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# Management of Environmental Protection Initiatives -Evidence from Sweden

### Santosh, Kumar Mishra

Technical Assistant, Population Education Resource Centre (PERC),
Department of Lifelong Learning and Extension (DLLE)\*,
S. N. D. T. Women's University,
Patkar Hall Building, First Floor, Room No.: 3,
1, NathibaiThackersey Road, Mumbai400020, Maharashtra, India.
(Retired on June 30, 2020)\*

Email: drskmishrain@yahoo.com

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## **ABSTRACT**

Environmental protection is one of the significant aspects of sustainable development (SD) of any country. Sweden is no exception, several environmental protection initiatives, including Environmental Governance Programme (EGP), have been undertaken by various stakeholders. The Swedish Government's vision of SD envisages the principle that "all policy decisions must take account of the longer-term economic, social and environmental implications". The terms environmental protection and SD have been used interchangeably in this paper. However, it is pertinent to note that it is a management aspect of environmental protection initiatives that require special attention on the part of programme managers. This empirical research aims to look into the management of selected environments and SD programmes undertaken in Sweden. Secondary data (mostly 'qualitative' in nature) have been used in the work, analysis methodology being 'descriptive', involving "desk-based research". The paper concludes that the management of Swedish environmental protection initiatives adopts multi-disciplinary approaches.

**Keywords:** Environmental Protection; Sustainable Development; Climate Change; Strategies; Sweden; Programmes.

#### INTRODUCTION TO ENVIRONMENTAL CONCERNS IN SWEDEN

Environmental preservation and well-protected ecology are the basic prerequisites for the overall sustainable development of any country in the world. It is pertinent to note that the rate of environmental damage is increasing across the planet, but there is still time to reverse the worst impacts if national governments, policymakers, and all other stakeholders (including non-governmental organizations (NGOs) act now, without further delays, in a meaningful manner. Environment and sustainable development educators advocate that there is still time to tackle many of the worst impacts of environmental degradation. It is pertinent to note that new environmental concerns and threats raise ethical questions for the human race (Brown, 2001). Some of the prominent outcomes of environmental and ecological degradation include:

- 1. damage to marine ecosystems,
- 2. air and water pollution,
- 3. global warming, 4. deforestation, and
- wildfires.

The issues outlined above are just a few of the environmental issues that the planet is facing today. In addition, climate change, the loss of biodiversity, land degradation and water scarcity are growing problems, across the world (Franjic 2018). In the context of the discussion on environmental issues, the author of this work specifically indicates that the environmental systems are comprised of the atmosphere, hydrosphere, geosphere, and biosphere, and the interactions of all these with the human population (National Academy of Sciences, 2021). These are significant aspects of sustainable development and the environment that need to be urgently addressed to achieve the goals set out in the 2030 Agenda for Sustainable Development. It is, therefore, imperative to understand the pace of environmental change. It is equally important to work with nature instead of against it to tackle the array of environmental threats. If economic growth and sustainable development are to be established, biodiversity must be ensured. As relevant information on environmental and ecological protection is disseminated to people at large, awareness is created about the significance of preventing environmental degradation in meaningful ways.

It is, thus, critical to protecting the environment to reduce the destruction of ecosystems caused by human-induced activities. Human overpopulation is one of the main causes affecting the environmental health of the globe. Environmental protection initiatives need to be strengthened through both streams of education: formal education, and nonformal education. The pursuit of sustainable development and environmental conservation policies make it necessary that the international community, at large, is made aware of the dimensions of environment and development. Environmental education is, thus, necessary for all people living on the planet. Education of this type can be imparted through appropriate modalities that are best suited to the locally prevailing social, economic, and demographic conditions. The bottom line is that in the new millennium, it is being increasingly realized that to ensure economic growth and development in a manner that is 'sustainable', there is no country in the world that does not want to protect the environment and biodiversity from further degradation (Gooch, 1995; Osonwa & Arikpo, 2018).

Sweden is no exception to this. Environmental concerns and Sustainable Development (SD) issues have remained high on the developmental agenda of Sweden. In terms of environmental concerns in Sweden, one of the biggest environmental issues is the consequences of the logging industry. According to data published by the World Wildlife Fund (WWF), 2000 forest-dwelling species are threatened in Sweden. Even though Sweden

has made significant progress in the area of sustainable timber harvesting, unhealthy environmental practices continue to remain in existence. Another major environmental issue the country is confronted with pertains to seawater pollution. It is reflected in the pollution of the Baltic Sea which has resulted from mainly two sources: (a) pollutants from agriculture sources, and (b) waste treatment facilities. Document titled "Voluntary Report on Implementation of the Programme of Work on Marine and Coastal Biological Diversity", published by the Helsinki Commission Baltic Marine Environment Protection Commission (HELCOM), suggests that the country under study was responsible for 12% of the 1 million tons of nitrogen, and 9% of the 43,000 tons of phosphorus that were dumped into the Baltic Sea in the year 2010. HELCOM (Helsinki Commission Baltic Marine Environment Protection Commission), established in 1974, is an

intergovernmental organisation (IGO). As a regional sea convention in the Baltic Sea area, it aims to protect the marine environment of the Baltic Sea from all sources of pollution.

This paper further points to the fact that Sweden is facing its legacy of past industrial emissions. Notably, these industrial emissions are in the form of the acidification of Sweden's lakes. This situation, along with prolonged industrialization and urbanization, has caused an "acidic water quality". This is a serious environmental concern because it threatens the flora and fauna of the country. In addition, flora and fauna degradation have counter implications. For instance, fish cannot breed in more than 16,000 lakes of the country (Helsinki Commission Baltic Marine Environment Protection Commission (HELCOM), n. d.). In addition to the above outlined environmental concerns, lowering carbon emissions in Sweden is key to sustainable development, even though the country is characterized by two demographic indicators, namely, "low population", and "moderate economic growth". It is equally important to note that the environmental issues in Sweden have international implications because of regional economic and environmental interdependencies, and commitment to global environmental issues such as climate change (Sweden.se, 2021).

