European Environment Agency

Workshop - Sustaining Arctic Observing Networks (SAON)
Miami, 18-19 March 2010

Experiences from the European Environment Agency

Dear participants,

[#1] On behalf of the European Environment Agency, I am very pleased to have been invited to this SAON workshop. The EEA is increasingly looking into Arctic issues, and we are happy to have been asked by the chairman to share with you some insights in to how the agency works and to give you some reflections and experiences on the multinational observing networks and systems that have been built up over the years in Europe. We hope these might help serve as a model or inspire this group to harvest some of our experiences and lessons learnt in the coming SAON process to ensure a more Sustained Arctic Observing Networks.

[#2] But before I do this, let me start by telling you briefly what the European Environment Agency is and explain its Arctic relevance. You may not be familiar with the mandate and main functions and these are key to understanding the systems we have helped put in place and how we have managed to do this. The main part of this presentation will focus on Eionet (the European environment Information and Observing Network) and SEIS, the Shared Environment Information System, before finishing off with an overview to the Eye on Earth platform which could be of high relevance to the aim and ambition of SAON.

The EEA

[#3] The EEA was established in 1990 by a European Council Regulation and has been operational since 1994. At the time, the EU countries were confronted with an increasing burden of reporting obligations, of duplications, overlaps and gaps in data monitoring and reporting and, most of all, with a lack of coordination. The EEA and Eionet were established to address this situation among others.

The EEA is based in Copenhagen and has approx. 200 staff from the member countries. It is worth noting that the EEA has 32 member countries and not 27 as in the EU (27 EU MS + 4 European Economic Area partners + Turkey). In addition 6 countries from the West Balkan region also cooperate with the

Agency. The EEA is therefore truly European as it covers a large part of Europe.

[#4] The EEA is an independent EU institution, and is not a part of the European Commission. It is mandated to provide reliable, relevant, impartial and timely information on the environment for decision makers as well as European citizens. It therefore serves all levels of society on the state of the environment, including the European Arctic region.

European Environment Information and Observation Network

[#5] To support the EEA mandate to provide information for decision makers and the public, the EEA is also tasked with coordinating the European Environment Information and Observation Network (Eionet).

To give you a flavour of Eionet I have decided to show you a short video clip starring our Executive Director and some of the national representatives taking part in the network. [#6] Please note all the beautiful Arctic pictures hanging in the background indicating our interest and concern for the Arctic. The video will only take some 3 minutes, but I hope it serves the purpose of illustrating how valuable the countries see the existence of Eionet. http://www.eea.europa.eu/about-us/countries-and-eionet

[#7] It is important at this point to note that Eionet (and SEIS) can be seen to consist of 3 components: a) institutional cooperation, b) common content, and c) shared infrastructures and tools.

a) Institutional cooperation across Europe

The institutional cooperation across Europe is the backbone of Eionet. [#8] Eionet is a partnership network of more than 1100 experts from around 350 national organizations in 38 countries across Europe. The network ensures that the Agency receives the timely, targeted, relevant and reliable data and information needed for European environmental assessments and outlooks. It is, in other words, a network that connects all the operational monitoring data and information that member countries produce at national level and makes these accessible.

[#9] The EEA is responsible for developing the network and coordinating its activities. To do this, the EEA works closely with the nationally nominated National Focal Points (NFPs), typically located in environment agencies or environment ministries in the member countries.

[#10] The NFPs are responsible for coordinating national networks of National Reference Centres (NRCs), bringing together over 1000 thematic experts from institutions across Europe.

In addition to the NFPs and NRCs, Eionet also includes (currently) five (5) European Topic Centres (ETCs) in the areas of: 1) Water, 2) Air and climate change, 3) Biodiversity, 4) Sustainable Consumption and Production and 5) Land use and spatial information. [#11]

Each ETC is contracted by the EEA to carry out specific tasks identified in the EEA strategy. Each ETC consists of a lead organisation and specialist partner organisations from the environmental research and information community, which combine their resources in their particular area of expertise. The ETCs are not placed in Copenhagen but in the member countries, and their main objective is to facilitate the provision of data and information from the countries and to support the EEA in delivering reports and other services.

At European level the EEA works together closely with the European Commission services DG Environment, the Joint Research Centre and Eurostat. Together, these four partners (we call ourselves the Group of Four) are responsible for all the most relevant environmental information and data in the EU. Thus we have organised a division of tasks, roles and individual responsibilities at the thematic level to ensure consistency and to avoid duplication.

Apart from this SAON workshop, the Eionet model is also being closely looked at in regions beyond Europe as well as being part of UNEP and UN international environmental governance discussions.

b) Common content: Eionet Priority data flows

[#12] Over the past 15 years, the EEA has been requested to manage an increasing number of agreed priority environmental data flows through Eionet. These cover, amongst others, the areas of air pollution, freshwater, marine and biodiversity. This enables the member countries to focus their resources on fulfilling their reporting obligations in the framework of European legislation and international agreements and conventions.

