

REPORT

Fifth Habitat Contact Forum Umeå October 15-16 2008





*The Resolution from the fifth meeting is signed !
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Habitat Contact Forum V

Umeå, Västerbotten 15 - 16 October 2008

Biodiversity and Climate Change – a Challenge for Barents Region

The Meeting is an activity of the Barents Euro-Arctic Council's Working Group on Environment, Subgroup on Nature Protection, and is organised by:

Sweden	County Administrative Board of Västerbotten Swedish University of Agricultural Sciences
Norway	Norwegian Directorate for Nature Management
Finland	Finnish Environment Institute Metsähallitus
Russia	Ministry of Natural Resources and Ecology

Conference venue: Swedish University of Agricultural Sciences (SLU), Umeå
 For documentation report and resolution see also <http://www.beac.st>

This report is put together by Ninni Broma Dahlgren and Pia Sjögren, www.piasjogren.se. There are no significant changes made in the original abstracts' contents, only in typography.

The notes from the panel discussions are written, as understood, by Ninni and Pia.
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The International Contact Forum on Habitat Conservation Issues in the Barents Region

MANDATE

- a) The Forum is an arena for co-operation on habitat conservation issues in the Barents Region including adjacent marine areas.
- b) The Forum should work to achieve increased focus on:
- proper management of existing protected areas
 - the need for additional protected areas
 - other measures relevant for habitat conservation.
- c) The Forum will have meetings every second year.
- d) Participation in the Forum is open to federal and regional authorities in the Barents Region, representatives from indigenous peoples organizations, and relevant and interested organizations (including NGO's) and institutions.
- e) A Chair should be elected from one of the countries within the Euro-Arctic Barents Region at the Forum meetings. The chairmanship will be rotated between the countries.
- f) Reports and recommendations from the Forum will be sent to federal and regional authorities in the Barents Region responsible for habitat conservation issues, Indigenous Peoples Organizations (RAIPON; Saami Council, etc), The Barents Council, The Barents regional Council, relevant and interested international institutions, and inter-governmental and non-governmental organizations (CAFF, IUCN etc).

Международный Контактный Форум Сохранения Местообитаний в Баренцевом Регионе

МАНДАТ

- a) Форум является объединением для осуществления сотрудничества по вопросам сохранения местообитаний в Баренцевом регионе, включая прилегающие морские акватории.
- b) Форум в своей работе должен уделять особое внимание вопросам:
- совершенствования управления существующих особо охраняемых природных территорий
 - развития и расширения сети особо охраняемых природных территорий
 - содействия другим процессам способствующим сохранению местообитаний.
- в) Встречи Форума будут проходить один раз в два года.
- г) Участие в Форуме открыто для федеральных и региональных органов власти Баренцевом Регионе, представителей организаций коренных народов и других заинтересованных институтов и организаций (включая НПО).
- д) Председатель Форума должен выбираться на каждой очередной встрече из одной из стран участниц сотрудничества Баренцева Евро-Арктического Региона. Преседательство будет передаваться от одной страны к другой.
- е) Отчеты и рекомендации Форума будут рассылаться в национальные и региональные органы власти в Баренцевом Регионе, ответственные за вопросы сохранения местообитаний, организации коренных народов (АКМНС и ДВ, Саамский Совет и др.), Баренцев Евро-Арктический Совет, Баренцев Региональный Совет, заинтересованные международные институты, межправительственные организации (КАФФ, МСОП и др.)

Introduction

The International Contact Forum on Habitat Conservation (HCF) is a platform for cooperation on habitat conservation in the Barents Region including the adjacent marine territories. The Forum focuses on management of existing protected areas and establishment of new protected areas in the most valuable and vulnerable nature areas.

The responsibility for organising the HCF meetings rotates between the countries or subregions of the Barents Euro-Arctic Region. Biannual meetings are organised with the participation of local (and indigenous) people, NGO's, scientific institutes and federal and regional authorities of the Barents countries. The results of the meetings are delivered to federal and regional authorities responsible for habitat conservation in the Barents Region, indigenous people's organisations, relevant non-governmental and intergovernmental organisations and other relevant parties.

The HCF is nowadays a part of the official Barents cooperation and the fifth HCF meeting was organised in Sweden, in October 2008. The main themes of the meeting were:

- Forest biodiversity conservation
- Network of protected areas in the Barents Region
- Management of protected areas
- Protection and sustainable use of wetlands
- Climate change and biodiversity

Введение

Международный Контактный Форум Сохранения Местообитаний (КФМ) является платформой сотрудничества для сохранения местообитаний Баренц-региона, включая прилегающие морские акватории. Форум обращает особое внимание на управление существующими особо охраняемыми территориями и образует новые особо охраняемые территории в наиболее ценных и уязвимых природных ареалах.

Ответственность за организацию встреч КФМ передаётся между странами или подчинёнными регионами Баренцева Евроарктического региона. Встречи, проводимые раз в два года, организованы с участием местного (и коренного) населения, НПО, научных институтов, а также федеральных и региональных органов управления стран Баренц-региона. Результаты встреч были разосланы федеральным и региональным органам власти, ответственным за вопросы сохранения местообитаний Баренц-региона, организациям коренных народов, соответствующим неправительственным и межправительственным организациям и другим заинтересованным сторонам.

В настоящее время КФМ является частью официального сотрудничества Баренц-региона, а пятая встреча была организована в Швеции в октябре 2008 года.

Главными темами встречи были:

- Сохранение биоразнообразия леса
- Сеть особо охраняемых ареалов Баренц-региона
- Управление охраняемыми ареалами
- Защита и рациональное использование водно-болотных территорий
- Изменение климатических условий и биоразнообразие



RESOLUTION

The Fifth Meeting of the International Contact Forum on Habitat Conservation in the Barents Region (HCF V)

I

On October 15-16, 2008 in Umeå, Västerbotten, Sweden the fifth meeting of specialists from Finland, Norway, Russian Federation and Sweden took place to discuss the questions of cooperation within the International Contact Forum on Habitat Conservation in the Barents Euro-Arctic Region, further – the HCF.

II

The fifth meeting of the HCF was held according to the recommendations of the first Contact Forum established in 1999 in Trondheim Norway, the second meeting in 2001 in Petrozavodsk the Republic of Karelia, Russia, the third meeting in 2003 in Kuhmo, Finland and the fourth meeting in 2005 in Syktyvkar the Republic of Komi, Russia. The fifth meeting was organized and hosted by the County Administrative Board of Västerbotten, Sweden. From the fourth to the fifth meeting Sweden chaired the HCF by the County Administrative Board of Västerbotten, 2005 – 2008.

The participants of the meeting (47 representatives from environmental ministries, national and regional authorities, institutes, scientific and nongovernmental organizations from all four countries) discussed nature conservation issues and climate change focusing on selected topics. They also discussed future plans and initiatives.

III

The fifth meeting welcomes the inclusion of the HCF in the Nature Protection Subgroup of the Working Group of Environment of the Barents Euro Arctic Council cooperation.

IV

In the HCF V meeting several issues were discussed and special attention was paid to the following five themes: Forest biodiversity conservation, network of protected areas, management of protected areas, protection and wise use of wetlands, and climate change and biodiversity.

* The HCF stressed importance of meeting the target of significantly reducing the rate of biodiversity loss by 2010. This target was laid down in the strategic plan of The Convention on Biological Diversity (CBD) and was confirmed in the plan of the implementation adopted at the World Summit on Sustainable Development (Johannesburg 2002).

* The CBD's working programme on Protected areas points out that current global systems of protected areas are not sufficiently large, well-planned, nor sufficiently well-managed. The meeting agreed that there is an urgent need to take actions to improve the coverage, representativeness and management of protected areas nationally and regionally in the Barents Region.

* The participants discussed the idea and supported the initiative of developing a Barents protected areas network (BPAN).

* The participants acknowledged that many traditional rural landscapes and their biotopes are threatened, and that increased knowledge and international cooperation is needed for their management.

* The meeting noted that mire carbon balances are likely to be highly sensitive to climate changes.

* The participants acknowledged that wetlands are important habitat types for biodiversity and that they need to get special local and regional attention (following the recommendations of the Ramsar Convention).

* The Forum urged the scientists to extract the best available scientific knowledge for the adequate management of protected areas and conservation of biodiversity.

* Updating of baseline knowledge of the habitats and species communities is a constant challenge for our work in the Barents Region.

* The participants discussed the shortcoming of the protected area network in meeting the challenges of climate change. Existing knowledge concerning connectivity, corridors, stepping stones and their effectiveness was paid special attention to.

* The participants recognise the potential conflict between the increased use of biofuels and other interests i.e. biological diversity.

* The participants stressed that the ongoing logging of natural forests depletes biodiversity.

* The participants underlined that in addition to the establishment of protected areas there is a need for environmentally sustainable use of the natural resources to secure biodiversity.

* The participants noted that sacred sites offer an opportunity to integrate cultural and natural values. This approach may lead to a combination of conservation efforts that result in a synergy of benefits for both values.

* The participants welcomed the important and interesting input from the representatives of the Vologda region to the HCF V meeting.

* The fifth meeting agreed to publish the report as soon as possible after HCF V. County Administrative Board of Västerbotten is responsible for this.

* The meeting agreed to publish available material from this and previous HCF meetings on the web site of the International Barents Secretariat (www.beac.st).

V

The sixth HCF meeting will focus on the following topics:

- * Wetland Conservation
- * Forest Protection including forested wetlands
- * Coastal ecosystem

VI

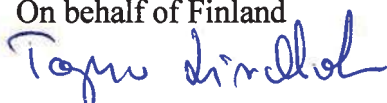
The meeting decided to ask Arkhangelsk region to chair the next period 2008 – 2010 of the Habitat Contact Forum.

VII


The participants of the HCF V expressed their gratitude to Sweden and the County Administrative Board of Västerbotten for organizing and hosting the HCF V.

Umeå, Sweden, 16 October 2008.

On behalf of Finland


Tapio Lindholm

On behalf of Norway


Jan-Petter Huberth Hansen

On behalf of the Russian Federation


Galina Veselova

On behalf of Sweden


Mats-Rune Bergström

РЕЗОЛЮЦИЯ

Пятая встреча Международного контактного форума по сохранению местообитаний в Баренц-регионе. (КФМ 5)

I

15-16 октября 2008 года в г. Умео, провинция Вестерботтен, Швеция, состоялась пятая встреча специалистов из Финляндии, Норвегии, Российской Федерации и Швеции для обсуждения вопросов сотрудничества в рамках Международного контактного форума по сохранению местообитаний в Баренцевом Евро-Арктическом регионе, называемом далее КФМ.

II

Пятая встреча КФМ была проведена в соответствии с рекомендациями Первой встречи КФМ, на которой Форум был основан в 1999 году в норвежском городе Тронхейм. Вторая встреча состоялась в 2001 году в Петрозаводске в Республике Карелия, Россия, третья встреча состоялась в 2003 году в финском городе Кухмо, а четвёртая встреча была проведена в 2005 году в г. Сыктывкар, Республика Коми, Россия. Пятая встреча была организована и проведена муниципалитетом провинции Вестерботтен, Швеция. В промежутке между четвёртой и пятой встречами с 2005 до 2008 г.г. председателем КФМ был муниципалитет провинции Вестерботтен.

Участники встречи (47 представителей министерств охраны окружающей среды, представители властей на региональном и местном уровнях, институты, научные и неправительственные организации из всех четырёх стран) обсуждали вопросы охраны природы и изменения климата, концентрируя свое внимание на подобранных темах. Они также обсуждали будущие планы и инициативные предложения.

III

Участники Пятой встречи приветствовали включение КФМ в Подгруппу охраны природы Рабочей группы окружающей среды сотрудничества Евро-Арктического совета Баренц-региона.

IV

На Пятой встрече КФМ были обсуждены несколько вопросов и специальное внимание было обращено на следующие пять тем: Сохранение биоразнообразия леса, сеть ОПТ, управление ОПТ, защита и разумное использование водно-болотистых территорий, климатические изменения и биоразнообразие.

* КФМ подчеркнул важность достижения цели значительного уменьшения уровня снижения биоразнообразия к 2010 году. Эта цель была заложена в стратегический план Конвенции биологического разнообразия (CBD) и была подтверждена в плане имплементации, принятом на Всемирном саммите экологического развития (Йоганнесбург 2002).

* Рабочая программа CBD об Охранных территориях отметила, что действующие глобальные системы охранных территорий недостаточно эффективны, недостаточно хорошо спланированы или недостаточно эффективно управляются. Участники встречи согласились в необходимости принятия неотлагательных действий для улучшения освещения событий, представительности и управления охранными территориями в Баренц-регионе на национальном и региональном уровнях.

* Участники обсудили и поддержали идею поддержки инициативы развития сети ОПТ Баренц-региона.

- * Участники подтвердили, что много традиционных сельских ландшафтов и их биотопных зон подвергаются угрозе исчезновения и признали необходимость повышения знаний и международного сотрудничества для их управления.
- * Участники встречи отметили, что баланс углерода болота очень чувствителен к климатическим изменениям.
- * Участники подтвердили, что водно-болотные почвы являются важными типами местообитания для биоразнообразия и что они нуждаются в специальном местном и региональном внимании (следуя рекомендациям Рамсарской конвенции).
- * Форум призвал учёных подобрать наиболее применимые научные знания для адекватного управления охранных территорий и охраны биоразнообразия.
- * Обновление базовых знаний местообитаний и видов является постоянной задачей нашей работы в Баренц-регионе.
- * Участники обсудили недостаток сети ОПТ в условиях изменения климата. Существующие знания, касающиеся взаимосвязи, коридоров, используемых для достижения цели методов и их эффективности получили особое внимание.
- * Участники признали потенциальный конфликт между увеличением использования биотоплив и других интересов, например, биоразнообразия.
- * Участники подчеркнули, что производимая вырубка природных лесов истощает биоразнообразие.
- * Участники подчеркнули, что в дополнение к учреждению охранных территорий, необходимо использовать природные ресурсы для обеспечения биоразнообразия.
- * Участники отметили, что неприкосновенные зоны дают возможность интеграции культурных и природных ценностей. Это сближение может привести к комбинации охранных усилий, которые результируются в преимуществах совместных действий для обеих ценностей.
- * Участники приветствовали важный и интересный вклад в Пятую встречу КФМ представителей Вологодского региона.
- * Пятая встреча согласилась с публикацией доклада в самое короткое время после окончания КФМ-5. Администрация провинции Вестерботтен ответственна за это.
- * Встреча согласилась с публикацией применимого материала с этой и предыдущих встреч КФМ на вебсайте Международного секретариата Баренц-региона. (www.beac.st).

