Action Plan on Climate Change for the Barents Cooperation

Review of the results and proposals for the way forward

18 September 2015

Contents

LIST OF ABBREVIATIONS

BEAC

Barents Euro-Arctic Council

BEATA

The Steering Committee of the Barents Euro-Arctic Transport Area

BPAN

Barents Protected Area Network project

BRC

Barents Regional Council

CSO

Committee of Senior Officials

GHG

Greenhouse gases

IBS

International Barents Secretariat

IPCC

Intergovernmental Panel on Climate Change

JWGER

Joint Working Group on Education and Research

NPS

Nature Protection Subgroup

SCLP

Short-Lived Climate Pollutants

WGE

Working Group on Environment

1. Introduction

The need for rapid action to halter climate change is verified by a vast amount of scientific assessments, including the recent findings of the Intergovernmental Panel on Climate Change (IPCC). IPCC's Fifth Assessment Report, published in 2013-2014, summarizes that without additional mitigation efforts warming by the end of the 21st century will lead to high or very high risk of severe, widespread and irreversible impacts globally.

Of particular importance for the Barents Region is that the region is experiencing more rapid change than regions at the lower latitudes. Consequences of the warming are seen already - and they are likely to continue and increase. The spring snow cover in the Northern Hemisphere has continued to decrease in extent, the measured ground temperatures in the permafrost zone have increased, the annual mean Arctic sea-ice extent has decreased. These and other changes may have profound effects on flora and fauna as well as on infrastructure and human activities in the region.

To address the challenges of climate change in the region, the Barents Euro-Arctic Council (BEAC) endorsed the Action Plan on Climate Change for Barents Co-operation late 2013. The Action Plan was officially adopted in December 2013 at the meeting of the environmental ministers under BEAC. The Council encouraged the regions and the working groups to follow up and implement the priorities and projects of the Action Plan without delay and called the working groups to provide the Committee of Senior Officials (CSO) with progress reports on regular basis.

2. Content of the Action Plan on Climate Change for Barents Co-operation

A Consulting company (Carbon Limits) was commissioned to draw up the Action Plan by the Norwegian Ministry of Climate and Environment. As climate change concerns different sectors of the society, the Action Plan is based on submissions from different working groups under BEAC. Most of the working groups (a total of nine) provided input to the action plan. The chairs of the CSO and the Working Group on Environment were actively involved in the process of compiling the Action Plan.

As stated in the Action Plan, an all-encompassing plan of action on climate change in the Barents Region would be beyond the resources and capacity of the Barents cooperation. Instead, the Action Plan includes a list of activities proposed to be carried out by the working groups within the BEAC and the Barents Regional Council. The recommended joint activities are expected to benefit local and regional planning, action and projects.

The actions are grouped into four different categories in the plan: 1) mitigation of climate change, 2) adaptation to climate change, 3) research, observations, monitoring and modelling, 4) outreach. In addition, a more comprehensive activity, that is the development of regional climate change strategies, has been defined as an overarching activity. The time frame for the activities, listed in the Action Plan is for the period2013-2015 (for some activities the time of completion is not defined).

3. Implementation of the Action Plan

Implementation of the Action Plan was one of the priorities Finland set for its chairmanship of BEAC in 2014-15. In line with that, many of the working groups have climate change as a priority area in their working plans for the same period. To support the implementation of the Action Plan, a Climate, Environment and Hot Spots Adviser was contracted to the International Barents Secretariat (IBS) in the beginning of 2013.

During 2013-15, most of the Working Groups have launched climate-related activities and the Secretariat (IBS) has been involved in many of them. Even Working Groups that did not provide input to the Action Plan have included climate change in their meeting agendas and considered possibilities to contribute (e.g. Joint Working Group on Tourism and JWG on Youth). Some key activities are highlighted below. A detailed assessment of the implementation of the Action Plan is annexed to this report.