The data and information are primarily linked to targets and measures defined in EU legislation, as well as international conventions and their protocols. The EEA bases its indicators and assessments on these data flows. It should be noted that EEA also draws on data and information from

other institutions when preparing assessments and reports, including Eurostat, the Joint Research Centre, OECD, UNEP, FAO, WHO and not least the AC working groups like AMAP.

c) Shared infrastructures and tools

[#13] To assist the member countries in delivering the data and information, a system of integrated IT tools and processes has been created. Reportnet provides a shared information infrastructure to support the reporting of environmental data and information in Europe. This open source reporting system used by Eionet has over the years proven to be an effective infrastructure for data sharing and transfer. When building an Arctic Observing Network, experience from this multinational reporting instrument could be drawn upon.

From the very beginning, EEA and Eionet have worked together in a very innovative way to develop tools and infrastructures to enable easy delivery and access of data and information. Collaboration on Reportnet has been significant because the flows of information from countries to the international level, and back again, are important for understanding environmental progress.

[#14] Reportnet is used by nearly all the member countries of the EEA, not only to deliver data within the Eionet priority data flows, but also to provide access to data and information delivered to OECD, Eurostat and to various international convention secretariats. Norway, for example, delivers data and information which are reported to AMAP using Reportnet.

The principle underlying Reportnet is 'Deliver-once-use-by-many' and to improve environmental reporting by: 1) Streamlining data and information deliveries across Europe, 2) Ensuring quality control of data delivered by countries and 3) Facilitating transparency, availability and accessibility of data and information at country and European level.

Reportnet ensures that the environmental reporting obligations that countries have towards the European Commission and international organisations, are adhered to. This reporting system could easily be extended to cover more Arctic parameters if deemed necessary, as it has already been extended to include Mediterranean ones.

Shared Environmental Information System for Europe

[#15] EEA and Eionet are also involved in the work towards a Shared Environmental Information System for Europe (SEIS) which is a gradual

move away from a centralised way of reporting towards a distributed system based on access, sharing and interoperability.

[#16] SEIS aims at establishing a modern system for organising environmental data and information, whereby countries make information and data available once, as close to the source as possible, and it is then accessed and used by many institutions and agencies. The overall objective of SEIS is to improve the knowledge base for environmental policy and reduce the administrative burden.

[#17] SEIS is based on the principles that: a) environmental information should be managed as close as possible to its source, b) that information is provided once and shared with others for many purposes, c) that data are readily available to public authorities to enable them to easily fulfil reporting obligations, d) that data and information should be easily accessible to all users including the public and e) that the information is available at national level in the national language(s).

[#18] Being born out the diverse situations and needs of the 32 countries of EEA, Eionet and SEIS are robust and flexible solutions to the challenge of building a common information base across a wide and varied background of geographies, institutions and governance structures reducing duplication of effort and improving efficiency and effectiveness. [#19] For these reason, the Eionet and SEIS models are worth serious consideration as you build the SAON process. The SEIS principles fit well with the Global Reporting Process under the United Nations as well as the vision of the SAON process.

One of the existing practical SEIS examples is ozone web. [#20] The website provides map views and graphs of ground-level ozone conditions. The information draws on near real-time data provided by national and regional organizations and it enables authorities or the general public to find out the level of ozone pollution in a specific local area anywhere in Europe.

Eye on Earth

[#21] This approach is now being taken up on a much broader front with the innovative "Eye-on-Earth" platform launched during COP15 in December. We believe this platform could be of particular interest to SAON and for this reason I would like to spend a few minutes explaining what is involved.

Eye-on-Earth is in fact SEIS in action where data is not transferred but linked to original sources and made easily available. Under development for

2 years and operational for the past 3 months, EoE currently displays the latest monitoring data on bathing water and air quality [blue and yellow dots on map]. The latter is updated every few hours in real time as the individual stations across Europe make this information available. The water quality information is based on data and information delivered to the EC under the Bathing Water Directive.

[#22] EoE has the power to give easy access to this and many other geo-referenced information, data bases and real time monitoring data. EoE allows you to zoom-in on an area of particular interest and interrogate the data. [#23] As a key innovation, EoE also provides the possibility for citizen involvement – individuals can provide own information and comments, rate the water and air quality and easily share information with others using social networking.

[#24] By engaging citizens as contributors and empowering them with relevant and comparable information, services like Eye on Earth can contribute significantly to better environmental governance. The EEA is aiming to enhance the value of Eye on Earth further, enabling utilities to add their own benchmarking and performance indicators to show their contribution to water quality improvements, and providing information to help utilities and water dependant industries learn about possible climate change impacts and environmental change that would affect business planning and performance.