V

Шестая встреча КФМ сосредоточит своё внимание на следующих темах:

- * Охрана водно-болотистых территорий
- * Защита лесов, включая лесные водно-болотистые территории
- * Прибрежная экосистема

VI

Встреча решила предложить Архангельскому региону председательствовать на КФМ в течение следующего периода 2008 - 2010 г.г.

VII

Участники КФМ-5 выразили свою благодарность Швеции и Администрации провинции Вестерботтен за организацию и гостеприимство КФМ-5.

г. Умео, Швеция, 16 октября 2008 года.

От имени Финляндии

От имени Норвегии

Тапио Линдхольм

Ян-Петтер Хуберт Хансен

От имени Российской Федерации От имени Швеции

Галина Веселова

Матс-Рюне Бергстрём



Opening session
Mats-Rune Bergström

Chair of Habitat Contact Forum

I have greetings from our governor Chris Heister, she couldn't be here but she wishes you all welcome to Västerbotten and a good luck with the conference.

It all started with discussions and songs round an open fire, under the full moon somewhere in the taiga forest during the 90'ties. The question was how could we go on? Let's create a forum, a platform for discussions about what to do. What the challenges are?

The first meeting was in 1999 in Trondheim to create the Forum and agree on the mandate. The second meeting in 2001 in Petrozavodsk was about priorities and cooperation.

In the third meeting in 2003 Kuhmo, Estonia and some other countries were also represented. The last Forum was held in Syktyvkar in 2005 organised by Komi the amount of participants was high. After a gap of three years we now have the fifth meeting in 2008 here in Umeå, Västerbotten.

In the framework of the international cooperation there have so far been many visits in different areas. Belomoro Kuloi, Onega Peninsula, Kozhozero and other areas of important for biodiversity conservation. The international expeditions have been an important part of our cooperation in the Barents region.

The purpose of the Forum is to be an informal forum for discussions and ideas. During the past years focus point has change for the different forum and of course the nowadays the climate change are highlighted in all areas. We do not know the impact on biodiversity in Barents region caused by an increase change of the climate. I think it is of great important to have the one of the session on this issue during the fifth forum.

The new Strategies for the Baltic Sea Area including the North Baltic Sea have to involve the Barents region, The EU Commissions work on the new strategies will be of important not only around the Baltic sea but also in the northern part of Europe.

I welcome all participants and all speakers to the fifth Habitat Contact Forum and hope that the two days we have together will contribute to develop our cooperation even more.

Thank you for your attention.

Opening session

Anne Bergteig

Chair of Barent Environmental Working Group

Habitat Contact Forum V
Umeå, Västerbotten 15 October 2008



Dear Friends and colleagues,

First I would like to thank our hosts from Västerbotten, Sweden for their comprehensive preparations for this Fifth Habitat Contact Forum Meeting. I have followed the planning from a distance, but I have seen enough to know that everything possible has been done to make this a successful meeting.

Norway is presently leading the Barents Working Group on Environment, and I have the pleasure of being the chair of the working group. The Barents Region consists of the 13 northernmost regions of Norway, Sweden, Finland and Northwest Russia. I am happy to see such a representative participation from the Barents countries at this conference.

Priority areas for the Norwegian chairmanship 2007-2009 are climate change, elimination of the environmental hot spots of the Barents Region and cleaner production, water issues, and last, but not least, biodiversity.

The Working Group on Environment has three subgroups:

- Subgroup on cleaner production and environmentally sound consumption
- Subgroup on water issues
- Subgroup on nature protection

As most of you probably know, after a request by the Habitat Contact Forum to be a part of the formal Barents structure, this year the Forum has been included into the Subgroup on Nature Protection.

The history of the Habitat Contact Forum goes back to the first meeting in Norway in 1999. The idea was to create an arena for exchange and discussion about habitat conservation and related issues in the Barents Region. The intention was to keep it as an informal meeting place. Even if the Forum now is a formal part of the Barents cooperation and allowed to use the logo of the Barents Euro-Arctic Region, we still want to keep its informal character. As such the Forum will be a valuable instrument to convey to the Barents ministers recommendations on habitat and biodiversity protection issues from a broad group of experts and stakeholders.

The NP-Subgroup has recently developed a Strategy and Action Plan and given priority to some selected projects. Most of the priority projects are picked from the original HCF-list. I hope that we during this meeting also will be able to identify new projects, in particular project ideas connected to climate change and biodiversity.

I believe that the Habitat Contact Forum will benefit from being included in the Barents cooperation. I also think that the Forum will contribute to making the Barents cooperation "greener". Biodiversity, habitat conservation and the 2010 target will become more visible in the Barents cooperation.

Protected areas are the cornerstones of biodiversity conservation. In this connection I would like to mention the idea to launch a project to establish a Barents Protected Areas Network (BPAN), which we will hear more about and discuss later in this meeting.

Norway has high ambitions when comes to environmental conservation and management in the High North, and we are prepared to continue the support to the Habitat Contact Forum and its activities. I wish us all good luck with the meeting, and I hope we will have constructive discussions and fruitful results.

Thank you for your attention!



Opening session

Knut Fossum

Norwegian Directorate for Nature Management

Habitat Contact Forum V
Umeå, Västerbotten 15-16 October

Dear Friends and colleagues,

First of all, on behalf of the Norwegian participants, I would like to thank our Swedish friends and organisers – especially Mats-Rune Bergström and Sune Sohlberg for excellent preparations prior to this Fifth Meeting of the Habitat Contact Forum.

I'm convinced that the conditions and facilities here in Umeå will be extremely favourable for our work the coming days.

During the years, since the first HCF meeting was held in Trondheim, Norway in 1999, many positive results have been achieved in the field of habitat conservation in the 13 Barents Regions, and we will hear more about these results shortly.

However, there are still huge challenges in this Region as there are worldwide. Our Habitat Contact Forum should therefore continue to play an important role as an arena for exchange of experience and cooperation on protected areas, other conservation efforts and not least on proper management of the natural heritage in the Barents Region.

The priority items for this Fifth Habitat Contact Forum are;

- Forest biodiversity conservation
- Network of protected areas in the Barents Region
- Management of protected areas
- Protection and sustainable use of wetlands
- Climate change and biodiversity

Networks of well-managed protected areas are important tools to halt the loss of biodiversity. To strengthen these networks we must also secure the last remaining large wilderness areas in the Barents region. I hope during this meeting we will come closer to a solution how to handle this challenge.

In this connection I would like to draw your attention to a project proposed by the Nature Protection Subgroup under the Barents Council. The subgroup has raised the idea to discuss whether it is relevant and possible to create a representative network of protected areas in the Barents Region - a so called BPAN-project. Such a project may be a good idea and I'm looking forward to the discussion around it.

Finally, I would like to share with you some very good news concerning nature management in Norway. Last week the Government presented their budget proposal for 2009. The proposal is to increase the budget relating to biodiversity and management of protected areas substantially.

Not least this news makes the Norwegian participants highly motivated both for hard work and social events here in Umeå!

I wish us all a useful and enjoyable meeting. Thank you!

Opening session

Dr. Tapio Lindholm

**Co chair Finnish–Russian
nature conservation working group
in Ministry of the Environment, Finland**



Welcome address to the Habitat Contact Forum
in Umeå, Sweden in 15. – 16 th October

Mr. Chairman. Ladies and Gentlemen

On behalf of Finland I have the honour to greet all participants of the the 5th Habitat Contact Forum, hosted by Sweden. First of all I would like to thank all Swedes which have been involved in organizing this Forum meeting.

Finland is obliged to contribute to the maintenance of biodiversity in the boreal region. The fate of the boreal environment in Northern Europe is also of particular importance for Finland. Finland has been particularly active in nature conservation co-operation with Russia, whose territory includes as much as 60% of the world's boreal forests. The extent of Russia's forest resources and the special features of its forested environment are unique, and include high levels of biodiversity in untouched old growth forests.

Some of Russia's extensive old growth forest regions are in the north western corner of the country near Finland, where there are increasing pressures to exploit forest resources. The fact that the Finnish pulp and paper industry is the largest importer of timber from NW Russia underscores Finland's involvement in and indirect responsibility for the sustainable use of Russia's forest resources. A balance must be achieved through national and international measures, ensuring the conservation of boreal biodiversity in Finland's neighbouring regions while enabling sustainable use of the natural environment. Promoting conservation within the Fennoscandian green belt of the Finnish- (Norway?!)Russian border zone will be an important factor in co-operation to conserve biodiversity in these regions.

The history of nature conservation co-operation between Finland and Russia dates back to the 1970s. Developing the Fennoscandian green belt and conserving biodiversity in the border zone has been an important agenda since the end of the 1980s. The Finnish – Russian working group on nature conservation is actively working in the Ministry of Environment. But as the working group has not been active in Russia, the Finnish part has continued directly with different regions and authorities and NGO's in Russia.

Since 1997 Finland has financed a development programme for sustainable forestry and biodiversity conservation in Northwest Russia, implemented jointly on a project basis by the Finnish Ministry for Foreign Affairs, the Ministry of the Environment and the Ministry of Agriculture and Forestry. Forestry projects within this programme are financed and co-ordinated by the Ministry of Agriculture and Forestry. Nature conservation projects are financed by the Ministry of the Environment and coordinated by the Finnish Environment Institute. Nature conservation projects are under way in NW Russia in the Republic of Karelia, Archangel, Murmansk, Vologda and the Leningrad regions, and also in the city of St Petersburg. So far over 50 projects have been completed under the programme.

The nature conservation projects within this programme have already had a favourable impact on the establishment of new protected areas and on the development of the protected area network in NW Russia. The most important outcome was the Federal decision to establish Kalevala National Park made in 2007 and the work of the Park has launched. In Finland the areas for Kalevala park are in administrative protection, but the legal status is still missing.

One innovative element of the programme of joint projects in NW Russia is the international project “GAP analysis – assessment of the representativeness and of the gaps in the protected areas network of Northwest Russia”, which involves an inventory of the environmental values of existing and planned protected areas, conservation planning, and assessment and analysis of land use. Improvements have also been planned for the use of GIS. With funding from the Ministry of the Environment, Metsähallitus has particularly been working to improve co-operation between protected areas with a view to establishing a chain of international partner parks along the Finnish-Russian border. Work on this network has also benefited from EU funding programmes. A new and relevant cooperation is to develop the management and activities of regional status protected areas in NW Russia. The Fennoscandian green belt and the enhancement of conservation measures have lately been the focus of attention, particularly due to recent initiatives by Russian specialists and NGOs.

The working committees, working groups and financing instruments of the Nordic Council of Ministers together form a permanent co-operation framework for promoting biodiversity not only in the Nordic Countries, but also in the Baltic Countries and Russia. The Nordic-Baltic section of the EUROPARC Federation also serves as a forum enabling collaboration between the public authorities responsible for protected areas.

Finland is actively involved in the work of the Arctic Council Conservation of Arctic Flora and Fauna (CAFF) working group, which aims to conserve the circumpolar environment. Finland chaired this working group over the period 2005-2006. The current CAFF work programme incorporates a diverse range of projects aimed at Arctic avifauna, with particular attention to seabirds, as well as vegetation and protected areas

Finland should work with Russia to promote the establishment of a representative network of PAs of international importance. The conservation of biodiversity forests with their all habitats would then form unite network between Russia, Finland, Sweden and Norway.

Finland, Sweden and Norway have long been engaged in bilateral nature conservation projects of their own in Northwest Russia. The International Contact Forum on Habitat Conservation in the Barents Region (HCF) was set up in 1999 to enhance and co-ordinate this co-operation. The HCF activities has proofed to be good and effective instrument to exchange ideas and projects. The HCF is an official part of the work of the Barents Euro-Arctic Council's environmental working group.

Finally, Mr. Chairman, allow me, on behalf of the Ministry of the Environment of Finland to wish that we would have a successful meeting and that all will enjoy this time under Sweden taking care on responsibility to organize this meeting.

Opening session

Galina Veselova

**Ministry of Natural resources
and Ecology, Russia**

Habitat Contact Forum V
Introductory Speech



Dear Friends,

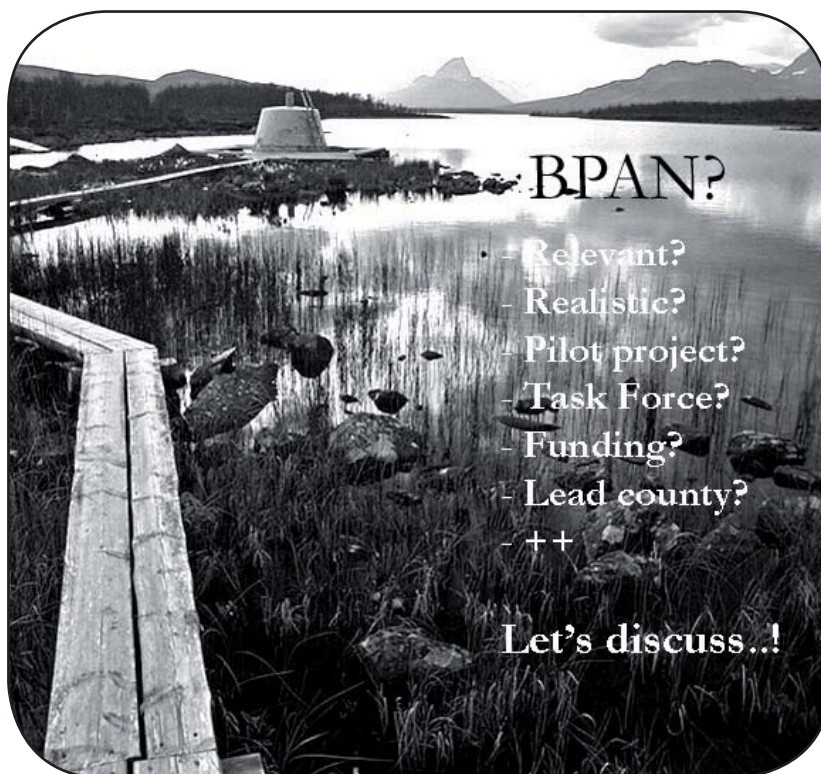
The objective of our meeting today is to discuss a number of important environmental problems: conservation of the plants and animal habitats, special protected natural areas biodiversity conservation, climate change and forest protection. Those problems are of high importance for all countries of Barents region, including Russia.

The existing special natural protected areas system (SPNA) which counts already more than ninety years, is aimed the maintenance of the natural balance, conservation of natural ecosystems, the regeneration of the renewable natural resources. The most effective in such an areas the protection of rare and endangered biological species (especially Red Data Book) is carried out.