3.1. Climate change mitigation

Measures to reduce local emissions of black carbon and other short-lived climate pollutants have a potential to reduce the rate of climate change in the Arctic already in the short run. It was recommended in the Action Plan for each country to make an inventory of the emissions and an analysis of possible reductions of black carbon and other short-lived climate pollutants within its territories in the Barents Region. Under the Working Group on

Environment (WGE), Norway published a report on black carbon and methane in Norwegian part of the Barents region (December 2014). Finland also made emission inventories of black carbon from its part of the Barents region (in 2014). Sweden is working to develop their black carbon emission inventory methodology within a project funded by the Nordic Council of Ministers. In the Russian part of Barents region, black carbon emission inventories are planned to be included in the development work of the regional climate change strategies (see 3.5.)

WGE Subgroup on Hot Spot exclusion has studied the greenhouse gas (GHG) emission potential from the Barents Environmental Hot Spots[1]. Actions to reduce GHG emissions have been included as a new, additional reporting item to Hot Spot progress reporting.

The Northern boreal forests form a huge sink for carbon dioxide. The other side of the coin is that changes in climate affect forest health and productivity. Barents Forest Sector Network organizes Barents Forest Forum in Joensuu in September 2015 with the aim to highlight sustainable wood construction and forest energy as drivers of sustainable development. WGE Nature Protection Subgroup's (NPS) flagship project Barents Protected Area Network (BPAN) and its second phase promote representative nature protected areas in the region. NPS interacts also with related nature protection projects in the region and works on a strategy for protection of intact forests in the Barents Region.

3.2. Adaptation to climate change

Climate change increases droughts on one hand and flooding on the other. Both have an impact on e.g. water quality, water level regulation, fisheries and recreation. Flooding is an important component of the Barents Rescue Exercise 2015 scenario in autumn 2015. The project *Trilateral cooperation on Environmental Challenges in the Joint Border Area* (2011-2015, reported under the Regional Working Group on Environment) studied the effect of climate change on the Pasvik River and other water bodies in its catchment area. Long-time monitoring reveals increased temperature and precipitation in the area. These changes and emissions from industrial activity in the region have led to eutrophication of the water

[1] Barents Environmental Hot Spots are major polluters or environmental/human health risk issues in the Russian part of the Barents Region where international investment projects have been proposed for improving the situation. More information at www.beac.st/HS

bodies and an increase of heavy metals, which may have led to non-desirable changes in the fish community composition.

Climate change has also negative consequences on the survival of some species and ecosystems in the region. Therefore, those projects that promote protected areas and connectivity between them have a potential to improve the adaptive capacity of the nature in the region.

3.3. Research, observation, monitoring and modelling

The Joint Working Group on Education and Research (JWGER) surveyed in 2014 the climate activities within the universities in the Barents Region. JWGER acts as a network for the region's universities to exchange information on topical issues of research. The group can provide valuable general information on what is going on in the climate change related science in the region and coordinate and consolidate the efforts of its different member institutes. However, the group does not launch own research projects/educational programmes. A lot of educational courses, research projects, and awareness raising activities were carried out by the member institutes. As an example, the Northern (Arctic) Federal University in Arkhangelsk carries out an international floating university with integrated climate themes, the Arctic Centre in Rovaniemi, the Arctic University of Norway and the Norwegian Institute for Air Research have carried out several projects in mitigation, monitoring, modeling and adaptation.

3.4. Outreach

The Working Group on Economic Co-operation organized the "Barents Industrial Partnership" meeting in May 2013 and "Cleantech in Minerals Production" seminar in Global Cleantech Summit in Helsinki in September 2015. Both addressed climate change in their presentations.

A Russian-English version of the exhibition "Climate change in Lapland's nature" – what can we do? was produced by the lead of IBS in 2015. The exhibition was shown in St. Petersburg, Petrozavodsk, Murmansk, Polyarny and Kirovsk. Several workshops with Russian school classes have been conducted during the year.