In the face of significant environmental concerns, Sweden has formulated policies that aim to ensure: (a) environmental protection, and (b) sustainable development. The country, today, has positioned itself as one of the progressive countries that have addressed environmental issues through series of advocacy efforts. According to the European Environment Agency, Sweden has three types of environmental objectives. They are: (a) generational goal, (b) milestone targets, and (c) quality objectives (European Environment Agency, 2020). This paper does not wish to further elaborate on these three aspects, as it is not within the framework of objectives of the present research. This work's main objective is to look into the management of the selected environment and SD programmes in Sweden. More specifically, efforts of the Swedish Environmental Protection Agency (Swedish EPA) have been looked into. With respect to this particular objective, in total, five (5) initiatives on environmental protection sustainable development (including climate change) undertaken in Sweden have been studied by the author in this work. Discussion on management of other environmental programmes that have national and regional implications form part of this work. The key research question, the author has tried to investigate in this study, pertain to (a) the extent to which Sweden has made progress in environmentally sustainable development initiatives over the years, and (b) areas needing improvements (given challenges encountered and lessons learned from past experiences). Further, significant findings from the research are presented by the author.

Drawing from the data analysed for this research- it can be stated that Sweden is one country that has pioneered in designing several policy instruments, more specifically in terms of application of environment-related technology in sustainability projects. For instance, achievements made in the field of cutting greenhouse gas (GHG) emissions, over the years, have been noteworthy. The country is committed to ambitious climate change goals. However, although the overall performance of environmental and sustainable development projects is quite impressive, Sweden is confronted with challenges in meeting the environmental quality objectives. Progress made in combating toxic pollution and curbing overfishing activities has been limited. In the context of toxic pollution and overfishing, it is significant to note that the Baltic Sea is particularly vulnerable to pollution due to limited water exchange. Sweden, thus, needs to further reduce inputs of nutrients to the Baltic to meet its national reduction target, as outlined under the "HELCOM Baltic Sea Action Plan" (OECD, 2014).

### RESEARCH METHOD

In terms of the methodology of analysis employed in this work, the nature of the analysis is 'descriptive' which involves "desk-based research". Examples of appropriate and relevant initiatives have been quoted in the research. Again, this research work is a case study in nature, since it attempts to address the management of environmental initiatives in Sweden, as indicated in the previous section. Data obtained from secondary sources have been used in the present work. The secondary data have been collected from sources, such as books, book chapters, journals, and internet resources. Data are, mostly 'qualitative' in nature.

#### ENVIRONMENTAL POLICY-CONCEPTUAL FRAMEWORK

Environmental policy is defined in several ways. However, in its simplest form, the term "environmental policy" is comprised of two words: 'environment' and 'policy'. The word environment indicates ecosystems. It, however, also envisages: (a) the social dimension (e. g., quality of life, health, etc.), and (b) economic dimension (e. g., resource management, biodiversity, etc.). On the other hand, the word policy is defined as a "course of action or principles adopted (or proposed)". Policies can be designed (or formulated) and implemented by governments (at local, provincial, and/ or national levels), stakeholders, and individuals. From this point of view, the environmental policy emphasizes problems resulting from the impact of human intervention on the environment. This is important to human society and human values. Environmental policies have, thus, to be formulated in the credible of social morals and values. Environmental policy is also defined as action or set of actions deliberately taken to manage human activities to prevent, reduce, or mitigate harmful effects on nature and natural resources (Vaiyda, 2019).

While discussing the conceptual framework of environmental policy, it would be relevant to research some of the key issues that necessarily need to be taken into consideration while designing policies, laws, and legislation. In this context, the author of this paper makes a specific point that there is a need to place an increased attention on theimplementation aspect of the overall management. Policy experts from around the globe, based on past experiences, are of the view that the problems are faced at the implementation stage. The Organisation for Economic Co-operation and Development (OECD), in its publication titled "Policies for a Better Environment: Progress in Eastern Europe, the Caucasus and Central Asia" published in (2007) has reported that the policy managers face several difficulties at the level programme implementation. More specifically the

implementation gaps are particularly evident at the sub-national levels in many countries. In addition to this, another area of concern in matters pertaining to environmental policy is that in situations where progress is being made, there are little shreds of evidence to suggest that countries are taking a coherent approach to reform. Careful investigation and research into achievements derived across different policy areas of environmental protection provide valuable insights into programme hurdles at the implementation stage. Another area that requires attention in formulating environmental policies refers to the situations with environment-related infrastructure. Such situations may be evidenced in cases of several environmental projects, for instance, projects on (a) water supply, and conservation; (b) sanitation; (c) waste management; (d) use of clean, and sustainable energy; (e) management of urban transport; and (f) irrigation management for sustainable agriculture. Situations on environment-related infrastructure are characterised by unsustainable financial models that, often, result in inadequate infrastructure. This, in turn, results in (a) poor services, (b) negative environmental impacts, and (c) poor outcomes of the environmental and sustainable development initiatives (Organisation for Economic Co-operation and Development (OECD), 2007).

Further, it is pertinent to note that the success of environmental policies is linked with "cross-sectoral policy dialogue". This issue (of cross-sectoral policy dialogue) needs to be looked into in the broader perspective of collaboration and networking mechanisms at national, sub-national, and provincial (or local levels). This aspect is of utmost importance because it is being increasingly recognised that "environmental policy integration" is a key contributing factor in ascertaining the extent of progress made towards environmental sustainability. However, it has been found that environmental authorities and other stakeholders (in many situations) are not adequately prepared to engage in cross-sectoral policy dialogue in a manner that is meaningful for the success of environmental conservation initiatives. This ill-preparedness (on meaningful crosssectoral policy dialogue) leads to a situation that indicates inadequate progress made in the programmre areas. Adopting effectively designed integrated policy responses is, therefore, key in achieving desired sustainability goals (Organisation for Economic Cooperation and Development (OECD), 2007).