The SPNA development and improvement will definitely enhance biodiversity conservation.

The Discussions on the upcoming Forum will give the opportunity to define the most significant problems with which Barents Countries are faced as well as to find the optimal solutions of those problems. There is no doubts that our joint efforts will lead to the nature conservation in the Barents Region.

1. Session on protected area network



The main intention of the session is to discuss how to establish and strengthen a national and regional system of protected areas as a contribution to globally agreed goals. Forming BPAN (Barents Protected Areas Network) is now on the Forum's agenda.

Speakers and panel: Aimo Saano, Metsähallitus, Finland, Ellen Arneberg, Norwegian Directorate for Nature Management, Olle Höjer, Swedish Environmental Protection Agency, Galina Veselova, Ministry of Natural Resources and Ecology and Jan-Petter Huberth Hansen, Norwegian Directorate for Nature Management.

Panel discussion

It's a **main task** that the protection of areas is a leading question. Everybody agrees it is urgent because of the climate warming. Large areas are disturbed. The forum can create a network for implementation of ideas. Different methods should be discussed. Main common approach is to identify objects and methods. We can be helpful as a base for the work.

It is **relevant** to go on with the work. There are issues to be added. BPAN can work with EU. Wilderness areas are pointed out.

We need to find common grounds, to identify the territories. What is to be done first? One way forward is for each country to present a list with size of areas, contact persons, framework, financial resources.

We **want to** visualize a network. Looking at the existing, reporting systems and use them. Norway has obli-

gation to report to EU, so updating is very important. It is a good idea with BPAN, to speak the same language and to get a common ground.

Barents region has hard impact from the human being, it is more economic activity now. It is important to support natural heritage. We could start pilot projects, use brand about natural heritage (compare USA) and emphasize that special values need support.

How do we go on? More meetings to talk it over now within this year; decide meeting points and key-persons. It is import to reach through the information noise. We want to put the Barents region on the map, develop trade mark for the region and point out special values and threats.

There are large territories in Russia. The tundra must not loose attention. Areas need survey.

Protected area network in Finland (Aimo Saano, Metsähallitus)

Finland's Natura 2000 network in 2008 consists of 1 858 areas. Most of them have the status of Site of Community Interest (SCI), the rest are Special Protection Areas (SPA). SPA are for their major part overlapping with SCI. The joint territory makes 4.9 mil. ha, 13 % of the country's terrestrial area.

Natural Heritage Services (NHS) administers the state owned nature protection areas of different categories in Finland. NHS is the public administration duties unit within the state enterprise Metsähallitus.

NHS's share of the Natura 2000 network territory is around 80 %. In addition, NHS administers other areas and public water areas, altogether over 7 mil. ha.

NHS annual management work is done by around 580 person years, of which 350 are permanent staff. Most of the permanent and seasonal personnel are located outside the capital area, and many of the state-wide steering duties are also dislocated out to the regional units. The major visitor streams direct traditionally to the northern national parks, with some tendency for the last years of growing visitor numbers in the southern parks. This is one reason for new thinking how to optimise customer service but ensure ecological sustainability. Other challenges are the state given obligations to reduce the public sector, and those coming with the climate change.

Despite the emphasised regional presence of NHS inside the country, a substantial part of the political, administrative, expert and research networking is happening in Helsinki-Vantaa area.

Perhaps, the most visible nature conservation work is the restoration and maintenance of forest, mire, traditional and special habitats. The field work for the conservation of some species draws public interest. These are the golden eagle, the Saimaa ringed seal and the white-backed woodpecker. But it is fair to say that the share of conservation work for other species has recently notably increased. Also, the inventories of the underwater habitats and indicator species communities along the Finnish Gulf coast line have been a popular subject for the mass media. Game and fisheries regulation and licensing has an internet-based customer service annually touching tens of thousands of people. NHS game wardens meet people face-to-face also in the most remote places.

A need for good baseline knowledge of the habitats and species communities is a constant alert for our work. Comprehensive habitat inventories were performed in the protected areas – still significantly missing from the northern Finland due to lack of resources. The results were used for a subsequent project to map the threatened habitats in the whole country. Implementation of the recommendations from that work is now going through a political and administrative process.

Inventories of threatened species in the protected areas are far from being run as systematically as the habitat inventories. Obviously, monitoring is therefore even more case-based. Data is collected primarily from areas projected to become protected areas or from those recently established, by NHS's own staff. Data is also received from research projects, from nature conservation societies and other sources and saved both in NHS's own GIS-database and often later in a database common to the whole environmental administration.

General usability of databases necessary for conducting effective nature conservation work across administrative frontiers is, unfortunately, still just a great goal. It is a major improvement challenge for the public sector in the coming years.

Protected area network in Norway

from PowerPoint presentation

Ellen Arneberg, Directorate for Nature Management
HCF 5 Umeå, 15 October 2008

Norway – key facts

324 000 km²

4.6 million inhabitants

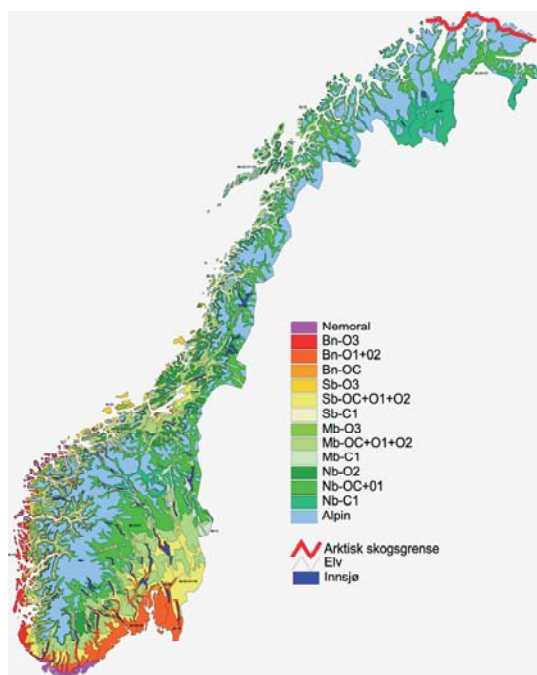
Mountainous country (app. 2/3 of the total area)

Atlantic Golf stream

Forest and other wooded land 38,2 % of the total area

-spruce 45%, -pine 33 %, -birch 15 %

Vegetation Geographical Regions



Objectives of protection to preserve

A representative section of natural environment

Key-areas with important function for species or individuals

The diversity of threatened species of animals and plants by protecting their habitats.

Nature Conservation Act of 1970

Where the most important types of protection areas are:

national parks – big undisturbed areas,

protected landscapes – distinctive or beautiful areas of natural or cultural landscapes

nature reserves – the strictest form of protection – undisturbed or largely undisturbed areas of special type.

Strategy

Thematic protection plans (wetlands, mires and bogs, seabirds, deciduous forest)

Forest protection plans (coniferous)

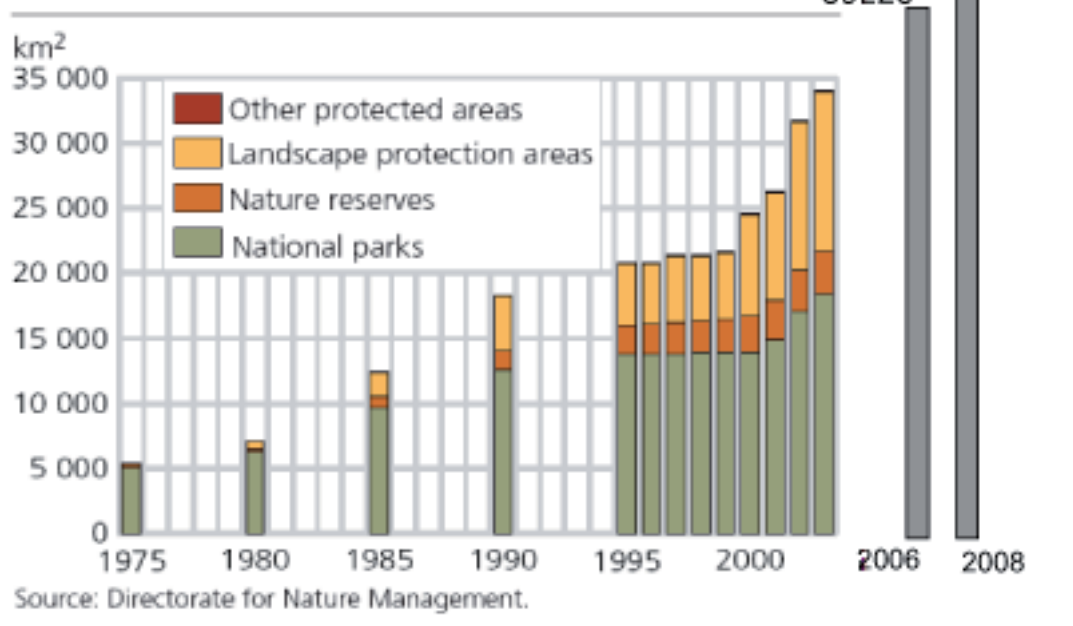
National park plans (big areas, mainly on state owned land)

Marine protection plan.

Status 1.1 2008

Type of protection	Number	Size, km ²	% of total land area
National parks	29	26756	8,3
Protected Landscapes	174	15093	4,7
Nature Reserves	1822	4299	1,3
Nature Memorials	101	2	0
Other protection areas	122	126	0
Total	2248	46276	14.3

Figure 9.2. Areas protected under the Nature Conservation Act. Whole country. 1975-2003.
km²



under the Nature Conservation Act 1975-2008

Areas protected

Main task 2008 and onwards

(I)

A few areas in the **National Parc Plan** and in the **Thematic Protection plans** are still to be protected.

Marine protection plan will be started shortly

Forest protection continuous in order to reach 4,6 % of productive forest

(II)

An **assesment/GAP analysis** of the protected area network in Norway will be started this year. A comprehensive system of **monitoring** and **managaging** protected areas is under construction and is implemented gradually from this year.

The programme of work on Protected Areas

Protected areas can provide a range of goods and ecological services while preserving natural and cultural heritage. They can contribute to poverty alleviation by providing employment opportunities and livelihoods to people living in and around them. They also provide opportunities for research including for adaptive measures to cope with climate change, environmental education, recreation and tourism. Given their many benefits, protected areas are important instruments for meeting the Convention's targets of significantly reducing the rate of biodiversity loss by 2010. The current global systems of protected areas are not sufficiently large, sufficiently well-planned, nor sufficiently well-managed. Therefore, there is an urgent need to take action to improve the coverage, representativeness and management of protected areas nationally, regionally and globally.

The Convention on Biological Diversity defines protected areas as: "a geographically defined area which is designated or regulated and managed to achieve specific conservation objectives." The world conservation union, IUCN, defines protected areas as: "areas of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means."

General consideration areas are not equivalents to protected areas.

The programme of work on Protected Areas

The overall purpose is to support the establishment and maintenance by 2010 for terrestrial and by 2012 for marine areas of comprehensive, effectively managed, and ecologically representative national and regional systems of protected areas. The programme of work is intended to assist Parties in establishing national programmes of work with targeted goals, actions, specific actors, time frame, inputs and expected outputs. A review of global implementation is available in Parks vol 17:1 2008, IUCN.

Critical issues...

By 2008, effective mechanisms for identifying and preventing, and/or mitigating the negative impacts of key threats to protected areas shall be in place. However, this target seems to be hard to reach for many countries. The forest and mining industry have increased their demands of natural resources. Also the demand of biofuels creates conflicts of interests.

Priorities... How to "walk the talk"

- Fill ecological gaps, keep focus on the most under-represented and vulnerable habitats that are threatened.
- Develop sustainable finance plans for protected area system. Also, the need for reinforcement of employees responsible for nature protection is substantial.
- Addressing issues related to local communities, including equity, benefit sharing and participation.
- Improve the protected area enabling policy environment.

The programme of work on Protected Areas in a Swedish context

In 2009 Sweden will celebrate 100 year of nature conservation. In 1909 the parliament enacts a National Parks Act and nine parks are established. In 1964 the nature conservation act is passed after which it became possible to establish nature reserves. In 1972 The first UN conference is held in Stockholm and in 1992 Sweden signs the Convention on biological diversity. Site protection is an important part of “The Swedish Model” to create a green infrastructure for animals, plants and people. The parliamentary environmental quality objective, the convention on biodiversity and the EU directives in this field creates the fundamental framework. Nature reserves are one of the most important and most common ways of protecting valuable natural environments in the long-term perspective. The nature reserves and the national parks constitute the most substantial contribution to the international work to protect the environment. An overarching aim is that unprotected core sites are set aside voluntarily or are formally protected. The spirit of the national strategies for protection of natural habitats means that government departments should try to develop cooperation between different stakeholders. In order for work with protected areas to be successful, it must take place in a spirit of openness and dialogue with concerned citizens. It’s crucial to priorities a good process for gaining the support of landowners and other stakeholders. Also striving for solutions that enable protection and conservation objectives to be achieved without regulations that encroach more than necessary is an important issue of the strategies.

Implementation of the Programme in Sweden – some activities and reports

- Swedish submission in reply to the CBD Secretariat notification 2006-080 (Protected areas) (SEPA 2006)
- Site protection from an international perspective
 - proposed measures for Sweden (SEPA report 5742 2007)
- Statements at the UN meeting WGPA 2 in Rome 2008 and at the 9 conference of the parties COP 9 in Bonn 2008

The SEPA report 5742 contains suggestions for further measures that should be taken within the field of site protection as specified by the Environmental Code. Around 20 measures are suggested with the aim of meeting the recommendations of the CBD and the OECD. This includes measures of a comprehensive nature, such as development work with respect to concepts, statistics and strategies and measures of a more specific nature with respect to instruments of site protection.

Does Sweden walk the talk?!

Yes and no. The protected areas in Sweden has got relatively strong but balanced measures for protection. Addressing issues related to local communities is an important part of ongoing processes for protected areas. The forest policy adopted by the Swedish parliament in 1993 includes two objectives, one relating to forest production and the other to environmental protection. Both objectives were granted equal importance. However during the last 10 years 20-25 % of clear felled areas does not fulfil legal demands and unprotected core areas are frequently under threat. But during the last 10 years there’s also been a substantial state funded financial support for site protection making site protection of more than 150 000 hectares of high biodiversity forests and mires a reality.

PROTECTED AREAS OF RUSSIAN FEDERATION

Galina Veselova Ministry of Natural Resources and Ecology

Protected areas of Russian Federation are assigned for preventing typical and unique nature landscapes, animals and plants diversity, and also for protecting objects of natural and cultural heritage. Being completely or partly excluded from economic activities, they have special protection regime. Protected areas are considered to be a part of the national heritage.

