





BEAC Joint Working Group on Education and Research

ANNUAL NARRATIVE REPORT FOR 2013

General Information:

Co-chairmanship by: Northern (Arctic) Federal University (Arkhangelsk, Russia) and University of Tromsø (Tromsø, Norway)

Chairmanship period: November 2011 – December 2013

Co-Chairs: Marina Kalinina, NArFU Vice-Rector of International Cooperation

Britt Vigdis Ekeli, UiT Vice-Rector for Education / until August 2013

Previous annual reporting: Narrative Report for 2012 (provided to IBS on March 28, 2013)

Reporting period: January 1, 2013 – December 31, 2012

Interim reporting in 2013:

- February 14, 2013 (PPP presented by JWGER Chair at BRC meeting held in Rovaniemi, Finland, see the Reference List);
- September 5, 2013 (PPP presented by JWGER Chair at BEAC CSO meeting held in Oslo, Norway, see the Reference List);
- November 21, 2013, JWGER meeting prior to the Barents Seminar on Horizon 2020 (introductory speech by JWGER Chair at JWGER meeting in Belgium, Brussels).

Narrative Report

In 2013 JWGER activities were continued to be coordinated by the Northern (Arctic) Federal University (NArFU, Arkhangelsk) as Chair and Tromsø University (UiT, Norway) as a Co-Chair. The partner universities were committed to continue implementing the positive initiatives undertaken during its 2011-2012 co-chairmanship aiming generally at strengthening academic cooperation in the Barents Region in response to growing local, regional and global challenges and needs in the field of human resources, research and innovation. In 2013 as in the previous years the JWGER overall performance and concrete were targeted to achieving the JWGER general tasks outlined in the JWGER Mandate. The special emphasis was made on meeting the

specific JWGER chairmanship priorities for 2012-2013 defined by JWGER members (see Reference List for JWGER Mandate and JWGER Action Plan).

In 2013 the JWGER member institutions continued the work started within the areas prioritized for 2012-2013, i.e. strengthening the WG membership, interacting with other thematic Barents working groups, enhancing university-business partnership and promoting Barents expertise and research in the global market.

The current Narrative Report covers the period from January 1, 2013 till December 31, 2013 and is based on the previous interim reports and member institutions' contribution. The Report provides a brief overview on the WG performance in the reporting period, institutional issues as well as sums-up the activities performed and interim results obtained under each priority line.

General Facts and Institutional Issues:

- During 2013 the University of Tromsø went through the reorganization process resulting in the merging of a number of colleges into the new university structure named "The Arctic University of Norway - the University of Tromsø". Some structural changes occurred and the new JWGER Co-Chair from Norwegian side was nominated in September.

- JWGER was actively participated in BEAC and BRC meetings and its activities were presented by JWGER Chair at BRC meeting held in February 2013 in Rovaniemi; BEAC CSO meeting held in September 2013 in Oslo; NArFU Chair attended the joint session devoted to chairmanship transition in October 2013 in Helsinki; NArFU and UiT rectors as well as other top officials of member institutions participated in Barents Summit on June 4, 2013 in Kirkenes.

- In 2013 one JWGER meeting was held on November 20-21, 2013 in Brussels;
- JWGER Annual Narrative Report for 2012 was submitted to IBS;
- JWGER web-page renewed (<u>http://www.beac.st/?DeptID=8557</u>).

<u>Priority 1:</u> Revitalizing the activities by strengthening the JWGER membership

In 2013 the JWGER coordinators continued to take efforts in order to expand the frames of the JWGER by involving new members from HEIs and research institutions from the Barents countries. It was also important to ensure better communication between the members, create discussion arenas and update the JWGER strategy to be in line with the modern trends. *Activities undertaken and interim results:*

Organizing a number of important discussion arenas and joint publications:

March 18-19, 2013: International Conference "Innovation in Education, Research and Business: Norwegian and Russian perspectives", Bodø (Norway), organized jointly by University of Nordland and NArFU. Attended by about 120 participants from Russia and Norway, including Russian and Norwegian Deputy Ministers of Education and research, representatives from Ministries of Foreign Affairs, regional and municipal governments, research funds, universities, colleges and businesses. Main objective: Forum for dialogue and exchange of best practices between Norwegian and Russian higher education institutions in the fields of education, research and business cooperation. Planning new cooperation agenda;