Furthermore, environmental programme managers are also faced with structural and political constraints. These are areas that require continuous consultation and interaction among all involved stakeholders, including personnel of non-governmental organizations (NGOs), and inter-governmental organizations (IGOs). Such a sustained interaction will result in sharing of both knowledge gain and infrastructural facilities. Notably, structural and political constraints are reflected in the form of inadequate strong drivers for environmental improvement. This situation leads to a series of factors that are not conducive for the success of the proramme, or for achieving desired goals (within the given time framework and available resources). Some of such resulting factors include: (a) subsequent low profile of environment on national policy agendas, (b) poor governance of environmental programmes, and (c) inadequate coordination among donors and implementing agencies (Organisation for Economic Co-operation and Development (OECD), 2007).

In view of the information presented above, the need for more effective and wellresearched environmental policies becomes obvious. Such policies should necessarily envisage the points made above, for instance, cross-sectoral policy dialogue, and implementation gaps. Policymakers advocate that carefully designed policies are aimed at

ensuring that "man-made changes to the environment do not have harmful effects on humans or the environment". Environmental policy of this type essentially envisages:

- 1. air and water pollution;
- 2. waste management;
- 3. ecosystem management;
- 4. biodiversity protection from further degradation; and
- 5. protection of natural resources, wildlife, and endangered species (Vaiyda, 2019). Environmental concerns like these affect everyone across the regions of the globe. They, thus, cannot be ignored. In this context, it is important to note that the people at the community levels need to understand exactly what environmental policy is and how it affects them (Vaiyda, 2019).

#### IMPORTANCE OF AND NEED FOR ENVIRONMENTAL PROTECTION POLICY

Nowadays, the term "environmental policy" has gained increased significance in the broader context of the global economy, international politics, and various domestic programs. The environmental policies are debated and researched at various regional, national, and international platforms. When environmental policy is discussed, the concerned stakeholders advocate the need for substantial policy reform. But the fact remains is that when actual policies are introduced and implemented at various levels, they are ignored (or delayed). It is due to this reason that national governments and lawmakers need to place a higher priority on environmental policy (Vaiyda, 2019). Environmental policy has, in today's world, became an international issue for debate. This is because sound environmental policies are needed to mitigate climate change and to address relevant sustainable development concerns. Several of the environmental issues that the international community faced in the late twentieth century are still issues of concern today, in the twentyfirst century. Prominent environmental issues of concern are: (a) climate change, (b) lack of fossil fuels, (c) sustainable energy solutions, and (d) ozone (including resource) depletion. It is, thus, obvious that with the plethora of issues presenting affecting the environment and ecology, environmental policy needs to become a priority (Vaiyda, 2019).

Stated differently, green initiatives are the need of the hour. Incidents resulting from environmental degradation (for instance, rising sea levels, frequent droughts and flood situations, and other extreme weather events) have enormous human impacts. This, in turn, has resulted in killing or displacing the countless number of people each year in several parts of the world. It is, thus, important that the national governments focus significant attention (and funding) on formulating environmental policies that are appropriate in view of locally prevailing social, economic, and demographic situations. Today, it is being increasingly realized that in case the human population continues to disrespect the environment (which, earlier, was considered as "mother nature" in countries), the planet might be degraded to the point and extent where it is no longer habitable (or liveable). Environmental policy of the twenty century should disseminate this message to all: we have only one Earth; we need to do our best to preserve it (Vaiyda,

2019). These descriptions present the context, rationale and need for environmental policy.

## INTERNATIONAL ENVIRONMENTAL PROTECTION POLICIES: A REVIEW

In view of national economies, across the regions of the continent, crippled by environmental threats, several debates and academic discussions are taking place on the subject centered around "environmental policy and globalisation". It has been realized that

it is appropriately designed international environmental policy that is particularly important in view of increasing globalization, several of the environmental problems extend beyond national borders. Such problems can be addressed and solved, in practical terms, through international cooperation. Here what is of paramount importance is that international environmental policy envisages inter-connected issues. Some of such issues include: (a) climate protection; (b) sustainable energy; (c) preservation of biological diversity; and (d) conservation of forests, seas and soils (Ering et al. 2016). In addition to this, other related environmental topics of significance are comprised of:

- a) desertification,
- b) sustainable waste management, and
- c) protection against hazardous substances (Federal Ministry for the Environment, Natural Conservation and Nuclear Safety, n. d.).

In view of these considerations (as outlined above), it is important to adopt a strategic intervention that is inter-disciplinary. All these environmental issues, therefore, require overarching strategies to ensure that environmental protection and climate change mitigation are considered in other policy areas (for instance, cooperation among developed and developing economies (Federal Ministry for the Environment, Natural Conservation and Nuclear Safety, n. d.). It is for the reasons cited above that several efforts have been made in the area of formulating international policies. For instance, the G8 and the G20 countries have joined hands together for addressing international environmental issues. It is pertinent to note that the agenda of the G8 countries (consisting of Germany, Japan, Great Britain, the USA, France, Italy, Canada and Russia) has included the environment, an issue that needs to be addressed as top priority basis (Sustainable Governance Indicators (SGI), 2020). The environmental agenda of the G8 countries aims to tackle environmental issues of current relevance. Some of such issues are comprised of: a) climate protection,

- b) biodiversity,
- c) forest protection,
- d) combating environmental crime, and
- e) protection of the world's oceans (Sustainable Governance Indicators (SGI), 2020).