In Russia, the most traditional form for native protection are state nature reserve.

System of state nature reserves as a standart of non-harmed nature territories considered to be an object of well-earned proudness of Russia. Nature reserves network had been creating for 90 years. The first Russian state nature reserve - «Barguzinsky» - was created at Baikal lake in January 1917.

The overall quantity of protected areas of federal level is 266, their total square (including water areas) is more than 55 millions of hectares, that is more than 2,7 % of Russian territory.

Protected areas of federal level represents up to 80% of eco-systems of Russia, protecting endangered species and their habitats.

Ecological doctrine of Russian Federation was approved by government of Russian Federation at August 31, 2002. It consider creation and development of special protected natural areas of different levels and regimes as a part of a headline of state ecological policy. Protected areas is a part of common state infrastructure, providing environmental safety as a part of national safety through stabilization of nature, climat and biodiversity statements. Protected areas provide scientific, educational, aesthetic and recreational needs of Russian population.

The main goals of Protected areas functioning are natural balance support and amended natural resources reproduction.

According with Federal Statute For Special Protected Natural Areas there are 7 categories of such territories.

Main categories are:

- state nature reserves, including biosphere reserves;
- national parks;
- special nature refuges of federal and regional level;
- nature parks. .

All these categories has various limitations for kinds of economic activities. Territories of nature reserves are completely excluded from any economic activities. Territories of special nature refuges and nature parks are not excluded from economic activities. But territories of last 3 categories has limitations for kinds of economical activities, on the allowed:

- At present, the Russian Federation Strategy of Development of the Protected Areas is in the stage of development.
- The main goal of the Strategy is performing nature-conservative measures in aggregate with social and economic development of regions. At that time, the Protected Areas's system structure should be improved the mechanism of management control should be optimized, special consideration should be gived to the territories with World-wide cultural heritage. Also increasing the number of accepted kinds of activities on existing Protected Areas is necessary. There should be terms for econical interest in developing tourist infrastructure, increasing the potention of Protected Areas in international and scientific projects.
- In case of increasing of the anthropogenic load on territories, the efforts of state and society should be guided on creation of Protected Areas on preserved areas in such regions.

In the state of intencification of the econoimic activity further development of existing Protected Areas System is also necessary. First we should pay attention on Kamchatsky region, Kronotsky state biosphere reserve and Southern-Kamchatka mature reserve.

- Far East region (Lazovsky, Hankaisky and Sikhote-Alinsky nature reserves)
- Baikal region (Pribaikalsky and Zabaikalsky national parks, Baikalsky and Barguzinsky state biospheric reserves)
- Altai-Sayan region (Katunski and Sayano-Shushenski state nature biosphere reserves)
- Northwest region (Kostomukshsky state reserve, Laplandsky (Lapish) state biosphere reserve, Kenozersky and Vodlozersky national parks).
- Central Russia region (Prioksko-Terrasny state biosphere reserve, Losiny Ostrov (Moose Island) and Smolenskoe Poozerye national parks.
- Southern region (Astrakhansky state nature biosphere reserve)

Increase of the network in Russian Federation is being made according with the Resolution of Government of Russian Federation which determines increasing the PNA network up to 2010. During last years positive results in this headline were achieved. The following objects were created:

- state nature reserve «Kologrivsky wood» (Kostromskaya region) in 2006
- National parks:
 - The Call of the Tiger (Primorsky region, 2007)
 - Buzuluksky wood (Orenburgskaya and Samarskaya regions, 2007)
 - Udegeiskaya (Udehe) legend (Primorsky region, 2007)
 - Anyuisky (Khabarovsky region, 2007)

Documents for two national parks located in Arkhangelskaya region are under development now: Onezhskoye Pomorye and Russian Arctics

Ingermanlandsky nature reserve should be created in Leningradskaya region.

Finally, it's necessary to mention about Barents region. Important feature of Barentsev region is existing international cooperation. Kostomukshsky SNR "Druzhba" has cooperation with Finland and for two other SPNA the documents are being prepared, and Paasvik SNR (cooperation with Norway) and Paanayarvi NP (cooperation with Finland. To sum up System of Protected Areas in Russia is developing and improving.

Thank you for your attention

Barents Protected Areas Network (BPAN)

Convention of biological biodiversity. Article 8 of the Convention: In-situ conservation

Parties are called upon to:

“establish a system of protected areas or areas where special measures needs to be taken to conserve biological diversity”

In the Barents Region BPAN could be an instrument to respond to this obligation

Among the ProGEO objectives are:

To promote the conservation of Europe’s rich heritage of landscape, rock, fossil and mineral sites.

Geological diversity!

Protected Areas

- cornerstones of biodiversity conservation
- critical to the achievement of the 2010 biodiversity target
- critical to reach the Millennium Development Goals
- values of protected areas !
- PAs can provide opportunities for;
 - i) rural development and rational use of marginal lands
 - ii) generating income and creating jobs
 - iii) research and monitoring
 - iv) conservation education
 - v) recreation and tourism
- Globally the number of protected areas has been increasing significantly over the last decade, covering about 12% of the Earth’s land surface, making them one of the Earth’s significant land uses.

- Note: Far from 12 percent in many of the 13 Barents regions

- However, the existing system of protected areas do not cover all biomes and species, requiring protection and they are not fulfilling their biodiversity conservation objectives.

- Note: This is also the case in the Barents Region

The Project Idea

Barents Protected Areas Network – BPAN

- Contribute to the 2010 target
(to halt loss of biodiversity)
- Create a representative and well managed network of protected areas
- Use the experience from CPAN
(AC – CAFF)
- ‘Think-tank’ in Umeå – October 08

Nature Protection Subgroup

Priority projects and activities (2008 – 2009)

Priority projects

- Tretriksøysa
- Conference on World Heritage Sites in the Barents Region
- Barents Protected Areas Network – BPAN

New project ideas

- Forests in NW Russia
- Climate & biodiversity
- Flyways and wetlands

International Contact Forum on Habitat Conservation

in the Barents Region (HCF)

- HCF V
Umeå, Sweden,
October 2008 (week 42)
- HCF project list
(updated in June 2008)

Barents Protected Areas Network (BPAN)

BACKGROUND

- Protected Areas are recognised as effective and necessary means of conserving biodiversity in the Barents Region
- Each of the Barents countries have a system for protecting areas..
- These systems vary considerably with respect to coverage and representativeness
- The Barents countries have identified gaps in their national networks of PAs and have partly developed proposals to fill them
- Probably still large gaps to be identified in some countries/counties in terms of protecting critical habitats and ensuring representativeness.

Barents Protected Areas Network (BPAN) cont.

PURPOSE

Protect the representativeness and unique Barents environment ;

– hereunder the biological diversity at all levels through habitat conservation in the form of protected areas, and

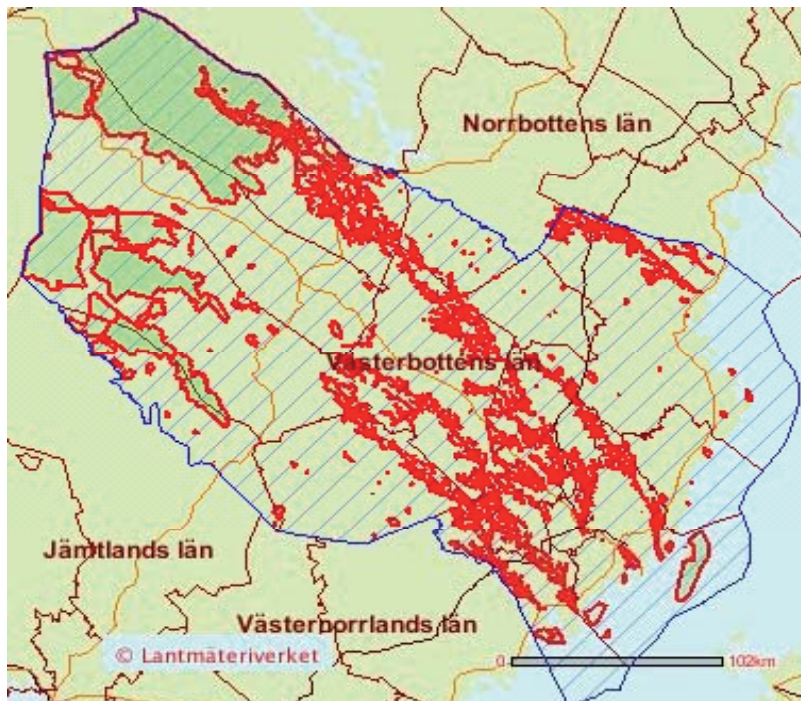
- protection of sites and areas securing an adequate selection of the geological diversity in the Region

BPAN could assist in a number of ways;

- by providing a baseline for identifying the most significant gaps in national networks of PAs, and
- by being an instrument for practical cooperation between the Barents countries/counties
- contribute to fulfill the Barents countries obligations to NCC and other MEAs



Example: Inventories, networks etc



Finland: Natur 2000 sites

Sweden: Intact mountain areas

Västerbotten county: Natura 2000 sites

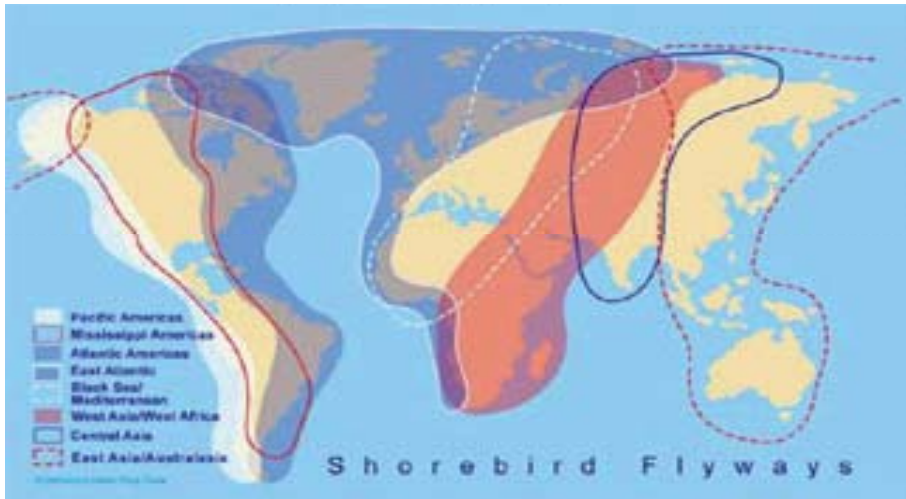
Example: Inventories, networks etc

Americas: Sites in the Western Hemisphere Shorebird Reserve Network

The Network currently has 69 sites in 10 countries, from Alaska in the north to Tierra del Fuego in southern South America

Vision;

Sites in sufficient number, quality, and location are designated and managed to sustain all native shorebird species and their current populations throughout the Americas.



MAJOR FLYWAYS

A flyway also describes the geographical area of a group of

migratory routes (for example African-Eurasian Flyway, Asian-Pacific Flyway) or a subunit of such an area – e.g. The Barents Region

“A FLYWAY IS the entire range of a migratory bird species (or groups of related species or distinct populations of a single species) through which it moves on an annual basis from the breeding grounds to non-breeding areas, including intermediate resting and feeding places as well as the area within which the birds migrate

Example: Inventories, networks etc

Antarctic Protected Areas

The Antarctic Protected Areas Information Archive

Welcome to the Antarctic Protected Areas Information Archive. The Archive provides an overview of the Antarctic Protected Area system, information on sites, location maps, detailed management plans and maps, site photographs, permit information and more... links are also made to other sites where information resources are available...

A BPAN – project could;

(Activities and products)

- Collect, compile and harmonize PA information in the Barents Region
- Develop the ultimate List of Protected Areas in the Barents Region (Directory)
- Review existing initiatives on PA networks worldwide
- Review and execute implementation of all obligations/recommendations given by IUCN, Birdlife international, CBD, Arctic Council etc
- Contribute implementing the Ramsar shadow list (wetlands) in Russia
- +++

BPAN ?

- Relevant?
- Pilot project?
- Realistic?
- Task Force?
- Funding?
- Lead country? ++

Let's discuss

2. Session of management of protected areas



Session two highlights the unprotected meadows. It's on cultural habitats as an example of challenging management issues. It's also about protecting of biodiversity and cultural landscape of Vologda region.

Speakers and panel: Katja Raatikainen, Metsähallitus, Finland and Nadezda Maksutova, Vologda University, Russia. In addition Aimo Saano, Metsähallitus, Finland, participated in the panel. (Pictures above.)

Panel discussion

Meadows are not part of the protection. There are no strategies for preservation. In Finland there are many private farmers. Thanks to some EU money there has been a big change.

We all have problems with meadows. Is the protection regime the best way? Isn't there a need for representation of the agricultural sector? It is different from other

fields. Maybe some sort of contract with the owner?

What's the best way to protect?

If there are too many managers nothing will happen. Main task is a regional cooperation to protect the most valuable.

Volunteers have a visible role in Finland; nature organisations, landowners, WWF funds.

Assessment of threatened habitat types in Finland

Cultural habitats as an example of challenging management issues

Katja Raatikainen

Metsähallitus Natural Heritage Services, Finland

The first Red List of habitat types in Finland was published in June 2008 (Raunio et al. 2008). Altogether, almost 400 habitat types were assessed. The assessment was based on the quantity and quality of habitat types and their changes from the 1950s to the present day. In addition to the assessment of the whole country, Finland was divided into two subregions: northern and southern Finland. Method was developed on the base of assessment methods in Germany and Austria. The red-listing of habitat types is complement to the assessment of threatened species in Finland (Rassi et al. 2001).

The assessment of habitat types revealed the poor state of many habitats. Over 51 % of the assessed habitat types were found to be threatened. Even 52 habitat types were critically endangered (CR), more than one half of them were traditional rural biotopes, such as different semi-natural meadows and pasture lands. Most endangered habitats were also e.g. herb-rich forests with broad-leaved deciduous trees, heath forest dominated by deciduous trees and forest and mire habitats on land uplift coast. Among the least concern (LC) habitat types were those in which the human impact is small, such as fell habitats, wettest mires and acidic rock habitats. The changes in quantity and quality of the habitat types were largest in the southern Finland where the proportion of threatened habitat types were 66 %, whereas, in the northern Finland it was 29 %.