- Joint publication as a follow-up of International Conference "Cooperation in the Barents Euro-Arctic Region in the Field of Education and Research as a Resource for Regional Development" hosted by NArFU in November 2012. The Collection of Theses was published in NArFU in August 2013.
- Participation in the activities and meetings of Intergovernmental Working Groups on Education and Research:
 15 March 2013, Oslo, Norway meeting of Norwegian-Russian Intergovernmental Working Group on Education. Agenda: enhancing bilateral cooperation in the field of research planning new joint initiatives, promoting Russian education in Norway;
 4 December, 2013, Helsinki, Finland meeting of Finnish-Russian Intergovernmental Working Group on Education and Research. Agenda: recognition issues, experience exchange;
- Enhancing internationalization of northern HEIs and cross-border cooperation: Finnish project: Experience exchange and best practices on internationalization of northern HEIs. Spring 2013: A series of benchmarking visits of Finnish universities to NW Russian and Norwegian HEis. Key partners: Rovaniemi UAS, Kemi-Tornio UAS, NArFU, UiT;
- 20-21 November, 2013 Brussels, Belgium: JWGER meeting organized by NArFU and North-Sweden EU Office with a special focus in the agenda on planning participation of the Barents academic institutions and developing joint project proposals to Horizon 2020 Programme (II Workshop "Research and innovation in the Barents Region/Horizon 2020"). The meeting was attended by 45 representatives from 13 universities and leading research institutes in the Barents Region (4 Barents countries), officials from Swedish regional authorities, North-Sweden and Norwegian EU offices, speakers from EU Commission and Barents Regional Council. In the opening ceremony the JWGER Chair gave an overview of JWGER activities in 2013 and welcomed the new JWGER members. The work programme also included three groups sessions on mapping out research potential for joint participation in Horizon 2020 and developing project applications. In the sum-up session it was reported that totally over 40 themes of potential projects were identified under working packages of ICT, Energy and Environment, Arctic issues, about 10 projects proposals were supported by the partners for further development and application.
- The special event on November 21th was devoted to Arctic-focused research cooperation and the role of Barents universities in this. The roundtable meeting was participated by the representatives from universities in Sweden, Finland, Norway and Russia as well as from the European Commission and European External Action Services (EEAS). During the meeting, the representatives from Directorate General for Maritime and Fisheries (DG MARE) with responsibility for the EU's Arctic coordination, the Directorate General for Research and Innovation (DG R&I), the EEAS and the regional actors in the Arctic and Barents stated their positions. The goal were to create a dialogue about future cooperation and how all involved parties will be able to continue

work with the common denominators of interest to the EU and the actors in the Arctic and Barents region.

European Union actively works for a coordinated Arctic Policy. Main points from the discussion:

• EEAS hopes that the universities through their contributions to the Arctic and the Arctic Council demonstrate the commitment and willingness of the European Union to contribute in Arctic issues;

• DG R&I is aware that research plays a major role in future EU policies for the Arctic. The role of EU is to coordinate what happens with increased efficiency;

• DG MARE points out that our universities have both Arctic problems and an Arctic dimension and if we keep that particular dimension in mind we can find what gives added value to our research, our regions and the EU.

One of the things discussed were the need of the Arctic as a research field of its own and to include the Arctic perspectives in EU's research calls and how the relatively small universities in the Barents region together can become a major force on the European research arena by offering cooperation with other leading Arctic research centers in the EU and on the global stage. Research is a path to regional collaboration and to create change even in the local community, also for indigenous peoples in the Arctic regions (*please, see Reference List for more information*).

Russian-Norwegian initiatives as an example of successful cooperation:

- June 12-14, 2013: As a follow-up of the Russian-Norwegian Ministerial meeting in March 2013 in Oslo Russian–Norwegian Session on Svalbard was organized by NArFU and UiT with the goal to discuss the possibility to establish Russian Arctic research centre on Svalbard, potential Russian-Norwegian Arctic cooperation and joint research activities. The session was participated by the key officials from Russian and Norwegian Ministries on Education and Research, research centers, municipalities, universities;
- 6 17 August, 2013 Russian-Norwegian Expedition "Following Nansen's Route" / International Floating University. Co-organized by NArFU, UiT, RosHydromet, NBS on board the research vessels. Participated by 50 representatives: politicians, authorities, scientists, businessmen, media.

<u>*Priority 2:*</u> Mapping-out synergy potentials and developing concrete actions with other thematic BEAC working groups.