In the year 2007, the foundation was laid (under the German G8 Presidency) for a longterm global climate protection target aiming to at least halve global greenhouse gas emissions (GHEs) by the year 2050. Further, it is pertinent to note that in the run-up to the climate conference in Copenhagen (that took place in the year 2009), the G8 states (countries) acknowledged the need to limit global warming to 2 degrees Celsius. Furthermore, as a response to the global economic and financial crisis, the G20 counties (comprising of China, India, Brazil, Mexico, South Africa, Australia, South Korea, Indonesia, Argentina, Saudi Arabia, Turkey and the EU countries) have attached gained importance to environmental issues, as a key player in the new "global governance". The process of transition from the G8 format to the G20 format has, therefore, been initiated in efforts aimed at designing and effectively implementing international environmental policies (Sustainable Governance Indicators (SGI), 2020). There are several other environmental policies of international significance that have been initiated by governmental bodies and international non-governmental organizations (NGOs) over the years. However, the author does not wish to elaborate further on this aspect, as it does not fall within the framework of scope and objectives of this policy paper.

## KEY ENVIRONMENTAL CONCERNS AND POLICIES IN SWEDEN

Sweden, stretching from the European mainland to the Arctic, is known for its undeveloped wilderness. It should be noted that the climate change scenario resulting from the emission of carbon dioxide and other greenhouse gases is one of the foremost environmental problems. Policy planners argue that emissions need to be reduced at a speed to ensure sustainable global growth. Transition needs to (a) be effective, and (b) at the same time ensure long-term sustainability benefits (Sweden.se, 2021). Reducing carbon emissions and limiting pollution, thus, remain two areas of concern the country is confronted with. Further, it is pertinent to note that more than half of the country's energy supply comes from renewables and a thorough legislation aims at further reducing greenhouse gas emissions (Sweden.se, 2021). Data presented above in the subsequent subtopic centers around international environmental protection policies with specific reference to policies adopted by the G8 and G20 countries. Since this work primarily addresses the management aspect of environmental and SD initiatives in Sweden, it would be relevant to look into the framework of environmental policies of the Swedish Government. It is for this reason that the author of this work briefly presents below the environmental policies of Sweden.

It is pertinent to note that Sweden considers damage caused to the environmental health of the planet as "global social injustice". It is because of this consideration that the country (Sweden) has been a forerunner in officially institutionalising environmental policy (that is best suited to the locally prevailing socio-economic and demographic situation). In terms of history and evolution of policies aimed at environmental protection, environmental policy, in Sweden, made its way to becoming an integral part of the 'political' (read: 'official') agenda in the 1970s. Since then, it (environmental policy of Sweden) has remained one of the salient and integral parts of the set of the developmental agenda (issues). The author of this research work makes a point here that the commitment of the Government of Sweden to SD and addressing climate change seems to be effective (from programme designing and implantation point of view) (Organisation for Economic Co-operation and Development (OCED, n. d.).

# NEED FOR MANAGEMENT OF ENVIRONMENTAL PROTECTION PROGRAMMES

It is reasons connected with environmental concerns and climate change that Sweden was the first country in the world to pass an Environmental Protection Act in the year 1967, which was followed by hosting the first United Nations (UN) Conference on the global environment in 1972. The Government has adopted sustainability goals, including going fossil-free by 2045 and 100% renewable energy (Sweden.se, 2021). Sweden devised a new government agency, namely, the Swedish Agency for Marine and Water Management (SAMWM). It was entrusted with the responsibility of handling issues pertaining to water pollution. In addition, several of Sweden's corporations take part in responsible business practices that are eco- and sustainable friendly. Also, Swedish companies (like Ikea) are viewed as environmental leaders, they have undertaken series of initiatives that help safeguard the environment and ecology. In implementing environmental protection programmes, the country collaborates closely with intern-governmental agencies on matters pertaining to (a) ecological sustainability, and (b) clean technologies. Some of the copartners are the United Nations Development Programme (UNDP), the United Nations Environmental Programme (UNEP), The World Bank, etc.

It is important to note that it is the management aspect of environmental protection programmes that are crucial for the success of the initiatives made. This, in turn, requires a

well-defined environmental policy. This is because the framing and designing of environmental policies are, often, not given due consideration. The fact remains is that at the stage of debating and developing environmental policy, citizens, civil society representatives, and all other stakeholders need to be involved to know their views on substantial policy reform. As against this, when actual environmental policies are framed and introduced, the opinions of other stakeholders are either ignored or delayed. It is, thus, necessary for policymakers to place increased priority on environmental policy.

# MODALITY OF MANAGEMENT OF ENVIRONMENTAL PROTECTION INITIATIVES-EVIDENCES FROM SWEDEN

As indicated in the previous section, environmental issues and areas of concern connected with sustainable development (including climate change) have remained high on the developmental agenda of Sweden (Organisation for Economic Co-operation and Development (OCED, n. d.). It is pertinent to note that the management of Swedish environmental protection initiatives adopts multi-disciplinary approaches, involving a partnership of intergovernmental agencies. Over and above, issues of relevant environmental concern in Sweden also have a strong international aspect because of:

- 1. regional economic and environmental inter-dependencies;
- 2. entry of Sweden into the EU in the year 1995;
- 3. the commitment of Sweden on global environmental issues, especially persistent organic pollutants (POPs); and
- 4. commitment to international environmental co-operation and aid (Organisation for Economic Co-operation and Development (OCED, n. d.).

In line with objectives of this work, management of the selected environment and SD programmes in Sweden (including efforts of the Swedish Environmental Protection Agency (Swedish EPA) have been looked into in this section. The management aspects (of environmental (including SD) initiatives in Sweden) that have been studied, in greater details in this research work, include:

- 1. conceptual framework and background of the initiative (understudy),
- 2. rationale (need of the initiative),
- 3. implementation strategy,
- 4. collaborating agencies,
- 5. the outcome of the initiatives (programmes) undertaken,
- 6. evaluation (including monitoring strategies), and
- 7. any other information related to programme management (for which data/information is available).