The main reason for habitat being threatened was forestry. Particularly, it affects to the quality of many habitat types, including especially forests and mires, as well as small water bodies. Drainage for forestry is the second main factor for quality and quantity reductions of habitat types. During the last 50 years also land clearing for agriculture has been a major factor for many habitats. Also, factors such as water engineering, eutrofication and overgrowing had major effect on many habitat types. Climate change is expected to be a major threat in the future.

Habitat types were assessed by a large group of experts of various fields. Expert group made 70 proposals to improve the state of threatened habitats, which include for example better regional planning and international co-operation in key issues e.g. eutrophication of the Baltic Sea and climate change. The assessment of threatened habitat types were coordinated by Finnish Environment Institute (SYKE) and project were financed by the Ministry of the Environment and the Ministry of Agriculture and Forestry.

Cultural habitat generally means a habitat that has derived from human management activities and history of cultural land use. Over the past 50 years, changing management practices have led to large-scale habitat degradation and loss in Europe. For example in Finland less than 1 % of former semi-natural pasture lands are still left, which means a great loss for biodiversity. Cultural habitats face many pressures from different aspects, such as construction, recreation, utilization, biological values, cultural history and landscape. Traditional rural biotopes are the most important cultural habitats for biodiversity.

National survey of traditional rural biotopes in Finland during 1990s revealed that the amount of these biodiversity hotspots were poor. Only less than 20 000 ha valuable semi-natural meadows and pastures were found and only half of them were managed by grazing or rarely by mowing. Åland was not included in the

national inventory. Today, the amount of managed areas are ca. 25 000 ha. EU agri-environment scheme and the support for management of traditional rural biotopes has been the most important financing for the management of these areas. The estimated potential amount for managed traditional rural biotopes in Finland is 60 000 ha.

Major questions in the management of traditional rural biotopes are several, for example: is agriculture and animal husbandry profitable in the future, how to make farmers and animal owners to meet unmanaged valuable sites, how to manage valuable areas if there are not animals available and how to finance management. In Finland, a great improvement would be made by higher national funding for the management and by better coordination and monitoring, as well as better status for cultural habitats and landscape values in general.

Protection of biodiversity of the Vologda region cultural landscapes

The territory of the Vologda region is 145,7 thousand km² and is situated in a unique (in geographical sense) part of the Russian plain North. After glaciers here there was forming of ecosystems of after-glacial reservoirs and surface boreal landscapes in conditions of the changing and complexly orientated system of a surface flow. In our day on the territory of the region there is a watershed of the Barents, Baltic and Caspian seas, near the 60th parallel the border of modern Middle- and South-taiga landscapes is situated. Mosaic and contrast character of natural biotopes (forest, taiga, water, swamped, meadow and coastal) leads to a very high level of biodiversity and rare species majority.

The regional landscapes have a long history of assimilation and are under a strong anthropogenic influence. That is why the only reasonable form of their protection is development of the protected areas network. The protected areas network of the Vologda region (year 2008) includes 1 national park, 1 preserve, 78 natural reserves, 83 natural memorials, 4 natural reservoirs, 1 municipal park, 1 tourist and recreation area.

Within the Russian-and-Finnish project «GAP-analysis of the protected areas network of the North-West of Russia» by means of the GIS-technologies in the Vologda region natural habitats of valuable biotopes were found and their presence in the created protected areas network was analyzed. According to the realized investigations different forest and swamped biotopes have the biggest area among the protected areas of the Vologda region; water and coastal biotopes are poorly presented; meadow biotopes are almost unprotected. At the same time meadow biotopes are the most vulnerable among cultural landscapes as they are connected with settling system, transport ways, they are centers of ancient mastery where the object of cultural heritage are situated (ancient memorials of archeology, history, architecture, historical settlements).

Valuable meadow habitats with grasses are about 7% of the area in the region. Within them agricultural lands dominate –hayfields, pastures and fallow lands, - and flood meadows are only a small part. Meadow biotopes of the region are notable for mosaic character, small contour, biotope diversity, are often located in picturesque places among fir, deciduous and pine forests, and along reservoirs.

Meadow biotopes of the region are characterized by a specific microclimate which differs by albedo decrease and higher air and soil temperatures (especially on the slopes of the South exposition). This determines forming of special structure of flora and fauna which include both typical and rare species. In the Red Book of the Vologda region there are 186 rare species of meadow biotopes which need to be protected, among them 1 is filices, 156 are flowerings, 1 is arachnida, 17 are insectas and 9 are aves.

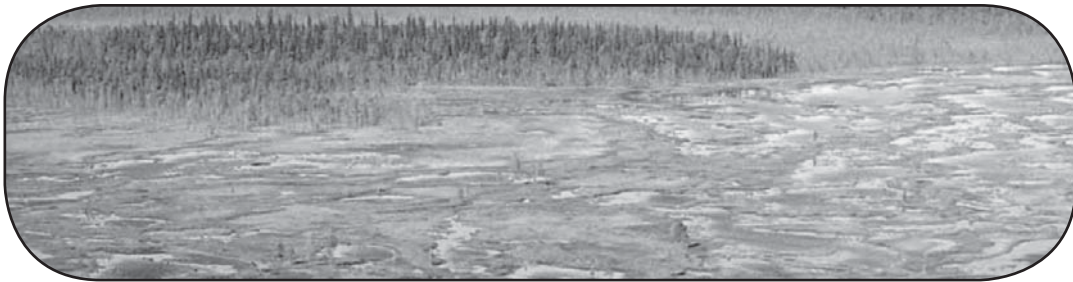
The main problems of protection of the meadow ecosystems biodiversity are connected with their small measures, insufficiently representative network of the created protected areas and with degradation of existing grass ecosystems as a result of their irrational household using.

Loss of the meadow ecosystems biodiversity happens because of their small part in the protected areas. The area of the overwhelming majority of the meadows in the protected areas isn't large enough for the populations whose quantity guarantees their vitality and surviving could locate within their borders. As a result many meadow species inhabiting the protected areas are presented by vulnerable populations small in number. Especially strong anxiety is caused by a very low participation of meadow biotopes in the structure of the protected areas of the region. In fact, there isn't any protected area which specially protected meadow ecosystems. Poor connectedness of meadow biotopes in the existing protected areas network can't provide with the necessary in-specific variability.

Ecologically groundless household using leads to degradation of the meadow ecosystems diversity. Unregulated cattle graze, excessive recreation loadings, absence of actions for restoration of hayfields and pastures biodiversity, using of meadowlands for individual buildings, kitchen-gardens and other activities (communications, open pits, summer enclosures, dumps, etc.) cause degradation of their biodiversity and first of all loss of rare species.

In the conditions of global rise in climate biodiversity can suffer much influence of existence of interregional meridian and width corridors making penetration of species both from South to North and from East to West easier. The fact that along the Southern coast of Onega lake, Kubenskoe and Vozhe lakes, the Sukhona river global migration ways of many species of birds pass is also of a big importance. All this must be taken into account by developing harmonious protected areas network not only in the Vologda region, but also in the general system of protection of landscapes and biodiversity of the Northern Europe where *meadow biotopes must become objects of education and special protection.*

3. Session on wetlands



Session three: The role of wetlands in the carbon cycle

- Assessment of wetland habitats
- The GAP-analysis of wetland habitat of Vologda region

Speakers and panel: Mats Nilsson, Swedish University of Agricultural Sciences, Natalia Bolotova, Vologda University and Eero Kaakinen, North Ostrobothnia Environmental Centre.

In addition Tatiana Minayeva's abstract is enclosed here.

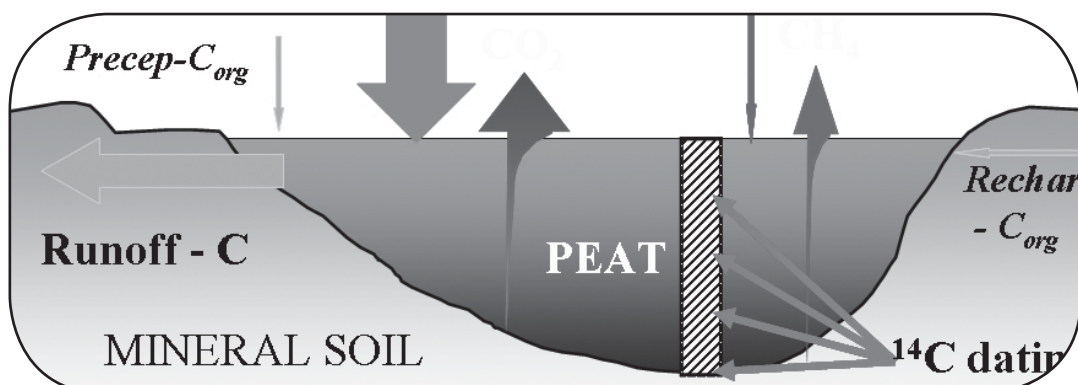
Panel discussion

More cooperation around the wetlands issues is needed. There are some differences between the countries. Finland have problems with the peat and have got received some help from EU and Sweden. Land asmosphere has changed. We will have to see how the climate will change and it's affects.

Common problems with cooperation because of different definitions is a fact.

We must not look separetely, but look at the whole complex, as methods, cultural habits, man-made changes, before the next meeting.

Wetlands highlight the Ramsar Convention Meeting end of November. Each country has a delegation. There is a need for communication and abstracts to that meeting.



The role of wetlands in the carbon cycle

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Mires are wetlands that interact with the atmosphere by accumulating carbon over millennia in the form of peat, removing CO₂ in the process, and by emitting methane. Hence, although Boreal mires cover only 3% of the earth's land area, they contain a quarter to a third of the global pool of soil organic carbon, mostly in peat that has accumulated since the last deglaciation. Global estimates of long-term apparent carbon accumulation rates in mires are in the range of ca. 15-30 g C m⁻² y⁻¹.

Methane emissions from wetlands account for about 90% of total emissions from natural sources, and a third of total global emissions, while emissions from high latitude mires account for ca. a third of the emissions from natural sources, and ca. ten percent of total emissions. The contemporary perturbations to the atmosphere due to northern mires are a decrease of ~35 ppmv CO₂ and an increase of 100 ppbv CH₄. The net radiative forcing impact of northern mires currently amounts to about -0.2 to -0.5 Wm⁻² (a cooling). It is likely that mires initially caused a net warming of up to 0.1 Wm⁻², but have had an increasingly net cooling effect for the past 8000–11 000 years.

A major current concern is that the long-term contributions of mires to the global carbon cycle may be about to change. According to theories on mire development peat accumulation ceases eventually as mires age, because as peat accumulates over time the total amount of organic material available for decomposition increases, so at a certain point the total amount of carbon released from the peat will equal the amount taken up through photosynthesis at the surface. In addition to these assumed natural processes climatic changes are also expected to affect the accumulation of peat and the emission of methane. High latitude ecosystems, including most mires, are predicted to be especially vulnerable to climate change. The awareness of potential changes in the role of mires in global carbon cycles has prompted intensive research on mire carbon biogeochemistry.

One major question being addressed is whether the current rate of peat carbon accumulation deviates from the natural, "pre-industrial", carbon accumulation rate. To answer this question data on both contemporary mire carbon exchange rates and Holocene peat accumulation rates are needed. The fluxes that significantly contribute to mire carbon budgets are land-atmosphere exchanges of carbon dioxide and methane, together with runoff C exports, which mainly consist of dissolved organic carbon (DOC) and inorganic carbon. The establishment of Eddy-Covariance measurement systems has greatly facilitated attempts to estimate complete mire carbon budgets. However, mire-specific estimates of all significant fluxes covering entire years have been obtained from very few mires to date, although data spanning eight years are available from one ombrotrophic mire (bog) in Canada, Mer Bleu, and four years from a nutrient poor, minerogenic, mire (fen) in northern Sweden, Degerö Stormyr. The results indicate that both mires still constitute significant sinks, with accumulation rates of similar magnitude to those that occurred during the Holocene (the period following the last glaciation). Data from northern Sweden on past peat accumulation rates in some of the most common types of mires indicate that the rate of peat accumulation decreased prior to any significant disturbance by human activities. The contemporary rate of carbon sequestration in Degerö Stormyr, in the same region, is at (or possibly slightly higher than), the rate in mires during the late Holocene.

A significant proportion (ca. a third) of the net carbon dioxide taken up through photosynthesis during the growing period is lost during the winter period, despite the snow cover and sub-zero temperatures. In addition, roughly the same proportion (ca. a third) of the net uptake during the growing season is lost from mires through

runoff and methane emissions, although there are likely to be large between-mire differences in these variables. The importance of wintertime losses, methane emissions and runoff carbon exports for the annual net carbon exchange in mires also indicates that mire carbon balances are likely to be highly sensitive to climatic changes. Both the emission of methane and the runoff export of carbon depend to a large extent on the hydrological conditions. Increases in precipitation, which have already been detected at high latitudes, will most likely increase losses of carbon through both processes. The increased losses may be counteracted by extension of the growing season and associated increases in net carbon uptake.

GAP –analysis of wetland habitats of Vologda region

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GAP –analysis of wetland habitats of Vologda region is the component of the regional project “Evaluation of landscape-and-ecological representativeness of the protected areas network of the Vologda region (GAP-analysis)”. This project is realized in framework of the interregional program «Analysis of fullness and showing up of “white gaps” of the protected areas network in the North-West of Russia».

Protecting of wetland habitats is very importance for the goal of the biodiversity conservation in Vologda region. It's connected with wide distribution of wetlands in Vologda region (at 61° 36' - 58°21'N, 34°40'-47°10'E) located in the North-West of the European Russia. This region situated at the boundary of middle and southern taiga and it's also marginal in relation to the largest drainage basins of Eurasia. Eurasian watershed between the Arctic Ocean (White Sea – Severnaya Dvina River), Atlantic Ocean (Baltic Sea – Lake Onego) and inland drainage (Caspian Sea –Volga River) basins cuts across the territory. The dense hydrological net includes numerous rivers and small lakes and large shallow lakes (Beloe, Kubenskoe, Vozhe) and 2 reservoirs (Sheksninskoe and the part of Rybinsckoe). Besides the part of the Lake Onega belong to the Vologda region.

The flat surface and shallow groundwater bedding contributes to bogging-up. In addition, the area is characterized by excess wetting, and the climate created favourable conditions for the waterlogging. Relief also contributes to bogging-up on low ground, which emerged in the historical past, due to the work of the glacier. The feature of this territory is high diversity of landscape structure and consequently there is diversity of aquatic and marsh ecosystems. The watersheds are characterized by high bogginess, where different types of river marshes, valley mires, and bog (lowland, transitional, raised) are situated on the territory of the Vologda region. In the region are identified 45030 peat bogs.