3.5. Overarching: Development of Regional Climate Change Strategies

Regional climate change strategies contribute positively to national climate goals and regional strategies have been developed in the Scandinavian part of the Barents Region. A"Climate smart regional strategies" workshop was organized by WGE in September 2014 in St. Petersburg, in order to support the development and implementation of regional climate change strategies. A survey on climate change strategies was also conducted[2]. The materials for strategy development are published at www.climatesmart.fi (English and Russian).

Arkhangelsk Oblast, the Chair of the Barents Regional Committee in 2014-15, has made an Activity Plan for climate strategies for the Russian part of the Barents Region (approved in BRC meeting in early 2014). The Oblast has also established an interregional working group for strategy development. Arkhangelsk organized several meetings with specialists on the theme in 2014 and 2015. The Swedish region Norrbotten has launched work for future development and implementation of the existing strategies and calls other regions to participate in the work.

4. Development needs and recommendations for the future

The aim of the Barents co-operation is to ensure sustainable development of the region. Climate change has a potential to affect that development perhaps more than any other issue. Therefore, it is a theme that Barents co-operation should continue to address this issue under the leadership of the Committee of Senior Officials.

The first Action Plan on Climate Change for Barents Co-operation has been a motivator to launch new activities as well as to identify climate relevance in already existing projects. The Action Plan also motivates to seek co-operation between different working groups in BEAC as well as BEAC and its "sister" councils[3]. To continue and enhance the climate work within BEAC and BRC it is recommendable to update the Action Plan to cover also years beyond 2015.

To avoid major gaps, the updating of the Action Plan should take place during 2016. As experience proves two years to be a short time for many activities, the updated list

[2] These activities were financed by the Ministry of the Foreign Affairs of Finland.
[3] The Arctic Council, the Council of the Baltic Sea States and the Nordic Council of Ministers.

proposals could cover the following 3-4 years (duration of each activity varies depending on the activity). The International Barents Secretariat may lead or assist in the updating work. As a start, a workshop between the different working groups could be organized by the IBS (with a possibility to take part by video connection). A starting activity could be the introduction of the work on regional climate strategies (WGE) and survey of climate research (JWGER) to the other working groups.

When updating the plan, attention should be paid to:

- Pushing activities that already have a good start but have not yet been launched or finished (e.g. activities on permafrost, development of regional strategies)
- Promoting practical activities that decrease emissions or increase adaptive capacity and / or essential knowledge on climate change in the Barents Region
- Involving the working groups broadly in planning of the activities and implementation of the plan
- Increasing the efforts in those sectors that have the biggest mitigation capacity, such as transport, industry and energy
- Establishing a coherent system for working groups to report on climate activities in their meetings and yearly report

Since no earmarked funding is available for the implementation of the Action Plan, the realization of activities remains dependent on national allocations to Barents work. Such instruments as NEFCO's Barents Hot Spot Facility, the foreseen ENI Kolarctic Programme and the Nordic Council of Ministers Arctic Programme are also essential for launching new targeted activities on climate change.

ANNEX: Recommended activities in the Barents Action Plan and their implementation

1. Activities to mitigate climate change

Altogether seven activities or clusters of activities are grouped under "mitigation" in the Action Plan on Climate Change for the Barents Co-operation. These recommended activities and their implementation are discussed below.

1.1. Black carbon and other short-lived climate pollutants

Measures to reduce emissions of black carbon and other short-lived climate pollutants have a potential to effectively reduce the rate of climate change in the Arctic, also in the short-term. Actions may be performed within the territories of the region.