In Sweden, climate change caused by the emission of carbon dioxide and other greenhouse gases is one of the foremost environmental problems in the twenty-first century. It is in view of this consideration that the Government of Sweden has set ambitious goals for sustainability, including going fossil-free by the year 2045 and 100 % renewable energy (Swedish Environmental Protection Agency (Swedish EPA), 2009). The Ministry of the Environment is entrusted with the responsibility of implementing the Swedish Government's environmental and climate policy. The Ministry works on issues concerning the environment. These environmental issues include: (a) climate change, (b) biological diversity, (c) nature and forest conservation, (d) marine and water environments, and (e) international environmental cooperation. The description of management aspects of

selected environmental and SD intimacies undertaken by various implementing agencies in Sweden, in accordance with the above parameters, are presented below:

## **ENVIRONMENTAL GOVERNANCE PROGRAMME (EGP)**

## **Introduction to the Initiative and Objectives**

The Environmental Governance Programme (EGP) is funded by the Swedish International Development Cooperation Agency (SIDA). This initiative emphasises sustainable natural resource management. At this juncture, it is significant to note that the initiative titled "EGP for Sustainable Natural Resource Management 2020-2023" is a continuation of the project which was launched previously (in the year 2014) by the Swedish Environmental Protection Agency (SEPA), in partnership with the United Nations Development Programme (UNDP) (Swedish Environmental Protection Agency (Swedish EPA), 2021). The EGP adopts an integrated approach to sustainable natural resource management. This approach emphasizes influencing:

- 1. the drivers of conflict,
- 2. environmental degradation,
- 3. inequality,
- 4. exclusion, and
- 5. poverty simultaneously (Swedish Environmental Protection Agency (Swedish EPA), 2021).

On the national level, the EGP supports ten countries (namely: Mongolia, Kirgizstan, Liberia, Namibia, Kenya, Peru, Colombia, Argentina, Ecuador, and Zambia) to enable them to integrate environmental sustainability and human rights into the governance of the mining sector. At the community level, on the other hand, the EGP works to support less well-off groups like women, youth and minorities to participate in the decision-making and monitoring process. Also, the EGP works at the global and regional levels to support the exchange of experience and approaches to common problems across countries and regions. It is pertinent to note that another collaboration within the EGP is with United Nations Environment Programme (UNEP) and Sustainable United Nations (SUN) to improve the environmental management systems of the United Nations (UN). Working with the UN system provides the EGP with an opportunity to impact the global environmental standards (Swedish Environmental Protection Agency (Swedish EPA, 2021).

#### The outcome of the Initiative

Information presented here on the outcome of the initiative (titled EGP) pertains to the period 2014-2019. It is interesting to note that the Swedish Environmental Protection Agency has, through the EGP 2014-2019, contributed to the global discussion (and understanding) of thesignificance of an integrated approach in the environmental and human rights sectors. Governmental agencies in the participating countries (viz., Mongolia, Kirgizstan, Liberia, Namibia, Kenya, Peru, Colombia, Argentina, Ecuador, and Zambia), working with the Programme (the EGP), have reached a higher capacity to manage natural resources within the mining sector. Sustainable natural resource management in ten (10) participating countries, as indicated above, using an integrated approach, is in line with international environmental agreements, including human rights commitments. The author of this work makes a specific point here that in terms of outcomes of the EGP initiative, two

specific achievements are mention-worthy. They are: (a) environmental management system of the UN has improved, and (b) international standards have developed into bridging research and politics with regards to ecosystems accounting for decision-making (Swedish Environmental Protection Agency (Swedish EPA), 2021).

## **Collaborating Agencies**

As specified above, the EGP initiative has sought, over the years, cooperation and networking mechanisms with several international organizations. In more specific and programme management terms, some of the agencies in collaboration with which the EGP is carried out by the SEPA are:

- 1. the United Nations Development Programme (UNDP),
- 2. the United Nations Environment Programme (UNEP),
- 3. Sustainable United Nations (SUN),
- 4. the World Bank (WB),
- 5. UN Environmental Management Group (EMG),
- 6. Intergovernmental Forum on Mining, Minerals and Metals (IGF),
- 7. the UN Women, UN Volunteers,
- 8. the United Nations Institute for Training and Research (Unitar),
- 9. Women in Mining,
- 10. Global Alliance of National Human Rights Institutions (GANHRI),
- 11. Source International.
- 12. Learning for Nature,
- 13. Stockholm University (SU), and
- 14. Lund University (LU) (Swedish Environmental Protection Agency (Swedish EPA), 2021).

## SWEDISH ENVIRONMENTAL PROTECTION AGENCY (SWEDISH EPA)

## **Introduction to the Initiative and Objectives**

The Swedish Environmental Protection Agency (abbreviated as the Swedish EPA) conducts international cooperation both bilaterally with selected countries and in various multilateral forums. Most importantly, it plays a central role in the climate change strategy, as decided by the Government and the Swedish Parliament. It aims to evaluate and propose measures needed to reduce greenhouse gas emissions (GGEs) in the country. The Swedish EPA reports and disseminates, on regular basis, relevant statistics on climate to three agencies: (a) the Swedish Government, (b) the EU, and (c) the UN. Also, it contributes and extends expertise in international negotiations. Another significant area in which the Swedish EPA works is the development and implementation of: (a) emissions of greenhouse gases in the EU region (countries), (b) trading system, and (c) local investments program, named as the "Climate Leap" initiative. Further, it also analyses the climate impact of Swedish consumption (Swedish Environmental Protection Agency (Swedish EPA), 2021). Also, it analyses the impact of Swedish consumption on the climate. Another important dimension of the Swedish EPA is that it strengthens the ability to achieve the Sustainable Development Goals (SDGs) under the global 2030 Agenda (Swedish Environmental Protection Agency (Swedish EPA), 2021).