The interactions between different waterbodies and marshlands and the diversity of wetlands led to the diversity of habitats and biodiversity of Vologda region. For example investigations of mires allow identify of 50 species of lichens, 115 species of mosses and 278 species of vascular plants belonging to 146 genera, 61 families. The list of the rare vascular plants of aquatic and coastland habitat contents 49 species. 53 species of vascular plants and 14 mosses were listed in the Red Book of the Vologda region, and 24 species of hygrophytic vegetation require botanical control. More than a third of vertebrate's animals including 127 the rare species live in wetlands and many animals are using of wetlands in life cycle periodically. Wetlands serve as migratory corridors, sometimes feeding, breeding or temporary refuges for migratory species. The fauna of birds in wetlands has 108 species, included 42 rare species. Along the Lake Onega on the territory of the Vologda region passes migratory way of birds. There are the “key” ornithological territories, which are protected under the Ramsar's Convention. About 25% of rare plant species and 38% of rare animals, which are recorded in the Red Book of Russia and the Vologda region found in wetlands.

Changing of the habitats led to a reduction in the number of sensitive species of flora and fauna. The wetlands as complex ecosystems are very vulnerable to human impact through transformation the system “drainage areas – waterbodies”. The waterbodies are exploited for fishery, water consumption, recreational use, waste water disposal and navigation. The focus of the economy on the using of rich water resources, transformation of drainage areas, and the creation of the largest transport waterways has induced to significant changes in ecosystems. Example, the connection of sea's basins (White Sea, Baltic Sea, and Caspian Sea) through Volgo-Baltic route, Severo-Dvinskay water way led to many problems: changing of wetlands, increasing of pollution, and invasion of new species. The wide distribution of mires on the drainage area stimulates getting of organics into waterbodies. The negative processes of eutrophication and pollution of wetland are observed.

Anthropogenic transformation of wetland including the draining of the marshes exacerbated the problem of conservation of the biodiversity. Creating a network of protected areas in the Vologda region was directed to the preservation of boreal forest ecosystems, and therefore was ineffective to maintain biodiversity of wetlands. The analysis showed that most valuable wetlands and habitats of rare species have been outside protected areas. Only 5 areas of the 181 protected have status of hydrological reserves. Most of bogs named

“protected” are not located in protected areas. Using of GIS-methods for the analysis distribution of protected areas, wetlands in different basins lets not only receive and analyze the information more efficiently, but also cooperate in research and direction to all interested parties.

The main result of GAP-analysis was receiving of the proof of necessary to optimize the network of protected areas for conservation of wetlands. Moreover, the maintenance of biodiversity of forest biotopes depends of the wetlands. Now the way to conservation of wetlands will be reservation of new areas, which includes aquatic ecosystems and watersheds and different types of marshland habitat. Especially valuable unique habitats are the back marshes, river marshes, and valley mires. This year the reservation of lands under protected areas in future took place in all administrative districts of Vologda region. The principles of reservation are the widening, combination of the existing protected area, reservation of unique and rare biotopes. In the present due to investigations of coastal areas of Lake Onega will be create special protected area here.

The wetlands are a source of energy, raw materials, food, territorial, recreational resources. Due to the high environmental and economic aesthetic and recreational value of wetlands there was an urgent need for their protection. For the conservation of biodiversity in Vologda region should be trend to maintaining the wetland as the habitats of organisms of different groups. Changes the hydrologic regime, construction the roads and existing of other risks led to degradation of the mires. Protecting biodiversity of wetland, on the one hand involves effective environmental management, and on the other - protection species (including creation of Red Book) and monitoring their habitats. Also the strategy must be focused on ecological education, on the creation of public opinion, organization of the network of public monitoring, the coordination of activity of all beneficiaries.

Assessment of threatened mire habitats in Finland

The first assessment of threatened habitat types in Finland was carried out during 2005-2008 and the results were published in June 2008. The project was co-ordinated by the Finnish Environment Institute (FEI / SYKE) and the assessment was conducted by seven expert groups including over 80 habitat specialists. The habitats were divided into seven main groups: The Baltic Sea and its coast, inland waters and shores, mires, forests, rocky habitats, traditional rural biotopes and the fell area.

The method for the assessment was based on two main criteria. Criterion A relates to the change in the total area or number of occurrences of a given habitat type and Criterion B to their qualitative development.

The mire expert group assessed all open and forested peat forming habitats; both mire site types and mire complex types, as well as succession series of the land uplift coast. The red listing of habitat types was carried out both on national level, and on the regional level for southern (hemiboreal, southern and middle boreal vegetation zones) and northern (northern boreal vegetation zone) sub-regions.

According to the results the state of Finnish mire habitats is alarming, especially in the hemiboreal, southern and middle boreal zones. About half of the mire site types and mire complex types assessed are threatened in the entire country (Red List Categories CR, critically endangered, EN, endangered or VU, vulnerable). The proportion of threatened mire site types is highest among rich fens, spruce mires, spruce-birch fens and rich spruce-birch fens.

Mire habitat types are much more threatened regionally in the southern sub-region than in the northern sub-region. That is because of more intensive utilization of mires. Drainage has been quite intensive even in southern parts of northern boreal zone, however. In the southern sub-region only two mire site types were classified LC, least concern: *Sphagnum fuscum* bogs and ridge-hollow pine bogs. All other mire site types were classified as threatened or near threatened (NT). All mire complex types are threatened or near threatened, and mire succession series of the land uplift coast are critically endangered. In northern sub-region the proportion of threatened mire site types is clearly lower. Rich fens, rich spruce-birch fens, rich pine fens and spruce mires have suffered most, and most them are near threatened (NT) in the northern boreal zone.

In Finland, forestry drainage is the largest threat to mire habitats. Agricultural use has reduced the mire area particularly in southern Finland, but also locally in northern Finland in areas with rich fens and fertile spruce mires. Industrial peat harvesting has expanded from the 1970s onwards and regionally it has had major impacts on mire biodiversity. Other reasons for deterioration of mires are e.g. water engineering and regulation, construction (incl. road networks), tree loggings and soil treatment in undrained forested mires as well as groundwater extraction.

Although mire conservation has progressed and the drainage of pristine mires for forestry is not any more supported by the state, there are still many threats to mires. Particularly the maintenance of old ditches can destroy mire margin habitats as well as the hydrology of undrained mire habitats. Moreover, undrained forested mire habitats are used for forestry and virgin mires are still drained for peat extraction. There are some plans to inundate large mire areas for hydroelectricity threatening even protected mires. Building and infrastructure projects may harm, destroy or fragment mires. Groundwater extraction threatens spring mires and other groundwater fed fens. Long-distance effects of drainage and other land use activities may have a negative impact on undrained mires.

Some of the rich fens were formerly used as pastures, which kept them open and more diverse. Abandonment now threatens this diversity in many of the smaller rich fens especially in southern Finland. Climate change mainly affects northern mires with permafrost formations.

Wetlands in Arctic
By **Tatiana Minayeva**,
Wetlands International Senior Technical Officer
Report to Vth Barents Habitat Forum

Basing on the CAFF vegetation Map analyses, wetlands are one of the most distributed landscape type in Arctic- They can reach 60 % of the total Arctic ecosystems area-

Wetlands types within the Ramsar definition are represented in Arctic by following types: Permafrost peatlands (polygonal, shallow peat tundra, palsa mires); shallow lakes; rivers and deltas; periodically flooded lands; coastal wetlands; shallow sea waters and present key Ramsar wetland types

Wetlands in Arctic are extremely fragile

Wetlands in Arctic occupy very thin biota layer - mainly represented by shallow peatlands and shallow lakes. That is the reason of their especial fragileness.

The main ecosystem-forming factor of arctic wetlands defining their genesis and function – is permafrost. At the same time permafrost is the most vulnerable to Climate Change

Permafrost is affected not only by high temperature but in some Arctic areas by increase of precipitation. The high termoconductivity of water enhance warming effect.

Arctic ecosystems are characterized by low species, ecosystem and population diversity. Biological species in Arctic as a rule are very specialized tightly connected to their habitats. In Arctic organisms, populations and ecosystems are more directly dependent on abiotic factors than in other conditions. The changes in habitat quality and spatial distribution will have an impact on population structure and even species presence. All changes have “chain” consequences.

Specific low level type of metaboloism in organisms, populations and ecosystems in Arctic is responsible for low resistance and restoration potential

As climate change consequences the serious changes in wetland hydrology are expected including, permafrost melting, presence, river flood regime and hydrochemistry, dissolved and particulated components presence what will have also impact on the permanent ices in the ocean.

Wetlands transformation caused by climate change will have negative feedback to climate via GHG balance by releasing methane. The modern methane will be produced during summer period due to changes in temperature regime peat layers and shallow waters. The relic methane will released from permafrost while melting. The expected methane volume to be released is comparable to current fluxes of industrial genesis and will have global impact.

Arctic wetlands support habitats for a great number of migrating species

The land use practice applied in Arctic in recent times have been based on the traditional knowledge of indigenous people. The land use have been balanced with resource availability and synchronized with seasonal and spatial resources dynamic. The land use have been harmonized and integrated with natural processes compatible with ecosystem capacity.

The new technologies provide opportunities to overcome challenges of harsh Arctic environment and lead to industrial uniformed rapid development in the region. Mainly development is focused oil and gas industry. Even traditional land use such as reindeer herd - appears to be industrialized.

The predicted hydrocarbon shortage and non stable political situation cause competition among Arctic countries for resources in the region – what could bring us to the unsustainable development ignoring environment demands

The wetlands conservation by Ramsar convention is not regular in circumpolar context

It is not very logic also in the Barents region – one can see the great concentration on Ramsar sites in Finland and Sweden, and lack in Russia and Norway especially along the coastal line

The recommendations for the improvement of wetlands conservation in Barents Region:

Wetlands Conservation in Barents Region needs urgent actions

- Wetlands diversity and status mapping
- Wetlands dependent species habitats and migrating routes mapping
- Threat analyses
- Identify conservation gaps and launch relevant protected areas
- Integrate wetlands in ECONET
- Map wetlands restoration potential and launch restoration projects
- Negotiate with oil and gas corporations on pilot projects on wise use and restoration
- Identify wetlands ecosystems and species status indicators
- Identify monitoring parameters
- Map monitoring capacity
- Launch monitoring network for Barents region compatible with CBMP
- Promote Nordic-Baltic Ramsar regional initiative as a tool for regional cooperation
- Develop joint position in the upcoming Ramsar COP10 on resolutions on Climate Change and on Wetlands and extractive industries

4. Session on climate change - a challenge for Barents Euro-Artic region

The influence of climate change on ecosystems and habitats is a politically highlighted issue. The issue was considered at the latest HCF but not identified as a theme for the fifth HCF. Since a project on climate change later started inside the Barents Euro Arctic Co-operation it is very relevant to include this issue. The Forum will discuss possible influence of climate change on the Barents region and consider recommendations.

Speakers and panel:

Roland Jansson, Umeå University, Staffan Berg, Skogforsk, Yrjö Norokorpi, Metsähallitus.



Panel discussion

The difficulty for biodiversity protection in Finland is that areas are very scattered in the north. In Sweden they are all mostly along the fell mountains. In Russia there are larger corridors from south to north.

In the south of Sweden we don't have big areas and no corridors. We have to ensure corridors; maybe have stepping stones. Migration out of the reserves should be possible. It is a question of careful management.

We need Fennoscandia green belts, more of biodiversity in forestry practice. Attitudes in practical forestry do not accord to new methods.

In industrial forestry it is possible to work with certifications. Forestry systems are slow. It is possible to build biodiversity in the young stands.

It's important to use the knowledge there is and to look upon the size and quality of areas and the necessity of dead wood.

Taiga forests need more protection areas. More pilot

projects and more incentives for forest producers are required. We all have different platforms, as always. There is a modest increase of dead wood. More is necessary already now, for the species. There will be increasing demands in the future for logging.

Corridors is the important issue. How can the stepping stones help the corridors?. There is no certainty that the Scandinavian countries understand the importance of the corridors. These issues require to get attention from the green public and the environmental policy.

The effectiveness of the measures is important. Corridors can be very expensive. One has to consider biodiversity and take the costs into account.

Better network representation is desirable to see the different interests and policy changes. We don't do what we can. It's really important to use the knowledge we all have and maintain representation.

Impacts of climate change on biodiversity and ecosystem services in the Barents Region

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This presentation reports the results of a cross-disciplinary study on the effects of climate change on ecosystems and changes the livelihood and well-being of people as a result of climate change in the Barents Region, i.e. northern Norway, Sweden, Finland and north-western Russia. We assessed likely changes in the provision of goods and services from natural and semi-natural ecosystems (i.e. excluding urban and agricultural land) in the Barents Region, as a consequence of anticipated climate change during the 21st century. Arctic regions in general are expected to warm more than the global average, but the Barents Region is unique within the Arctic for several reasons: It is more densely populated, have higher cultural diversity and have steeper environmental gradients (e.g. closer between temperate forests and tundra) than other Arctic regions.

A warmer climate is expected to result in a net increase in species richness in the region as more southern species have the potential to immigrate than is expected to be lost, but barriers to migration may prevent species from adjusting their ranges in response to climate. Some endemic species, primarily northern and alpine species, may be at risk of going extinct. Exotic and invasive species are expected to expand, since they are often derived from warmer climatic zones and have reached the Barents region with the help of humans.

The provision of ecosystem services, i.e. the benefits we obtain from ecosystems, the expected responses to climate change ranged from those judged as positive to strongly negative, i.e. they favour and disfavour, respectively, the service in question. For many ecosystem services, direct, first order effects are expected to be positive as a result of e.g. higher survival and reproduction in populations of many species in response to warming, whereas indirect effects are expected to be negative, e.g. due to habitat loss and altered species interactions. In general, forecasts of changes in the provision of ecosystem services are inherently difficult as a result of complex, often non-linear interactions among species and among ecosystems and humans. This calls for strategies to enhance the adaptive capacity of society, as a way to prepare for uncertainty.

The capacity of Barents Region societies to adapt to climate change is generally higher in the Nordic countries than in the Russian north, where the combined effects of climate change and globalisation for local residents may be severe. In addition, some sectors, such as reindeer husbandry, already being affected by other pressures, may be forced to reorganise across the entire region.

In the future, the opening of the northern sea route between Europe and Asia might open up new areas for extraction of natural resources, such as oil, gas and logging, having consequences for ecosystems and local and indigenous peoples as severe as climate change.

The potential of forest production and its possibilities for fossil fuel replacement

Summary of presentation at Habitat Contact Forum 15 - 16 October 2008

INTRODUCTION

How are the possibilities to replace the global use of fossil fuels with energy from forests? This question is easy to answer. Consider the global oil consumption, ca 32 E+9 Barrels, that is equivalent to 180 000 PJ¹ per year.