Since JWGER mission and activities are closely interlinked with the issues tackled by BEAR working groups and are given special emphasis in the mandates and action plans, more efforts were put to create better synergies between different groups and levels that favoured cooperation with other chairmanships. In the reporting period the previously undertaken initiatives were successfully developed and concrete results achieved through interaction with the two working groups: i) Joint Working Group on Tourism and ii) Subgroup on Clean Production and Environmental Consumption / Regional Working Group on Environment

Activities undertaken and interim results:

i) Joint Working Group on Tourism: cooperation under ENPI CBC Kolarctic Project "Public-Private Partnership in Tourism / BART" in 2010-2013:

- Joint elaboration and publication of Action Plan on Barents Tourism Development. The following Barents universities were involved in research and Action Plan development as the key executors: RAMK, UoL, LTU, NArFU, UiT, MSTU;

- JWGER members participated in JWGT meeting held on February 8, 2013 in Rovaniemi and devoted to discussing the mechanisms for Action Plan on Barents Tourism implementation and the role of the Barents universities in improving the quality of tourism managers training.

- II International Tourism Forum was held in Arkhangelsk on 18-19 June, 2013. Barents universities participated in the Workshop on Research and Educational Cooperation Perspectives in Tourism Sector. Action Plan on Barents Tourism Development was adopted by the representatives of national tourism agencies of the Barents countries and members of JWGT.

ii) Subgroup on Clean Production and Environmental Consumption / Regional Working Group on Environment:

Cooperation in the joint project under the auspices of JWGER and RWGE / SCPEC Chairmanships "Implementing Methodology of Cleaner Production and Environmentally Sustainable Consumption at Russian Universities of Barents Region" aimed at introducing the Nordic competence and expertise in clean production and environmentally sustainable consumption into academic curricula at North-West Russian universities. A series of international workshops was launched in March 2013 in NArFU and continued in autumn 2013 in Syktyvkar State University (October 2013), Murmansk State Technical University (November 2013) and Petrozavodsk State University (December, 2013). The RWGE experts were invited as key-note speakers, NArFU representatives participated as coordinators and experts.

The cooperation between JWGER and RWGE / SCPEC under the above project can be considered as a good example of achieving the synergy by using the existing networks and uniting the resources in order to meet the goals of the both groups. The second stage of the project is to be started in spring 2014 and is aimed at developing an international educational program on CP and ESC

<u>Priority 3:</u> Promoting cooperation with business and industries by analyzing their needs and studying possibilities for joint initiatives.

Recognizing the crucial role of academia, research and innovation in sustainable socioeconomic development of the Barents Region, in 2013 more attention was paid to facilitate university-business cooperation. The WG actions were directed to organizing discussion arenas for academic-business cooperation, analyzing educational needs of businesses, initiating joint projects.

Activities undertaken and interim results:

16-19 June, 2013: III Russian-Finnish Business Forum "Russian-Finnish Arctic Partnership", Arkhangelsk

Organized by NArFU jointly with the Government of Arkhangelsk Region, under the auspice of the Russian and the Finnish Ministries of Foreign Affairs, co-chaired by Russian and Finnish Ambassadors-at-Large. Attended by about 100 representatives from Finnish and Russian businesses, authorities, universities. Participated by RF Vice Minister of Transport. Key topics: Northern Sea Route, university cooperation, development of northern territories, tourism

19-21 March, **2013**: Arctic Dialogue Conference 2013: "Arctic in a Global Perspective", Bodo, Norway (<u>www.arcticdialogue.com</u>). Organized by University of Nordland.

30-31 October, 2013: International Oil & Gas Forum "Arctic Projects – Today and Tomorrow", Arkhangelsk. Organized by Arkhangelsk Regional Government, Arkhangelsk Regional Association of Oil and Gas Suppliers, NArFU. Barents universities participated in the Working Session on cooperation between oil and gas industry and universities/ New demands for training specialists for oil and gas sector.

17 September, 2013: Launch of the new joint project "Young Entrepreneurs" under Norwegian-Russian Chamber of Commerce aimed to support young researchers. Project partners: Norwegian and Russian universities and companies. Funded by NMFA.

Thoughout 2013: On-going international projects with active involvement of business and academia funded by Kolarctic ENPI CBC, NMFA, NBS, NCM (e.g. "Budrus" project – local government budgeting reforms in Russia: implications and tensions", "Food and health security in the Norwegian, Finnish and Russian border region: linking local industries, communities and social-economic impacts", KITENPI, "Water resources management", "Energy Efficiency in North-West Russia", "Creative Industries, Industrial Research School", SUMILCERE - Sustainable mining, local communities and environmental regulation in Kolarctic area", etc.).