#### The outcome of the Initiative

The Swedish EPA has produced documentation to describe and monitor the developmental initiatives undertaken in the country. In terms of outcomes, it has made efforts to reach the climate goals within five key areas. They are: (a) transport, (b) energy, (c) industry, (d) food, and (e) forest (Swedish Environmental Protection Agency (Swedish EPA), 2021).

#### Vision for the Future

According to the climate policy framework, the vision of the Swedish EPA is that Sweden's climate-affecting emissions will be net-zero in the year 2045. Also, it is proposed that in the non-trading sector, several milestones must be achieved along the way. Most importantly, with regard to the international cooperation, the overall ambition of the Swedish EPA is to contribute to the development of effective environmental strategies needed for mutual strategic benefit, such as:

- 1. implementing commitments under international environmental conventions,
- 2. active participation in the development, and
- 3. formulation of strategies and policies in the EU (Swedish Environmental Protection Agency (Swedish EPA, 2021).

## **Collaborating Agencies**

The Swedish EPA conducts international cooperation both bilaterally with selected countries and in various multilateral forums. This type of partnership and networking mechanism contributes to Sweden's vision of "a good living environment for humans and all other living things, now and for future generations" (Swedish Environmental Protection Agency (Swedish EPA, 2021). The multilateral collaborating partners and agencies include:

- 1. the Nordic environmental cooperation,
- 2. the Arctic Council,
- 3. the Barents Euro-Arctic Council,
- 4. the Organisation for Economic Co-operation and Development (OECD),
- 5. the United Nations Economic Commission for Europe (UNECE),
- 6. the United Nations Development Programme (UNDP), and
- 7. the United Nations Environment Programme (UNEP, sometimes also termed as UN Environment) (Swedish Environmental Protection Agency International Affairs, n. d.).

#### NATIONAL AIR POLLUTION CONTROL PROGRAMME (NAPCP)

## **Introduction to the Initiative and Objectives**

The Swedish Environmental Protection Agency (Swedish EPA) is the authority responsible for implementing the national air pollution control programme (NAPCP) in Sweden. According to the provisions of the Air Pollution Control Ordinance, the Government of Sweden is mandated to adopt a national air pollution control programme. The programme (NAPCP) must subsequently be updated at least once every four years (Swedish Environmental Protection Agency (Swedish EPA), 2019). The NAPCP aims to describe how Sweden will meet its commitments to reduce emissions of certain atmospheric pollutants to achieve its commitments under the Emissions Reduction Directive. Implementation of the Directive will also reduce sulphur dioxide emissions within the EU-28 by 79 % by the year

2030 (compared with 2005), and nitrogen oxide emissions by 63 %. Here, it is pertinent to note that meeting the requirements of the Directive implies working together with other EU countries to achieve a shared solution to a shared problem (Dore, Goodwin, Vincent, Nielsen, Anderson, &Misra, 2019).

## The outcome of the Initiative

Air quality in Sweden is relatively good. However, there are still areas with raised concentrations mainly of nitrogen oxide, particles and ground-level ozone. The most recent evaluation of the environmental target of fresh air is indicative of the fact that the concentrations (of nitrogen oxide and particles) in street areas, urban backgrounds and regional backgrounds continue to decrease slowly. In the NAPCP, the focus is placed mainly on measures that need to be taken to meet the emissions ceilings (Swedish Environmental Protection Agency (Swedish EPA), 2019).

Most importantly, the Swedish Energy Agency, in the year 2016, implemented electrical buses to reduce carbon dioxide emissions and other air pollutants. Investments in electrical buses have significantly contributed to an estimated emission reduction (Climate and Clean Air Coalition, 2021). In addition, in the case of air quality, the emission of several air pollutants has decreased significantly. There has been a reduction in the emissions of fine particulate matter.

#### Vision for the Future

According to the climate policy framework, a climate action plan must be drawn up. There is scope for streamlining and synergies with selected measures in the air pollution control programme. There are strong synergies between the efforts made for the climate to meet the emissions target for the vehicles fleet by 2030 and reduced emissions of atmospheric pollutants. It should be noted that tackling air pollution is an essential part of tackling climate change mitigation programmes. The country has a longstanding commitment to strategies needed for clean air and climate change mitigation. Sweden intensified its efforts since the launch of Climate and Clean Air Coalition (CCAC) in the year 2012 (Climate and Clean Air Coalition, 2021).

## **Collaborating Agencies**

The collaborating partners in the implantation of the NAPCP include: (a) Swedish Board of Agriculture, (b) Swedish Environmental Protection Agency, (c) Swedish Energy Agency, (d) Swedish Transport Administration, (e) Swedish Transport Agency, (f) Climate and Clean Air Coalition (CCAC), and (g) the United Nations Environment Programme (UNEP). These agencies provide a qualitative description of the projected improvements in air quality and projected further evolution of the degree of compliance with EU air quality objectives (Swedish Environmental Protection Agency (Swedish EPA), 2019). Through the CCAC initiative, Sweden, today, is able to both learn from other countries and share experience of combining ambitious climate and clean air policies (Climate and Clean Air Coalition, 2021).

## **ENVIRONMENTAL MONITORING PROGRAM AREA: AIR**

## **Introduction to the Initiative and Objectives**

Under this initiative, titled the Environmental Monitoring Program Area: Air (the EMPA: Air), pollutants in air and precipitation are, within the national air monitoring program, monitored, mainly on a regional background level. In terms of objectives, the EMPA: Air monitors substances that are regulated in law (or in international conventions). Outcomes of this initiative ultimately contribute to the discovery of new environmental disturbances (Swedish Environmental Protection Agency (Swedish EPA), 2021).