Growing stock of Global Forests 434 219 E+6 m³ on bark year 2005 according to FAO. Assume 500 kg dry substance per cubic meter and assume also this volume has an inherent caloric energy of 20MJ/kg. This makes a total energy content of ca 4 mill. PJ. Even with an addition of a factor 1,x biomass index per standing cubic meter, it is clear to anyone that the world's forest will never be able to replace the total global use of fossil oil.

WHAT IS IT THE ABOUT?

The wish for fossil fuel replace have many reasons:

- Cost efficiency
- Global quest for renewable energy sources in order to comply with the idea of sustainability
- Reasons of security policy and the quality of not being dependant of other nations
- The reason of mitigating the Global Warming by not increasing or even decreasing the amount of carbon (green house gases) in the atmosphere.

How is it then with the global boreal Carbon resources in forests.? According to a work by (Goodale et al, 2002)

Table. Northern Hemisphere carbon pools in the forest sector, 1990.

Forest C.pools (Pg C), Overall forest sector					
Live	Dead	Forest	SOC	Forest	Total
veg.	wood	floor		prod.	
83	14	28	260 ²	4	390

Most of the Carbon sequestered in forests is in the forest floor or as soil organic Carbon. Only a small part is in the biomass. This brings up the issue whether forest management aiming to increased biomass production can release other Carbon pools. Vegetation management plays here clearly a role.

CONFLICTING INTEREST

The worlds forest are today important and serve as an relevant platform in the field of world politics. Many calls for the service of forests and the use of forests is important for e.g;

- Traditional forest industry, timber, pulp and paper.
- Employment, regional economies
- Energy
- Water

1 Each liter of oil assumed to contains 36 MJ 2 soil organic carbon from below the forest floor to a depth of 1 m

- Biodiversity
- Cultural and Sacred values
- Tourist Industry, recreation, and health.

Some of these interests are conflicting, some agree. The allocation of forests to users is an issue for markets and the political system. For scientists and practitioners in forestry it is however relevant to manage and increase forests biomass production so it doesn't risk the sustainable use of forests.

What is then the potential to increase the production from forests in the Boreal Hemisphere?

EXAMPLE SWEDEN

An investigation by Rosvall, (2007) identifies that the present growth and use of timber from Swedish forests, 90 mill m³ per year as close to the sustainable level. The author reckons however there are possibilities to augment the growth by several measures, altogether adding up to increase growth by 50%.

These measures are identified as:

- Better use of present measures +30%, increased efficiency or in larger scale, regeneration, forest tree breeding, extended use of Lodgepole pine, fertilization and cleaning of old dykes
- Introduced use of new methods or applications, +20%, as somatic embryogenesis, afforestation (agricultural land), new methods of fertilization and increased draining of forest land.

The author stresses that the boreal forest system with long rotation periods react slowly to changes. The potential, if reached will, from a human perspective, be due after a considerable period of time.

CONCLUSION

- The boreal forests cannot solve the problem with replacement of fossil fuels.
- Forests and forest management plays however an important role in efforts to achieve a sustainable society. It provides products and services that all has the quality of being managed sustainably. It is a part of the solution!
- Some products and services are conflicting, but many are not. The potential can be great. Forest sector is one of the few, if not the only one, that has renewable assets of raw material and energy.
- Vegetation management is important from the perspective of global warming. Forests can manage forests towards a better sustainability, it is also possible to apply a negative loop that will impoverish biodiversity biomass and sequestered carbon in soils.
- Good management is important!

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Assessment of fell habitats and climate change

The first assessment of threatened habitat types in Finland was conducted between 2003-2008. The objective was to provide a complete description of the current state of the habitat types found in Finland, their development during recent decades, and the threats they are likely to face in the near future. The assessment coordinated by the Finnish Environment Institute was conducted by broad-based expert groups from various research institutes, universities, and administrative bodies. The project was divided into seven main groups, one of which was the fell habitat group.

The fell habitat types include treeless hilltops and the upland habitats of the mountain birch zone with 46 of them being assessed. They cover a total of 1.3 million hectares. The fells are characterised by low temperature and a short growing season. The wind is a factor regulating the thickness of the snow cover and wind creates bare wind-beaten patches and accumulations of snow, patches where the snow stays. Along with soil fertility, snow cover regulates the composition of the ground vegetation. The fell ecosystem is also characterised by habitats modified by frost-induced soil-heaving and rocky outcrops.

Some 15% of the fell habitats are threatened, and this corresponds to a little over 10% of their area. The most threatened habitats are patches where the snow stays and lingers; their numbers have powerfully diminished and this trend is expected to accelerate due to climate change. Also threatened are the driest mountain birch stands and some fell heath, the cause being heavy reindeer grazing. Roughly half of the habitats are assessed near threatened (NT), which is 77% of the total area. Of the future threats, the foremost are overgrazing and climate change.

It is predicted that climate change will be most marked in northern areas. At minimum, the average summer temperatures are expected to rise 2 °C by the year 2100. This could mean a gradual upward shift of the timberline more than 330 metres, which would mean just a few highest treeless hilltops being retained in Enontekiö Lapland. This would be devastating for the sensitive and rare plant and animal species of the treeless fell habitat, which have little margin for adaptation and minimal space for propagation. The change in vegetation zones means the transition of entire ecological communities. The speed of this transition is considerably slower than the predicted pace of climate change. In addition, the sunlight zones remain unchanged. The various species have markedly different reproductive, propagative and adaptive capacities, thus leaving them vulnerable to a range of disturbances and imbalances, and susceptible to a variety of threats. Increasing annual variations in weather conditions and occurrences of extreme phenomena also place further pressures on species adaptation.

There is little than can be done in the fell areas by way of mitigating climate change, but adaptive actions are possible. The key lies in fostering high ecosystem biodiversity by maintaining an extensive conservation area network and by seeing to it that ecosystems remain in excellent condition in terms of their structure, quality and functioning. The grazing pressure coming from reindeer herding is an example of a factor needing to be modified. Safeguarding species and genetic diversity ensures the health and viability of the natural environment and its ability to react flexibly to change. The key to the ecosystem's ability to recover from disturbances thus lies in its biodiversity. Many endangered species, and thus biodiversity itself, are wholly dependent on the continuity of their biotopes. A coherent, comprehensive conservation area network serves as a vital ecological corridor as climate change speeds up and favourable climatic conditions for vegetation zones shift.

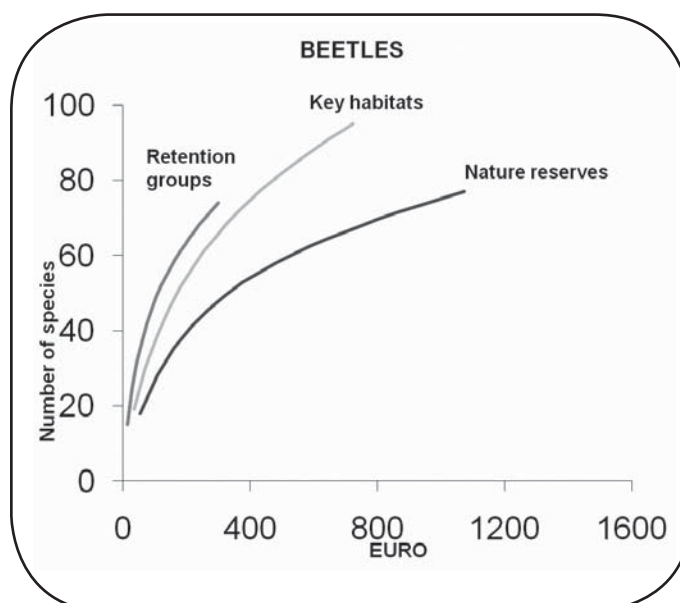
5. Session on forest biodiversity conservation



To conserve the biodiversity of forests of Barents region is a target of great importance. The Fourth Habitat Contact Forum identified the protection of forest biodiversity a key issue for the next HCF. To conserve forest biodiversity protected areas are needed. In addition sufficient protection of habitats, structures and species are needed in areas where industrial forestry is used. Sacred sites in the forest may offer opportunities for enhanced protection. A changed climate may also have an influence. The Forum will focus on the need of measures to conserve forest biodiversity.

Speakers and panel: Lena Gustafsson, Swedish University of Agricultural Sciences, Valeri Efimov, Institute of ecological problems of the North, Alexander Davydov, Institute of ecological problems of the North, Aleksandr Markovskiy, SPOK.

In addition Per Angelstam, Swedish University of Agricultural, participated in the panel.



Panel discussion

It is a simplified message that the key habitats are too small (referring to Ilka Hanskis study). It depends on the type of habitat. Some species can disperse in small habitats. One has to take into consideration what surrounding forest there is. Small habitats can be 3-500 ha. It differs in different countries. Of course we have to look at the surroundings.

Consider that ownerships change each 15-20 years. We have to be more specific, look at the different roles and what we want to achieve. Always clarify what it is about, if the ambition is low or high.

A new type of strategy is needed. It's not necessarily the researchers that will come up with the most creative new ways of thinking.

There is a lot of knowledge, isolated from each other. Where should the researcher publish to reach out?

We, operative people, recognize a problem. The solution is to make agreements so we can get help from research.

It is a question of knowledge transfer. There is a certain programme about communication and education in the Convention of Protection Area. Put the issue in the agenda and use the programme.

Conservation and support of biodiversity of wide spread species is less studied. Find out key habitats for different species. We should identify different species and think of the combination. There is a range of such areas protected in the forest. In Russia it is a waste area. We have to have different approaches.

Important to have own solutions and then exchange information about it.

Environmental effects of measures for increased forest production

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The current trend in Swedish forestry is that there is an orientation towards a higher focus on wood production. This is also manifested in the new forest policy that was adopted in 2008. Measures that lead to increased production usually cause negative effects on biodiversity, for example nitrogen fertilization and drainage. The ongoing logging of the last remnants of natural forests also depletes biodiversity. If present trends will be long-lasting, the future forest landscape will have darker and more homogenous forest stands and younger production forests. The forest landscape will become more polarized with a large proportion of the forestland covered with more or less intensively managed production forests and with a much lower proportion conservation areas. Main consequences for biodiversity will be that the production forests will have a lower number of species, smaller populations of natural forest species, less dwarf shrubs and more grasses. The present forest conservation model in Sweden implies 1) increase in the area of protected forests, 2) large area of certified forests, and 3) tree retention schemes at final loggings. A key question is if these actions will be enough to counteract the negative biodiversity trends caused by the intensified forestry. A main issue is also how combined effects of increased forestry intensity and climate change will affect biodiversity. Changes in the forest landscape are very slow due to the long life span of many forest species and long rotations times in forestry. The changes in the forest landscapes have been progressing for a long time and the current intensification will only add on to an ongoing development.

PROTECTION OF BIODIVERSITY OF TAIGA FORESTS IN THE NORTH-WEST RUSSIA

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The North-West Russia is a huge territory, which is located between Southern taiga forests and tundra region in Arctic. The North-West Russia is characterized by the diversity of landscapes, nature complexes, and biota. The biodiversity of the region is studied not enough, especially in the Archangel region.

The developing and spreading of forest industry has a result as the fragmentation of habitats for biota, decumulation of the populations of rare and typical taiga species. Especial influence on this process have industrial cuttings on the large areas.

For a protection of biodiversity, there are studied rare species and species in danger, which are described at the Red Data Books of the regions and in Russia in general. There are deduced a special regulations for a protection of it.

About 50% of terraneous Red-Data-Book' species of biota (plants, mushrooms, insects, birds, etc.) are depend on industrial cuttings. For a protection of it there are Nature Protected Areas (PA) organized, as far as forest legislation proposed a protection of forests on the places of their location (osobo zashchitnye ychastki – OZU).

Our research (Razumovsky, Efimov, 2000) shows, that nowadays existed network of PA in the Russian Part of the Barents Euro-Arctic Region is characterized by rather low landscape representation, so the network of PA nowadays is not efficient for a protection of nature systems and biodiversity. This PA network needs to be developed and improved. But even improved PA network could not provide a protection, and even more could not to maintain of typical taiga species of biota, which are not protected from industrial cuttings and undergo of the influence of it very much. So the main task of the protection of biodiversity of taiga forests in the North-West Russia is a protection of environment for the biota of taiga. The researches shows that there are necessary to save of cuttings not less than 30% of total amount forests for a reliable protection of biodiversity.

The solution of the problem it seems to be using the way of creation of *environmental skeletons* which has to be constructed by the *green meridians* and the *green belts*. The basic elements of those *green meridians* and *green belts* should be the PA, connected with each other by *green corridors*. We described already the main approaches for creating of the *green meridians* and the *green belts* (Efimov, 2007, 2008). The *green meridians* and the *green belts* which will be connected each other should be the main component uniting the PA of all of the North-West region into the living network and which will connect this system with the network of the PA of the countries of the Barents Euro-Arctic Region.

The formation of the belt of boreal forests of Murmansk and Archangel regions and Karelia and Komi Republics should be the important component of this system. The creation of such a belt there will gives an opportunity to protect large massive of intact old-grove forests in Archangel region and Komi Republic, which determine a special value of the North-West Russia in the processes of protection of Nature Heritage of European Continent. The value and importance of such territories for a protection of biodiversity and nature complexes were confirmed by 5 International Environmental Expeditions, which were organized in Archangel Region in 1997-2003.

Creating of the *green meridians* and the *green belts* will be the most efficient in the framework of International cooperation. Continue this process the important tasks will be the organizing of the International Environmental Expeditions into the remote and “undiscovered” areas, one of it is located in the North-East part of Archangel Region (the upper part of the basin of Pyoza River in Mezen District).

SACRED SITES IN THE FOREST OF NORTH-WEST RUSSIA

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A Nordic-Russian conference “The Last Large Intact Forests in North-West Russia: Protection and Sustainable Use” (Steinkjer/Lierne, Norway, 4-7.12.2007) addressed to include into the Programme of V-th Habitat Contact Forum an explanation of IUCN/WCPA “Delos Initiative”. The creators and coordinators of “Delos Initiative”, J.M. Mallarach, and Th. Papayannis said: “For some people nature is sacred. For others the natural world is part of the divine Creation. Still others believe that the divine Spirit resides in every natural element, in rocks and trees and wild beings. In all cases, spiritual beliefs are related to nature in one way or the other and warrant a joint appreciation. For practical reasons as well, looking in an integrated manner upon the sacred and the natural may lead to a combination of conservation efforts that can result in synergy, of benefit to both sides” (Mallarach, Papayannis, 2006).