Activities recommended in the Action Plan:

- Each country develops an inventory of black carbon and other short lived climate pollutants emissions and an analysis of possible reductions of these within its territories in the Barents Region
- Continued and strengthened efforts to reduce emissions of greenhouse gases and short-lived climate pollutants at the Barents Hot Spots and cleaner production activities

Responsibility for both activities: Working Group on Environment (WGE), with Joint Energy Group and others

Measures taken:

- Norwegian Environment Agency published in December 2014 a report on black carbon and methane in Norwegian part the Barents region. The report includes information on emissions, calculation of the climate and suggestions to reduce that effect. The report also provides methodological guidance for conducting of the inventories at regional level.
- Finland estimated the black carbon emissions from its part of the Barents region in 2014
- Sweden is working to develop their black carbon inventory methodology further within a project funded co-funded by the Nordic Council of Ministers. WGE follows the project.

- WGE and its Subgroup on Hot Spot exclusion have studied the greenhouse gas (GHG) emission potential of the Hot Spots. Actions to reduce GHG emissions have been included as a new, additional reporting item to Hot Spot progress reporting.

- There are some joint projects contributing to climate emission reductions from Hot Spots, e.g. Norwegian-Russian wood waste project in the Republic of Komi.

- NEFCO is integrated in the Hot Spot work via its Barents Hot Spot facility. NEFCO administers also Arctic Council's Project Support Instrument that has recently launched black carbon mitigation projects in the Barents area.

Weaknesses/Development needs:

- SLCP emission inventories for Russian part of Barents region have not been launched, but black carbon inventories are planned to be included in the development work of the regional climate change strategies (see 5)

- More concrete investments and change of practices are needed to reduce the emissions

- Systematic quantification of emissions are essential to be able to follow the progress

- Focus in the inventories has been in black carbon. Sources and methods for methane differ from BC – separate look on methane may be needed

- Barents Joint Energy Group is not active, which limits the Barents fora for promotion of improved energy efficiency and alternative energy sources

1.2. Forestry activities

The 90 million hectares of forests that grow in the Barents region provide employment for a substantial proportion of region's inhabitants. Forest is also an important part of the Northern lifestyle and trap and store carbon dioxide. Changes in climate are likely to include changes in forest health and productivity as well as changes in the geographic range of forests and tree species.

Activities recommended:

- Research programme on the effects of climate change on Barents Region's forest ecosystems

- Developing and expanding of efforts to increased sustainable production and supply of forest products for energy and wood construction in the Barents Region

- Continued and strengthened efforts in forestry operations to avoid damage to old-growth forests not suitable for logging, peatlands and other wetlands to enhance reservoirs for greenhouse gases, as well as habitats for biota

Responsibility for the activities: The Barents Forest Sector Task Force (with WGE and others), now Barents Forest Sector Network

Measures taken:

- Barents Forest Sector Network organizes Barents Forest Forum in Joensuu in September 2015 with the aim to highlight wood construction and forest energy as drivers of sustainable development

- WGE Nature Protection Subgroup's (NPS) flagship project BPAN and its second phase promote representative nature protected areas in the region. NPS interacts with the Green Belt of Fennoscandia and other related projects. VIII Habitat Contact Forum takes place in Petrozavodsk late September 2015. NPS is preparing a strategy for protection of intact forests in the Barents Region.

Weaknesses/Development needs:

- Launching a large-scale research project on the impacts of climate change on forests and/or conservation areas would be beyond the scope of the Barents co-operation bodies. Results of national projects (e.g. climate vs. forest health research in Finland) can be shared in the networks.

- Improved knowledge on the role of Northern forests as carbon sinks could boost the efforts for sustainable forest management of the region

1.3. Energy efficiency and renewable energy

Energy efficiency and renewable energy policies are key activities to mitigate emissions.

They also improve local air quality, increase security of supply and enhance competitiveness.