#### The outcome of the Initiative

The EMPA: Air has many target groups. It is steered by several sets of actors and regulations. These include (a) the Environmental Code, (b) the EU directives, (c) the environmental quality standards and objectives of Sweden, and (d) the needs of international organizations and international conventions. In this context, it is pertinent to note that the Swedish legislation and EU directives are given the highest priority in monitoring. Again, the Convention for Long-Range Transboundary Air Pollution (CLRTAP) and the European Monitoring and Evaluation Program (EMEP) connected to it are also given high priority (as is following up the Swedish Environmental Objectives). The EMPA: Air was revised during the year 2015-2016. A sub-revision is currently taking place, covering the sub-programs (Swedish Environmental Protection Agency (Swedish EPA), 2021).

#### Vision for the Future

The national monitoring program is an integral part of air monitoring in Sweden. Other agencies that collect key data on air monitoring include local municipalities (for urban areas) and County Administrative Boards. The Swedish Environmental Protection Agency (SEPA) is responsible for producing an assessment of the air quality (nationally) as well as reporting all monitoring data. As per the vision of the initiative, there are several subprograms, and these can be sorted under six of the Swedish environmental quality objectives. Also, there are Reference groups that cooperate and exchange information with other stakeholders in the monitoring area, including: (a) relevant governmental agencies, (b) municipalities, and (c) County Administrative Boards (Swedish Environmental Protection Agency (Swedish EPA), 2021).

# **Collaborating Agencies**

In many cases, Swedish legislation, environmental goals and objectives, and international conventions align. Other important international conventions and agencies (with whom are the EMPA: Air initiative has partnered) include: (a) the Baltic Marine Environment Protection Commission (HELCOM), (b) the OSPAR commission, (c) the Arctic Council's Arctic Monitoring and Assessment Program (AMAP), (d) the Vienna Convention for the Protection of the Ozone Layer, and (e) the World Meteorological Organization (WMO) (Swedish Environmental Protection Agency (Swedish EPA), 2021).

## SWEDISH ENVIRONMENTAL CODE

## **Introduction to the Initiative and Objectives**

The Swedish Environmental Code (SEC) is comprehensive legislation, covering environmental matters of concern in Sweden. It was adopted in the year 1998 and entered into force on January 1, 1999. The purpose of the SEC is to promote sustainable

development. The SEC is guided by several principles. Important among the guiding principles is the concept of "sustainable development". Apart from promoting sustainable use of natural resources, the SEC places increased emphasis on the preservation and conservation of biodiversity. *Further*, it calls for the undertaking of environmental impact assessments on all planned development projects. The Code (SEC) provides for the creation of protected areas including: (a) national parks, (b) nature reserves, (c) cultural reserves, (d) national monuments, (e) wildlife and plant sanctuaries, and (f) water protection areas. *Furthermore*, it restricts activities that are environmentally hazardous (The Urban Law Data Base (UrbanLex, 1998). *Most importantly*, the ISEC defines such activities as those including:

- 1. discharge of wastewater;
- 2. solid matter or gas from land;
- 3. buildings or structures onto land or into water areas or groundwater;
- 4. use of land, buildings, or structures that entails a risk of detriment to human health or the environment due to discharges or emissions and;
- 5. any use of land, buildings, or structures that may cause a detriment to the surroundings due to noise, vibration, light, ionizing or non-ionizing radiation, or similar impact (The Urban Law Data Base (UrbanLex), 1998).

#### The outcome of the Initiative

An import and new provision in the SEC is the possibility to introduce environmental quality norms. According to these rules, the Government may issue regulations for certain geographical areas or the whole of Sweden on the quality of land, water, air or the environment. Here, it is pertinent to note that such regulations are referred to as "environmental quality norms" in Sweden. Norms that Sweden is liable to introduce under SEC rules may also be issued by authorities other than the Government. It is suggested that environmental quality norms will specify the levels of pollution and disturbance that humans may be exposed to. The levels of environmental quality norms may not be contravened after a certain stated time. The norms must specify, for example, the maximum or minimum amounts of chemicals in land, water, or air or the maximum levels of noise. Environmental quality norms may also state the highest or lowest water levels or flows in a watercourse or the highest or lowest amount of water in an organism to serve as a guide for assessing the condition prevailing in the environment (Ministry of Environment, Government of Sweden, 1999).

#### Vision for the Future

The scope and vision of the SEC are directly linked to the promotion of sustainable development. It is pertinent to note that the Code applies to all activities (or measures) that are of significance. It, therefore, concerns all types of measures and operations that may be of importance to those interests the Code is intended to protect. The scope of the SEC is the basis that decides what types of environmental issues can be examined in a court of law (Swedish Environmental Protection Agency (Swedish EPA), 2020).

## **Collaborating Agencies**

The Swedish Environmental Protection Agency (Swedish EPA) is one main national authorities in Sweden with which collaboration has been made by the SEC for environmental protection. The Swedish EPA conducts international cooperation in several countries and in

various regional and multilateral forums (Ministry of Environment, Government of Sweden, 1999). In terms of nature of cooperation, the networking mechanism focuses on the Swedish EPA's two core competence area: (a) the development and strengthening of public environmental administration, and (b) environmental governance based on legislation and other policy instruments (Ministry of Environment, Government of Sweden, 1999).

# IMPORTANT CONSIDERATIONS IN IMPLEMENTING ENVIRONMENTAL POLICIES

In efforts aimed at implementing environmental policies (and initiatives) at the grassroots or community levels, there is one important consideration. It is essential that the public, in the first instance, understand: "what exactly environmental policy is and how it affects them"? In a broader term, environmental policy is defined as: "any action that is deliberately taken to: (a) manage human activities to prevent, reduce, or mitigate harmful effects on nature and natural resources; and (b) ensure that man-made changes to the environment do not have harmful effects on humans or the environment". It is pertinent to note that environmental protection initiatives and programmes generally cover: (a) air and water pollution, (b) waste management; (c) ecosystem management; (d) biodiversity protection; and (e) the protection of natural resources, wildlife, and endangered species (Organisation for Economic Co-operation and Development (OECD), 2007).