Other European data sets will also soon be integrated on the platform. This includes Ozone Web, and WISE (the Water Information Service for Europe). [#25] WISE, already launched by the EEA 3 years ago, is an internet tool offering citizens and businesses the opportunity to monitor drinking and bathing water quality, and wastewater treatment in their neighbourhood. WISE is also a service to experts to find further data and in-depth analysis of all European river basins. There is wide scope to add further data and information to EoE, and already EoE is being used as a platform for delivering multi-media documentaries and background information of community actions across Europe adapting to and combating climate change [#25a]

With time our aim is to include more and more information into Eye on Earth, possibly including parameters relevant to the Arctic. This could allow governments and the indigenous peoples to follow the situation in the Arctic when it comes to sea ice, biodiversity, etc. But first a stable access to the data from the Arctic nations needs to be secured for this to happen.

EoE is a public good, so while currently focused on Europe, it has the potential to become a truly global platform. Over this year EoE will begin provide access to data sets from countries outside Europe including also global ocean data sets. Moreover, a global EoE summit being organized by UNEP and the Abu Dhabi government, is also being prepared for the second half of this year.

These are just some examples from EEA on how the data and information flowing through Eionet using the SEIS principles can prove to be useful tools in assessing the real time situation on the ground. Something similar for Arctic parameters would of course be extremely useful, and hopefully an Eionet type of cooperation within SAON could lead to similar types of information platforms using the SEIS principles.

Assessments

[#26] The network and SEIS principles ensure that the EEA receives the timely, targeted, relevant and reliable data and information needed for European environmental assessments and outlooks. The production of such integrated environmental assessments is one of the core functions of the Agency, and later this year the 4th European State and Outlook of the Environment Report (SOER 2010) will be published. This report will include a number of Arctic aspects including marine issues and climate change impacts on Arctic biodiversity.

The establishment of a Sustained Arctic Observing network would be extremely helpful for all future work on Integrated Environmental Assessments and the Agency fully supports the process. Indeed this is also emphasised in the Monaco Declaration of 10 November 2008 when a conference on 'Observing the environmental changes in the Arctic and facing their challenges' was held during the French EU presidency.

Recommendations

[#27] Before I conclude, I would like to share with you some take home messages and recommendations from the EEA to the SAON process:

- Two decades ago, the EU countries were confronted with similar issues as the Arctic community, namely that the lack of coordination meant there were many duplications, overlaps and gaps in data monitoring and reporting. The EEA and Eionet were established to address these issues. The SAON Steering Group should consider duplicating some of the information networking structures in place in Eionet and we would be

very happy to send you more information or invite you to Copenhagen if this is helpful.

- Countries provide specified data in the areas of air emissions, air quality, water quality and quantity, marine and several other areas. With the agreement of the relevant countries, this could be extended to the whole circumpolar area for the relevant parameters. Having data from a larger geographical area obviously leads to better indicators, trend analyses and timely assessments for policy makers. It would be useful if the SAON process could ensure a greater sharing of environmental data through an Eionet/SEIS type of arrangement.

- As highlighted by the National Focal Points in the video shown earlier, countries find that Eionet and SEIS reduces the administrative burden at national level and that it thereby assists them in their national programmes and efforts. Many of the Eionet data flows are relevant to the Arctic and could therefore be easily incorporated into the SAON structure if needed.

- In May 2009 EEA hosted a conference with a large number of international organisations taking part, with the title 'A global setting for European environmental monitoring – measuring what we must manage'. As the title indicates, it is important to identify what governments need to manage and then secure the collection of the information needed to support policy making. This is of relevance to the 8 Arctic states when developing the SAON structure, including which parts of the operational monitoring in the Arctic have to be sustained and which parts should be expanded in order to support future policy decisions. I would be happy to share the Conference conclusions with the SAON Steering group if needed.

- Eionet is a flexible networking structure, taking into account the diversity of national governance. It responds to changes and each operational case helps the learning process and strengthens the system. The SAON process should adopt a similar flexible mechanism when developing the structures for collecting data and information and making it available to the end users. EEA is open to share its experiences in this regard, including the value of conducting country visits in order to improve the cooperation and flow of environmental information for the benefit of all parties.

- The EEA aims over the coming years to include more and more information into the Eye on Earth platform, and if SAON is able to provide a steady and reliable stream of Arctic information on a number of key parameters relevant to the Arctic, it would be possible for SAON to use this platform to make Arctic information available to Governments, scientists and citizens, including the indigenous peoples who are most affected by the situation in the Arctic.

Final remarks

Europe has a major role to play in addressing these issues and I hope this workshop will contribute to improved monitoring and observations systems in the Arctic which can lead to developing the right policy decisions need for the Arctic. Such systems have to tap into both the information and data from operational monitoring as well as from scientific research and Lay, Local and Traditional Knowledge. However it is important to get the balance right and not only let one part steer the process.

If you have any questions I am happy to answer them now or later during the workshop discussions.

[#28] Thank you for your attention.