Activities recommended:

- Continued effort to define policies for improved energy efficiency and increased use of renewable energy for climate change mitigation

- Launching workshop in 2013

Responsibility for the activities: The Joint Working Group on Energy

Measures taken:

- Workshop planned for early 2014 was canceled

- Some projects within WGE (Hot Spot, cleaner production) have energy efficiency/renewable energy component, e.g. wood waste usage promotion in the Republic of Komi

Weaknesses/Development needs:

- Joint Working Group on Energy has not been active. Under other working groups there has been modest or no activities for energy issues.

2. Adaptation to climate change

Altogether five activities or clusters of activities are grouped under "adaptation" in the Action Plan on Climate Change for the Barents Co-operation. These recommended activities and their implementation are discussed below.

2.1. Water resources management

Climate change increases droughts on one hand and flooding on the other. This impacts i.a. on water quality, water level regulation, fisheries, recreation.

Activities recommended in the Action Plan:

- Study of the harmful effects of climate change on water level, flow regulation and contamination in the Finnish, Norwegian and Russian border region.
- Increased cooperation on water management related to flood prediction, flood risk and clean drinking water, as well as on efforts to counteract flooding in river systems. Responsibility: WGE in co-operation with other WGs

Measures taken:

- The project *Trilateral cooperation on Environmental Challenges in the Joint Border Area* published its final report in May 2015. The effect of climate change on Lake Inari and the Pasvik River hydrology, water level fluctuation and ecology was studied in the project. The Pasvik watercourse is exposed to multiple environmental stressors and an updated guideline for long-term adaptive monitoring has been carried out.

- Barents Rescue Exercise 2015 has flooding as an important component of the exercise scenario

Weaknesses/Development needs:

- Activities on flood prediction, prevention or on drinking water have not been launched

- Future cooperation with the Arctic Council and Nordic Council of Ministers on the same themes

2.2. Transport

Climate change is likely to increase the risk of more extreme weather such as storms, avalanches and flooding. Also, permafrost melting is likely to affect, among others, the transport sector in the region. Responsible working group: The Steering Committee of the Barents Euro-Arctic Transport Area (BEATA).

Activities recommended in the Action Plan:

- To include an assessment of the impacts of climate change, such as risk for more extreme weather in the planned joint transport plan for the Barents Region

Measures taken:

- Based on the Joint Transport Plan, accepted in September 2013, a report on updating of the cross-border corridors in the Barents Region ("Road Map") has been prepared in 2014-15. Climate change action plan and environmental sustainability are noted in the strategy papers. BEATA has set as a target to follow in the planning EU requirements concerning environmental impacts. Also, it has been recommended to carry out a screening process to determine whether the plans/programs are likely to have significant environmental effect.

Weaknesses/Development needs:

- To achieve concrete results, the climate aspects (both emissions from different alternatives and risks caused by changing climate) should be an integral part in comparing and selecting the prioritized transport routes.

2.3. Nomadic Reindeer Husbandry

Indigenous peoples have a long history of adapting to the natural environment around them, including relying on a diversity of species to fulfil their needs and allowing scarce resources to regenerate and recover. Indigenous traditional knowledge can build resilience to the rapid changes in the Arctic. At the same time, the projected changes in climate will influence for instance reindeer and reindeer herding due to changing snow conditions that may affect the availability of forage especially in winter.

Activities recommended in the Action Plan:

- An assessment of how climate change in the Barents Region affects the society and environment if nomadic reindeer herders

Responsible working group: Working group of Indigenous Peoples (WGIP)

Measures taken:

- Youth project *Eallin,* initiated by the Arctic Council was conducted by the Association of Reindeer Herders, an observer to WGIP. Final report in 2015. New project proposal *Eallu* to Arctic Council incl. climate change, food culture, youth mental and physical health.

Weaknesses/Development needs:

- No Barents-specific activities

2.4. Protected area network

Conservation of forests was discussed above in the context of the mitigation effect the forests provide through acting as a carbon sink. On the other hand, climate change may have negative consequences on the survival of species and ecosystems in the region.