Issues connected with the environment and ecology, as cited above, affect everyone across the regions of the globe; they cannot be ignored. In today's world, environmental initiatives and policies have become international, national, regional (including interregional, and inter-governmental) issues under the Paris Agreement on Climate Change (which is a legally binding international treaty on climate change). It (the Paris Agreement) was adopted by 196 Parties at COP 21 in Paris, on December 12, 2015, and entered into force on November 4, 2016 (Food and Agriculture Organization of the United Nations (FAO), 2011).

It is for the environmental concerns, specified above, that several countries have taken steps to further environmental initiates. One example of such project is: Theodore Roosevelt - when National Parks were established. It is pertinent to note that the National Parks (under the initiative the Theodore Roosevelt) were put in place with the objective of "preserving wildlife for future generations". The modern environmental initiative movement began in the 1970s. It is during this time that a large amount of environmental legislations started rolling out, across the regions of the globe. Several agreements were signed to establish a policy that promotes the enhancement of the environment and set requirements for all government agencies to prepare environmental assessments (including environmental impact statements). At present, the focus on environmental initiates has begun dwindling, especially during the 1980s. Most importantly, several of the environmental issues of concern (that the public in large is faced with) in the late twentieth century are still issues today, in the 21st century. These issues include: (a) climate change, (b) lack of fossil fuels, (c) sustainable energy solutions, (d) ozone depletion, and (e) resource depletion. In today's world, with the plethora of issues currently affecting the environment, it needs to become a priority once again (European Union (EU), 2020).

## LESSONS LEARNT

In terms of commitment to the environmental policies, it is significant to note that Sweden continues to present a strong international record in terms of supporting international environmental protection regimes, including the Paris climate change conference that took place in the year 2015. The country is marked with handling climate change situations by going beyond the requirements of international accords. It should be noted that climate change and global warming issues can only be addressed through multilateral efforts. Sweden has played an important role in addressing environmental issues, including fulfilling commitments to international conventions. The country is also a very active player on the EU's environmental policy agenda (Swedish Environmental Protection Agency (Swedish EPA), 2009).

It has been found that based on effective and innovative environmental policies, Sweden has achieved a range of environmental results over the years. These achievements are, indeed, in line with many of the country's objectives, including international commitments made in the past. One should also note that Sweden has further strengthened its environmental legislative and planning frameworks. Progress of this type in the area of commitment to environmental protection builds on the priority attached to environmental policies by the government (including the parliament, civil society, business enterprises, and the public at large). The comprehensive framework of environmental laws, enacted recently, (a) introduces environmental courts, environmental sanctions, and ambient quality standards; and (b) clarifies the role of environmental impact assessment (EIA), including highlighting the EU water framework directive and integrated pollution prevention and control (IPPC) directive. The EU environmental legislation has an important influence on Swedish legislation (Zannakis, 2010).

#### **CONCLUSION**

Management of Swedish environmental protection initiatives adopts multi-disciplinary approaches, involving a partnership of intergovernmental agencies. Sweden is performing well in areas such as the reduction of greenhouse gas emissions and the use of renewable energy sources. Therefore, even though while there is a strong political commitment among all the major stakeholders, the execution of the commitment in some aspects is still lagging. Over and above, Sweden continues to push environmental issues in international forums such as the EU and is a strong supporter of the Paris Agreement. However, it is suggested that Sweden integrates environmental concerns into economic decisions. It is important to note that meeting the environmental challenges of the future is not just about protecting landscapes, and Sweden is making big strides towards safeguarding the future as well as conserving the past. Sweden certainly has a long way to go. It should be noted that environmental policy is necessarily an integrated component of the larger project of restructuring the economy and making the developmental initiatives more sustainable (Ministry of Environment, Government of Sweden, 2003).

With regard to the implications of the findings of this research, the author points out that Swedish environmental programme outcomes have paved the way forward for "sustainable living". The concept of sustainable living implies that national governments and policymakers prioritize the use of natural and renewable resources, without depleting resources needed for the survival of future generations. Efforts aimed at environmental conservation sustainable development in Sweden have given rise to "institutional changes". In this context, it is pertinent to note that sustainable development was adopted in the year 2003 as an overall objective of the policy of the country. More specifically, the policymakers

of other countries can learn from the Swedish experiences about the "partnership of intergovernmental agencies" approach. This approach led to the emergence of sustainable living in Sweden.

In terms of the academic implications of the conclusions drawn from the present work, the author states that the educators in the university system (including institutions of higher education) can share experiences and lessons learned from the environment protection initiatives undertaken in Sweden with the student population. This initiative can be implemented as a part of academic courses, or in the form of "extension lecture series". Students will be academically enriched (by knowledge sharing) who, in turn, can disseminate the acquired inputs among the communities, they are associated with. This type of knowledge-sharing arrangement forms an important part of environmental and sustainable development initiatives.

With regards to future research directions to academia, the author is of the view that the researchers (and others involved in the study of environmental science and sustainable development) can design action research projects that aim to investigate renewed measures needed for addressing issues about seawater pollution. Research areas in the environment, ecology and sustainable development need to be identified. Also, today, there is an increased need for research to improve the evaluation of environmental benefits. The author of this work is of the considered view that a great degree of uncertainty is associated with this topic (evaluation of environmental benefits). This is because of two factors: (a) a large number of environmental benefits are, often, not valued, and (b) programme managers and policymakers do not fully understand how people make choices regarding environmental and ecological services.

To sum up, there is room for improvement in Sweden in the implementation of international commitments and international cooperation. Even though it has successfully used a range of economic instruments to implement its climate policy, much more needs to be done. Steps should be taken to enhance the environmental aspect of the inspection.

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