a range of human activities, including fishing, pollution and oil spills.

Nairobi
Convention

Convention
on Biological
Diversity (CBD)

Bilateral environmental and climate collaboration with the Nairobi convention's emerging countries aims to provide access to knowledge and collaboration platforms that benefit engagement in the region in fisheries, the marine environment, development and stability



In 2022, workshops were held in Kenya and Tanzania. Also, WIO Symphony was launched in South Africa with participants from the entire region, particularly from the convention's emerging countries. This work has been enthusiastically received and continues moving forward in a management and user-oriented direction, where Sweden and the region are helping to develop the tool's functionality and management impact. Improved knowledge of technical solutions for cumulative environmental assessments benefits the continued development and use of national Symphony software. This can ultimately result in environmental considerations gaining more prominence and quantifiable roles in planning and management, and that ecosystem-based marine spatial plans are significantly supported and facilitated in the decision-making process.



Council of the Baltic Sea States

The planned activities of the Council of the Baltic Sea States (CBSS) for 2022 could not be conducted due to Russia's invasion of Ukraine, which led to Russia's suspension from CBSS in March 2022. The plan for 2022 was for CBSS to fulfil the ambitions of CBSS Baltic 2030 Action Plan, which would contribute to achieving the Sustainable Development Goals in the Baltic Sea region. The focus for the year would have been on learning and sharing of experience between Russia, Sweden, and the other countries in the Baltic Sea region on environmental and climate-related issues, as well as to support events that would have taken place in Russia. CBSS also planned to improve and harmonise assessments of the results of the Sustainable Development Goals between Russia and other countries in the Baltic Sea region. Another planned activity was getting Russian youth involved in environmental cooperation in the Baltic Sea region through capacity development.

Sector-specific results

Gender equality, equity and human rights



Environmental and climate work requires integrating gender equality and equity. Additionally, according to the Swedish Government, Swedish agencies shall contribute to gender equality and equity, which includes projects within this appropriation. SwEPA currently also has a government assignment to integrate gender into its operations.

The agencies within the appropriation seek to enable an equal gender balance in the project groups and to incorporate gender equality in the projects. This can be regarded as an important first step, particularly in countries where gender equality is not highly prioritized. For this reason, ongoing internal training is required to incorporate the gender perspective in each stage of the international projects. In 2022, SwEPA expanded its knowledge and awareness within gender equality and equity when a focal point was appointed for leading the implementation of gender integration in the international projects, in line with the government assignment "Uppdrag om att stödja arbetet med jämställdhetsintegrering i statliga myndigheter" [Assignment to support gender integration in government agencies]. The project is still ongoing and initial results will be presented in 2023.

Swedish Agency for Marine and Water Management (SwAM)

SwAM emphasizes the importance and need for an inclusive and transparent gender perspective in the marine spatial planning processes. This perspective has been highlighted and emphasised in discussions with responsible authorities for the development of Indonesia's strategy and roadmap for a sustainable blue economy. SwAM has also tasked Environment for Development, an international network of economists led by the University of Gothenburg, to write a comparative and summarising report of three case studies that tested the agency's framework for how poverty and gender equality can be integrated into marine spatial planning processes.

SwAM emphasizes the importance and need for an inclusive and transparent gender perspective in the marine spatial planning processes

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, regulatory development, allocating resources and in decision-making processes. Chemical controls are connected to 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 (SwEPA)

By including those involved in what is referred to as informal waste management within SwEPA's waste collaboration in Brazil, everyone affected by a measure has an opportunity to be involved in developing the waste management. In the collaboration with the United States, gender equality and equity are prioritized since they have a significant importance since there is a strong link between gender equality, equity and transport-related policy instruments. Within the Arctic Council, participation of indigenous peoples is a basic requirement for the work and inclusion of traditional and local knowledge and indigenous rights are central. The Council includes six indigenous groups that actively participate in the work at every level. Since 2017, SwEPA has given clear support to the Council's expert group on indigenous peoples' environmental toxic substances programme, particularly to 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)

Groups such as children, elderly and those in ill-health are particularly vulnerable to the effects of heat waves and air pollution, which makes gender equality and human rights perspectives important in SMHI's work. Individuals who live in slum areas and close to industries are particularly impacted. For this reason, data on air quality and radiant temperatures in these areas is of significant value. Gender equality and rights perspectives are also central in SMHI's work with water management, since women and children are impacted more by water shortages and poor water quality. Dependable access to good water quality has a major impact on health, security, educational opportunities, income and family relations. Development projects

focused on women and minorities create better opportunities for these groups to achieve a higher level of autonomy and independence.