Activities recommended in the Action Plan:

- Expand the protected area network to meet the challenges of climate change and species adaptation

Measures taken:

- WGE Nature Protection Subgroup's (NPS) flagship project BPAN and its second phase promote representative nature protected areas in the region. NPS interacts with the Green Belt of Fennoscandia and other related projects. VIII Habitat Contact Forum takes place in Petrozavodsk late September 2015. NPS is preparing a strategy for protection of intact forests in the Barents Region.

- An important related project: Impacts of climate change on biodiversity and ecosystem goods and services in the Barents Region, Umeå University

Weaknesses/Development needs:

- The role of Barents co-operation can be in promotion of conservation and in sharing of information but the establishment of protected areas comes from national processes

3. Research, observation, monitoring and modelling

Altogether five activities or clusters of activities are grouped under “research” in the Action Plan on Climate Change for the Barents Co-operation. For all the recommended activities the responsible working group according to the Action Plan is Joint Working Group Education and Research.

3.1. Education

Activities recommended in the Action Plan:

- PhD-level courses related to climate change from the High North Academy throughout the entire Barents Region
- International courses on climate change onboard the Floating University

Measures taken:

- JWGER surveyed in 2014 the climate activities within its member universities and many educational activities within climate change have been reported, just as the Arctic Floating University organised every summer by the Northern (Arctic) University of Arkhangelsk

Weaknesses/Development needs:

- Coordination of High North Academy activities with JWGER is lacking
- Arctic Floating University could have climate-focused expedition to support the Action Plan implementation (funding not secured)

3.2. Ensuring long-term series

Activities recommended in the Action Plan:

- Drawing up a prioritized list of long-term observation series that should be given funding for a long-term period and making the data series available to all researchers

Measures taken, Weaknesses/Development needs:

- No activities have been reported

3.3. Black carbon

Activities recommended in the Action Plan:

- Increased monitoring and research related to black carbon and other short-lived climate pollutants, including assessment of the contribution from the Barents Region to climate change in the Arctic

Measures taken:

- In the JWGER survey many research activities within climate change have been reported, for some universities/institutes participation in black carbon research or leading project on short-lived climate pollutants

Weaknesses/Development needs:

- BEAC WGE has started mapping of the black carbon initiatives. Also many activities are going on under the Arctic Council – coordination required (also with the new initiatives)
- Arkhangelsk activity plan on climate strategies for the Russian part of the Barents region includes black carbon emission inventories. This information could be provided by the Russian universities of the region (a separate research project needed).

3.4. Permafrost

Activities recommended in the Action Plan:

- Assessment of how climate change affects the temperature regime of permafrost-affected soils

Measures taken:

- In the JWGER survey many research activities within climate change have been reported, for some universities/institutes projects with permafrost aspects

Weaknesses/Development needs:

- BEAC WGE has a permafrost conference initiative – coordination

3.5. Common for the proposals on section "research and education"

The Joint Working Group on Education and Research has set the implementation of the Action Plan on Climate Change as one of its priorities and carried out a survey on the member universities' activities on the issue. JWGER as a voluntary network of universities does not launch own research programs, but encourages the member institutes to do so and follows those activities. The funding for the activities has to be raised by the universities themselves. In addition to the funding, the working group has identified the following challenges in the climate work: not all of the region's universities are included in the network nor do all report actively about their activities, no authorities are included in the network, synergies with other university networks are not utilized to the full extent.

Research is important for many activities of Action Plan and synergies and coordination needs between such working groups as WGE and JWGER are evident. The Joint Committee on Rescue Cooperation has noted that local and regional emergency preparedness plans would benefit from a more detailed prognosis on what kind of changes will most probably take place due to climate change and whether the risk picture has changed to a such extent that there would be need to update the emergency personnel training and introduce new equipment. Production / collection of this kind of information would be a practical input from research to implementation of concrete adaptation activities.

4. Outreach

Altogether five activities or clusters of activities are grouped under "outreach" in the Action Plan on Climate Change for the Barents Co-operation.