I would like to touch a phenomenon of sacred sites in the forest of North-West Russia. Since 1991 the territory belonged to the National Park “Kenozersky”. I have a field research on this territory since 1981 (the last field trip was in 1994, when the National park was already organized) with the exploratory design of the National park and collected a number of stories of local people about sacred groves. Nowadays there are described 45 sacred groves in the National Park “Kenozersky” (Tretjakov, Koptev, Kozykin, Torhov, Kosarev, 2002). Kenozero sacred groves are coniferous forests (pine and common spruce). Local people mark out those groves in the surround woodland. Those groves have special name, being called *svataya roscha* (sacred grove). The fact of presence of *coniferous* sacred groves is unusual in the Russian tradition (for Russian people the sacred tree is birch).

The analogous of sacred groves on Kenozero one could find in taiga forests of West Siberia, which I have seen during the expedition “*Slavyansky Khod 2008*” in the forests of Ob’ and Sos’va rivers. Among peoples Khanty and Mansy is a tradition of sacred groves of coniferous trees, which is connected with shamanism. One example is the sacred grove *Khalev-Oyka*, which is a sanctuary of Mansy people community of the village Aneevo in the West Siberia, located in 5 km of the point where river Posol flows to the river Sos’va. The sanctuary described by Izmail Gemuev, who visited the place in 1986 (Gemuev, 1990). There is a glade in the centre of the sacred grove with a post on the glade, a top of it covered by birch bark “cap”. There is a thin pole fastened to the post by several cloths. There is a parallel with *pelena* on the Holy crosses of Kenozero and cloths on the post and the spruce tree of the sacred grove *Khalev Oyka*. Near the post there is a small wooden table (*passan*) used for ritual food for *Khalev Oyka*, who is a sacred protector of the Aneevo village and surrounded forest. A parallel is with Kenozero Lake Area: near some chapels also stand small table on which peasants of the villages have their ritual meals in patron saint’s days. A ritual storehouse (*sum’yah*) stayed in the *Khalev Oyka* sacred grove. Inside storehouse there are a wooden sculpture of a spirit and *aryyn*, which are cloths, as offerings to him.

The sacred groves might have been considered as a spiritual/natural phenomena, which are characteristic to the different ethnic groves located in taiga forests. Sacred groves are “*an examples of the most ancient forms of Protected Areas, which are connected with ritual (religious) rites*” (Boreiko, 1998).

At Svensk-Ryskt Forum (St. Petersburg, 10-11.06.2008) the Chair of CAFF, Mr. Sune Sohlberg introduced me the experience of CAFF for conservation value of sacred sites of indigenous peoples of the Arctic (CAFF Technical Report 11, 2004). This experience has a great value for elaboration of methods of evaluation of the sacred sites of the taiga forests of North-West Russia, which has to be included into the International cooperation for a protection of biodiversity, as a special trend of an international multidisciplinary field research, studies and recommendations.

CURRENT SITUATION WITH PROTECTION BIODIVERSITY IN FORESTRY IN NORTH-WEST RUSSIA

Alexandr Markovsky, Karelian nature protection organization “SPOK”

Habitat Contact Forum V, Umeå, Västerbotten, 15 – 16 of October 2008

Session on forest biodiversity conservation

To support nature values of a certain area we should protect biodiversity on different levels.

1. Large valuable forest areas of world and international concernment.
2. Less valuable forest areas of regional and local concernment.
3. Key biotopes – local patches of special value.

In forestry we can combine two ways:

- To exclude most valuable objects from exploitation;
- To adopt forestry practice to pay more attention to forest dynamic and biodiversity conservation.

In Karelia Republic at present 216 nature reserves - 1007,6 th. ha (5,6 % from total area of Karelia).

At the same time there is Karelian Master-Plan consist 60 planning nature reserves. Total area (without water surface) is about 1600 th. ha (9 % from forestry area of Karelia). Almost all OGF are included in planned nature reserves.

In 2007 new «Logging rules» were adopted by Russian Government. It contain direct request to protect biodiversity in forestry (for example it request to protect a patches with high conservation value nature objects ect.).

In NW-Russia there are several groups of investigators which deal with protection biodiversity in forestry: Global forest watch (Russia), WWF (Russian Far East), WWF (Arkhangelsk), Found “Silver Tajga”, SPOK, Pskov Model Forest, Kirov’s Forest Certifications Centre, Metsaliitto (Leningrad region), Project “Biological value forests”(Leif Andersson&Nadezhda Alekseeva).

Bases on investigation in last years first Field manual books for identify key biotopes were created. Such examples we could see in Karelia and Arkhangelsk region.

This Field manual books includes list of key habitats which potentially consist highest level of forests biodiversity and their photos and recommendation of protection.

At the same time investigations shows small key biotopes do not work because the response of species non-linear (Hanski, 2008).What needs in nearest future concerning biodiversity conservation in forestry? Concerning protection biodiversity in forestry in NW-Russian forest conditions we needs answer on following questions:

- What proportion of the forests can be used for timber supply without critical damage for biodiversity?
- If small isolated key biotopes can not protect full biodiversity what should be the state of the forest outside them to help them to protect biodiversity?
- What biotopes should remain in logging plots?

1. Сессия о сети охраняемых территорий

Основным назначением сессии является дискуссия о методах организации и укрепления государственной и региональной систем особо охраняемых территорий вносящая свой вклад в достижение общих глобальных целей. В настоящее время на повестке дня Форума стоит формирование ВРАН (Сети особо охраняемых территорий Баренц-региона).

Выступающие и участники дискуссионной панели: Аймо Саано, Метсэхэллитус, Финляндия, Эллен Арнеберьг, Директорат управления природы Норвегии, Улле Хёйер, Шведское управление защиты природы, Галина Веселова, Министр природных ресурсов и экологии и Ян-Петтер Хуберт Хансен, Директорат управления природы Норвегии.

Дискуссионная панель

Основной задачей является защита особо охраняемых территорий. Все согласны с актуальностью этого вопроса вследствие потепления климата. Повреждены огромные территории. Форум имеет возможность создания сети для претворения в жизнь намеченных целей. Должны быть обсуждены различные методы. Основным общим методом является идентификация объектов и методов. Основной работы является взаимная помощь.

Релевантным является начало этой работы. Необходимо дополнить некоторые вопросы. ВРАН (ОПТ) может сотрудничать с ЕС. Важно обратить внимание на территории дикой природы.

Нам необходимо найти общие основы, идентифицирующие территории. Что необходимо сделать в первую очередь? Одним из путей работы для каждой страны является представление списка, включающего размеры территорий, контактных лиц, основные направления работы, финансовые ресурсы.

Мы желаем визуализировать сеть. Посмотреть на её наличие, системы отчетности и их использование.

Обновление данных является важным звеном, и Норвегия несёт обязательство предоставления рапорта ЕС.

Одной из положительных черт ОПТ, является возможность ведения диалога на едином языке для достижения общей основы.

Баренц-регион подвергся сильному влиянию человека вследствие экономической активности. Важным является сохранение наследия природы. Можно начать пилотные проекты, использовать брэнды о наследии природы (сравните США) и подчеркнуть необходимость поддержки особых ценностей.

Как мы можем начать эту работу? Больше встреч для дискуссий в текущем году, определение мест встреч и назначение ключевых лиц. Важным является получение отклика путём предоставления информации. Мы хотим выделить Баренц-регион на карте, подготовить торговую марку региона и подчеркнуть особые ценности и опасности.

Большие территории расположены в России. Нельзя ослаблять внимание к положению тундры. Территории необходимо инспектировать.

2. Сессия об управлении охраняемых территорий

Вторая сессия обращает особое внимание на незащищённые сенокосные угодья. На культурных местообитаниях, в качестве примера, выбираются методы управления. Необходимо защитить биоразнообразие и культурный ландшафт Вологодского региона.

Выступающие и участники дискуссионной панели: Катя Раатикайнен, Метсэхэллитус, Финляндия и Надежда МаксUTOва, Вологодский университет, Россия. Дополнительный участник Аймо Саано, Метсэхэллитус, Финляндия, участвовавший в панели.

Дискуссионная панель

Сенокосные угодья не являются частью особо охраняемых территорий. Нет никаких стратегических планов, направленных на их охрану. В Финляндии существует много частных фермерских хозяйств. Благодаря финансированию ЕС, там есть значительное изменение.

У нас у всех есть проблемы с сенокосными угодьями. Является ли охрана наилучшим методом? Не являются ли они необходимостью для представительства сельскохозяйственного сектора? Они отличаются от других полей. Возможно, необходимо установить контакт с владельцем? Какой способ является наилучшей защитой? В случае большого количества управляющих ничего не произойдёт. Главной задачей регионального сотрудничества является защита наиболее ценного.

В Финляндии заметную роль играют волонтеры, природоохранные организации, землевладельцы, WWF-фонды.

3. Сессия о водно-болотистых территориях

Третья сессия: Роль водно-болотистых территорий в круговороте углерода

- Оценка экологии водно-болотистых местообитаний

- GAP-анализ экологии водно-болотистых местообитаний Вологодского региона

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Дополнительный участник Татьяна Минаева, реферат прилагается ниже.

Дискуссионная панель

Необходимо больше сотрудничества по вопросам водно-болотистых территорий. Между странами существуют некоторые различия. В Финляндии есть проблема торфяных болот и страна получила помощь от ЕС и Швеции.

Экологическая обстановка в стране изменилась. Хотелось бы проследить как изменится климат и последствия этого изменения.

Общие проблемы с сотрудничеством из-за различных определений являются реальностью.

Мы должны подходить не с различных точек зрения, а перед следующей встречей рассмотреть весь комплекс: методы, культурные местообитания, изменения внесённые человеком.

Большое значение водно-болотистых территорий - Рамсарская встреча в конце ноября. Каждая страна представлена делегацией. К этой встрече необходима коммуникация и рефераты.

4. Сессия об изменении климат – сложная задача для Евро-Арктического Баренц-региона

Влияние климатических изменений на экологическую систему и местообитания является вопросом, выделенным политическими деятелями. Вопрос был рассмотрен на последней КФМ, однако не был идентифицирован как отдельная тема для пятой встречи КФМ. После начала проекта климатических изменений в составе Евро-Арктического сотрудничества Баренц-региона, релевантным стало включение рассмотрения этого вопроса. На Форуме будет обсуждено возможное влияние климатических изменений на Баренц-регион и предполагаемые рекомендации.

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Дискуссионная панель

Сложности защиты биоразнообразия в Финляндии в том, что ареалы в северной части страны находятся на большом расстоянии друг от друга. В Швеции они расположены большей частью вдоль склонов гор. В России есть большие коридоры с юга на север.

На юге Швеции нет ни больших ареалов ни коридоров. Мы должны обеспечить коридоры; возможно устроить каменные переходы. Должно быть возможно изменение исходя из резервов. Это вопрос бережного управления. Нам необходимы зелёные зоны Фенноскандии, больше биоразнообразия в практике лесоводства. Положения в практике лесоводства не соответствуют новым методам.

В промышленном лесоводстве возможно проводить работу с сертификациями. Системы лесоводства медленны. Возможно закладывать биоразнообразие на молодых посадках.

Важным является использование существующих знаний, и рассмотрение размера и качества ареалов и неизбежного наличия мёртвого леса.

Тайге необходимо большее количество особых охранных зон. Требуется большее количество пилотных проектов и больше мер поощрений для людей, выращивающих лес. Как всегда, мы имеем различные платформы.

Наблюдается незначительное увеличение мёртвого леса. Больше необходимо уже сейчас для биологического разнообразия. Необходимо повышение требований для будущих заготовок леса.

Коридоры являются важным вопросом. Как переходные методы помочь коридорам? Неизвестно, понимают ли Скандинавские страны важность коридоров. Эти вопросы требуют привлечения внимания людей, заботящихся о природе и экологической полиции.

Важна эффективность измерений. Коридоры могут быть очень дорогими. Кто-то должен рассмотреть биоразнообразие и принять во внимание расходы.

Желательна улучшенная сеть представительств для возможности обнаружения различия интересов и проведения политики изменений. Мы еще не делаем всё возможное. Чрезвычайно важно использовать имеющиеся общие знания и поддерживать представительство.

5. Сессия о сохранении биоразнообразия леса

Сохранение биоразнообразия лесов Баренц-региона является важной задачей. Четвёртый Контактный форум по местообитаниям (КФМ) определил охрану биоразнообразия леса как ключевой вопрос следующего форума. Необходимо сохранить особые охраняемые зоны биоразнообразия леса. В зонах промышленного лесоводства необходимо создание защиты местообитаний, структур и видов. Неприкосновенные зоны в лесах могут создать возможности для улучшенной защиты. Может оказать влияние и изменение климата. Форум будет концентрировать внимание на необходимости измерений для сохранения биоразнообразия леса.

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Дополнительный участник Пер Ангельстам, Шведский институт сельского хозяйства, участник панели.

Дискуссионная панель

Примитивным является представление незначительности ключевых местообитаний (ссылка на исследования Илка Хански). Это зависит от типа местообитания. Некоторые виды могут развиваться в малых местообитаниях. Необходимо принять во внимание, что есть окружающие леса. Малые местообитания могут составлять 3-500 га. Это зависит от различных стран. Конечно мы должны смотреть на окружающую обстановку.

Предположительно, владелец меняется каждые 15-20 лет. Нам необходим более специфичный взгляд на различные роли и что мы желаем достичь. Всегда выяснять, если амбиция ниже или выше.

Необходим новый тип стратегии. Не обязательно, чтобы исследователи пришли с наиболее креативными новыми путями мышления.

Существует большой запас знаний, изолированных друг от друга. Где должен быть опубликован исследователь, чтобы его прочитали?

Мы, лица занимающиеся оперативной деятельностью, узнаём проблему. Решением является достижение соглашений таким образом, чтобы мы могли получить помощь от исследований.

Это вопрос передачи знаний. Существует определённая программа о коммуникации и образовании в Конвенции об охраняемых территориях. Необходимо поставить вопрос на повестку дня и использовать программу.

Сохранение и поддержка биоразнообразия широко распространённых видов изучена меньше. Найти ключевые местообитания для различных видов. Мы должны идентифицировать различные виды и думать о комбинации. Существуют разновидности таких ареалов, охраняемых в лесу. В России это бросовые земли. Мы должны иметь различные подходы.

Важно иметь собственные решения и затем обмениваться информацией об этом.

Fifth Habitat Contact Forum in the Barents Region, Umeå Västerbotten 15 - 16 of Oct 2008

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Foto: Göran Skogsmo