Regarding the cooperation on the Cordex climate modelling tool, it is sometimes challenging to reach and engage certain groups in society and find contacts among these groups, such as indigenous peoples in certain regions. SMHI works to improve this and during the year, SMHI has been able to involve more female contacts in Africa, the Middle East, and South-East Asia where previously only men had served as contacts. The work with Cordex is also intended to improve gender equality in access to information and knowledge development by contributing to local expertise and to work for easy access to decision-making data of the same high quality everywhere.

Sustainable project implementation and digitisation

The agencies in the appropriation aim to reduce the environmental impact from project activities, for example by using more digital and travel-free working methods. The Coronavirus pandemic led to a rapid transition to digital working methods for meetings and sharing of knowledge and experience. Above all, we are now better equipped to work with less travel in the future. However, we continue to regard in-person meetings an important trust-building element in collaborations, and when we need to see and understand local conditions.

In 2022, the Coronavirus created challenges in countries impacted by the effects and restrictions of the pandemic, which in turn impacted certain projects in the appropriation. This included SwEPA's collaboration with India and China, where no physical trips were possible, which impacted the progress of the work negatively. Pandemic restrictions in Taiwan also resulted in many of the planned activities for 2022 being delayed until 2023.

Swedish Agency for Marine and Water Management (SwAM)

In 2022, a large part of SwAM's meetings with partners could be held online, and thus had limited environmental and climate impact. After pandemic restrictions not allowing travels, SwAM could again travel to East African countries which was important for the collaboration, yet online meetings will continue to be held to reduce travels and thus emissions moving forward. Regarding the collaborations with Brazil, Indonesia, China and the United States, initiatives have solely been held online which mean that the collaborations have had low environmental and climate impact.

Swedish Chemicals Agency (KemI)

KemI 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 Coronavirus pandemic resulted in a faster transition to online solutions, and in 2022 KemI took part in online seminars to a greater extent than the years before the pandemic. This was enabled by the partner organisations also developing their online tools and methods.



Swedish Environmental Protection Agency (SwEPA)

In the various collaboration constellations, SwEPA continuously seeks ways of limiting the environmental impact of initiatives, such as by holding meetings, seminars and workshops through digital meeting platforms. In 2022 digital meetings were widely used in all collaborations, and this reduced the environmental impact of projects significantly. SwEPA's collaboration with China and the United States did not include any trips in 2022, all work was done online. Previously, in the collaboration with India, annual study visits to Sweden had a relatively high environmental impact through emissions from travel. To reduce this impact, study visits have been discontinued. No trips were made to India in 2022 and lectures were instead held remotely through digital platforms. In 2022 SwEPA and KemI travelled to Indonesia for initial consultations, which involved establishing new contacts. This means that continued work largely can be done online.

In 2022 digital meetings were widely used in all collaborations which reduced the environmental impact of the projects significantly

Swedish Meteorological and Hydrological Institute (SMHI)

SMHI has since long used both physical and online meeting solutions. During the Coronavirus pandemic, physical meetings were completely replaced by online meetings. This caused some difficulties for certain training that requires hands-on work. Since internet connections and technical platforms are lacking in some geographic areas, online cooperation is sometimes a challenge. SMHI has used a preliminary review of what works in different regions and countries to find effective forms for online collaboration. Physical meetings have been resumed to some degree, but to reduce the environmental and climate impact, hybrid meetings are now being tested to a greater extent. In 2022, several hybrid workshops were

organised with participants onsite and online in South Asia, South-East Asia, South America, Africa and Norway. The hybrid format also increases gender equality, since more researchers and other stakeholders from organisations with lower financial resources are able to participate, expand their networks and exchange experience without travelling far.