4.1. Barents Industrial Partnership Meeting

Activities recommended in the Action Plan:

- Address challenges and opportunities linked to climate change and development of business cooperation during the Barents Industrial Partnership Meeting organized by the Barents WG on Economic Co-operation

Measures taken:

- In the Barents Industrial Partnership meeting (May 2013) there were included presentations concentrating on climate change
- In September 2015, WGEC organises Cleantech in minerals production session in Global Cleantech Summit in Helsinki. Climate change is addressed in the presentations.

4.2. Permafrost conference

Activities recommended in the Action Plan:

- An international conference on thawing permafrost, WGE

Measures taken:

- Conference planning started under the lead of Sweden, conference to be organized in 2016

Weaknesses/Development needs:

- Coordination with/support to the other permafrost initiatives of the action plan (under adaptation and research)

4.3. Dissemination of information

Activities recommended in the Action Plan:

- Collection of knowledge and distribution of updated information about climate change and recommended action (WGE and other WGs)

- Creation and sharing of information videos about climate change via the "FrostBytes" system and online "webinars" (JWGER)

Measures taken:

- Production of Russian-English version of the exhibition Climate change in Lapland's nature – what can we do?, showing of the exhibition in St. Petersburg, Petrozavodsk, Murmansk, Polyarny and Kirovsk and conducting workshops with schoolclasses during 2015

- Updating of the BEAC web page with regards to climate info, BarentSaga 1/2015 newsletter with climate and environment theme

- JWGER member institutes have organized many events disseminating climate change information

- IBS hosts climate journey exhibition one year onwards from August 2015

Weaknesses/Development needs:

- Barents-specific information about climate change via "FrostBytes" (an existing system) and online "webinars" could be developed (activities have not been reported)

- Further co-operation with Arctic Council's AACA project

4.4. Co-operation with international organisations

Activities recommended in the Action Plan:

- Strengthened cooperation between the BEAC and other international organizations in order to increase awareness of specific northern concerns in relation to climate change

Measures taken:

- IBS has conducted survey on synergies on BEAC and Arctic Council work. Working groups invite other working groups as well as sister organisations and vice versa. Many working groups under BEAC and AC have partly same members. Sister council's meet every year, 2014 the meeting was hosted by BEAC/IBS and climate action were presented.

Weaknesses/Development needs:

- Launch of common concrete projects, deeper learning from each other. Common brainstorming for future activities in climate context?

5. Overarching: Development of Regional Climate Change Strategies

Many municipalities are drawing up climate change strategies, but it is also often necessary to view such strategies in a context larger than a single municipality. Regional strategies may contribute positively to national climate goals. Regional strategies have been developed for most of the regions in the Scandinavian part of the Barents Region.

Activities recommended in the Action Plan:

- Development of regional strategies for all parts of the Barents region, activity to be launched by an information seminar with participation from regional administrations, business partners and other stakeholders (WGE)

Measures taken

- "Climate smart regional strategies" workshop was organized 3.-5.9.2014 in St. Petersburg. Background survey on the situation in the regions has been conducted. Results and materials for strategy development published at www.climatesmart.fi (English and Russian)

- Arkhangelsk Oblast has made an Activity Plan on development of climate strategies for the Russian part of the Barents Region (approved in BRC meeting early 2014). Interregional Russian working group for strategy development has been established. The Oblast has organized several meetings with specialists on the theme in 2014 and 2015 with discussions on the context of the plan as well as mapping of potential participants for future joint projects.

- Swedish Norrbotten has launched work for future development and implementation of the existing strategies and calls other regions to participate

Weaknesses/Development needs:

- Launch of practical strategy work in Russian part of the Barents Region

- Implementation of the strategies in Finland, Norway, Russia and Sweden. Adaptation in addition of mitigation, taking into account that the four countries have different systems

- Funding