Export promotion effects

Projects within the appropriation should be consistent with Sweden's export strategy. Strengthened regulations and systems in collaborating countries could improve the capacity of ordering Swedish knowledge, Swedish system solutions and technical solutions. Sharing Swedish experiences and methods can also generate interest in and awareness of Swedish expertise and environmental and climate technology. Close dialogue with Swedish embassies and other Swedish authorities, such as Vinnova and Business Sweden, and contacts with other relevant Swedish stakeholders further strengthens the work, such as enabling opportunities for the Swedish private sector.

Swedish Agency for Marine and Water Management (SwAM)

SwAM's collaboration with China has included exchanging knowledge and experience within prioritised fields and improving regulations and environmental management in China. In the long term, this could increase requests for Swedish expertise and Swedish systems and technical solutions. Through this collaboration, SwAM has also been in close dialogue with Swedish research institutes, such as the Swedish Environmental Research Institute (IVL) and Research Institutes of Sweden (RISE). SwAM has also been active in networks like Team Sweden where Swedish companies and export-promoting groups have been informed of the results and experience from the collaboration.

South Africa and East African countries have learned about the Symphony Environmental Assessment Tool, which is used within Swedish marine spatial planning. The countries have used it in their decision-making processes in national marine spatial planning. The development of the tool, which is based on an open-source code, has now been transferred and is administered by the Nairobi Convention in their clearinghouse mechanism, a data reference centre that provides data and information for improved administration and protection of coastal and marine environments in the western Indian Ocean. WIO Symphony is thus made available to all member countries. The tool has also sparked interest from neighbouring countries, such as Namibia, where it may be introduced.

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 completed this transition and have solutions to offer. Trade is promoted also by harmonising the classification and labelling of hazardous chemicals, which KemI works for in the cooperating countries.

Swedish Environmental Protection Agency (SwEPA)

SwEPA's collaborations could contribute both directly and indirectly to Swedish export promotion. For example in Brazil, SwEPA is sharing experience from Sweden's legislation, policy, data collection, analysis and changing behaviour of the public through communication efforts. These changes towards a circular economy also create a need for new system solutions and green technologies, where Sweden is at the forefront. The collaboration with the United States is focused on exchanging knowledge and experience, which can stimulate interest for Swedish solutions and expertise. In autumn 2022, discussions began with other Swedish stakeholders working with California, including Green Transition Initiative, Vinnova and Nordic Innovation House. Each of these groups takes a Team Sweden perspective and works for green innovations and increased collaboration between groups and organisations in Sweden, the Nordic countries and California.

Swedish Meteorological and Hydrological Institute (SMHI)

SMHI and Sweden have good reputation within Cordex and regional climate information efforts. By providing Swedish expertise, making available climate information produced in Sweden and sharing methods, tools and good examples, SMHI contributes to showcasing the potential of Swedish expertise and solutions, which can ultimately contribute to increased exports. Tools and methods produced by SMHI are widely utilised. As part of the collaboration with Brazil, Sweden and Brazil have worked together to learn more about how different types of urban planning can increase urban heat resistance and which sources that can increase air pollution. This knowledge of and tools for air quality and climate can be transferred to other cities. The water management tools and methods tested and implemented by SMHI can also be used in many other countries within consultancy, forecasting, alert services and capacity development.

Environmental and Climate Collaboration Funded by Appropriation 1:13

Annual Report for 2022

In this report, the Swedish Environmental Protection Agency (SwEPA) describes its collaborations in 2022 with strategically important countries, regions and multilateral organisations for the global environmental and climate work, funded by the appropriation for international environmental collaboration (1:13). The primary organisations participating in the collaborations are the Swedish Environmental Protection Agency (SwEPA), the Swedish Agency for Marine and Water Management (SwAM), the Swedish Chemicals Agency (KemI) and the Swedish Meteorological and Hydrological Institute (SMHI). The Stockholm Environment Institute (SEI) has also received a grant from the appropriation. During the year, Sweden collaborated with Brazil, India, Indonesia, China, South Africa, South Korea, and the United States. Projects were also conducted through the UN Institute for Training and Research, the International Chemical Secretariat, the Leadership Group for Industry Transition and the Coordinated Regional Climate Downscaling Experiment. Through the appropriation, Sweden is contributing to global environmental and climate work of significance for a sustainable future, both in Sweden and around the world.