Implementation of ENERU Project (Kolarctic ENPI CBC) aimed at establishment of business cooperation in the field of energy efficiency in the Barents region. The work is based on Triple Hellix approach when cooperation of scientific (educational) institutions, business structures and municipalities is taken as a ground for successful implementation of energy efficiency innovations and activities. Municipalities of Kirovsk, Kandalaksha (Russia) and Piteo, Bothnian Arc (Sweden), companies from 3 Barents countries and research bodies (INEP, RAMK, Lappia) are involved in the activities. June 10; October 3, 2013, Kirovsk, Murmansk Region: Seminars "Energy audit methodologies in Russia and Finland", "Opportunities of renewable energy use in the Murmansk region", business-related seminar "Opportunities for business cooperation in the Barents region in the field of energy efficiency"

With regards to university-business cooperation development, the JWGER considers very important to establish relations and initiate joint actions with the related Barents Working Groups on economic development, investments, transport, etc. Unfortunately, the JWGER calls for cooperation were not responded so far.

<u>Priority 4:</u> Contributing to solving climate change challenges

The JWGER Action Plan for 2012-2013 defined the JWGER contribution to solving climate change challenges and developing BEAR Action Plan on Climate Change as a special priority. As reported before in autumn 2012 the UiT collected the proposals from member universities and submitted the proposals to Norwegian Ministry of Foreign Affairs. In 2013 the JWGER considers important to continue the activities towards increasing collaboration in the related applied interdisciplinary research and innovations to address climate challenges timely and in a proper way. JWGER actively supports on-going and new international projects on environmental protection and climate change issues and encourages the results dissemination through workshops and conferences. The projects examples:

- i) **TEC Trilateral cooperation on Environmental Challenges in the Joint Border Area** (Kolarctic ENPI CBC), aimed at developing tools used by environmental authorities and researchers when assessing the impacts of airborne emissions, regulation of waterways and climate change on the environment. These tools are assessment systems, based on environmental monitoring and research of meteorological, hydrological and ecological models. Key event in 2013: international seminar "Trilateral environmental cooperation in the Joint Border Area" (Norway, Bioforsk).
- ii) **CETIA Coastal Environment, Technology and Innovation in the Arctic (Kolarctic ENPI CBC) a**ims to contribute to develop new approaches to monitor the coastal environment and new technologies of bio-remediation.

One of the ways to enhance scientific cooperation on the issues of climate change could be organizing international expeditions. Some experience was acquired by NArFU and UiT in August 2013 by organizing Russian-Norwegian Arctic Expedition "Following Nansen" on board the Russian Research Vessel Professor Molchanov. It is planned to organize two international expeditions in summer 2014 with invitation of researchers and postgraduate students from different foreign countries.

Priority 5: Supporting activities of consortia and networks

Since most of the BEAR academic and research institutions are active members of different networks it is important to strengthen links with existing networks, institutions and associations. With this regards, it is viewed useful to achieve more synergy and encourage the exchange of information, approaches and best results. Much work was done to identify potentially prospective areas of cooperation between Barents Region and other international cooperation models, like European Union, the Arctic Council, Nordic Dimension and others.

On the basis of the theme-wise synergy approach and coherent regional mandates, a lot was achieved by networking within the University of the Arctic consortium under joint events, initiatives and concrete projects. Apart from the established links and on-going interaction, the JWGER together with North-Sweden EU Office did a lot in order to identify areas of cooperation between Barents universities in research and innovation, as well as opportunities to pursue joint projects - primarily in the context of the new EU Program for Research and Innovation Horizon 2020. In 2013 a nu,ber of actions were undertaken in order to broaden interaction with Northern Dimention and its structures like Northern Dimension Partnerships,

Northern Dimention Institute, Business Council that are viewed as important instruments for expanding a dialogue of Barents Region with Baltic Region and European Union in general.

Activities undertaken and interim results:

Extending links with *University of the Arctic* and the Arctic Council under the strategic context of High North focus of the Barents institutions:

- 21-23 January, 2013: UArctic Thematic Networks meeting in UArctic Research Office located in NArFU, Arkhangelsk;
- Joint implementation of Global Access Project (2012-2014, funded by the Norwegian Ministry of Foreign Affairs under the Barents 2020 Programme): The main purpose of the project is to increase human capacity in the North by making it an important destination of living and study, to attract more young people to the North from outside of the northern regions, to work on better visibility, attractiveness and accessibility of the excellent study opportunities in the High North. Key partners: UiT, University of Lapland, NArFU.

Project results achieved in 2013: a) evaluation of UArctic Study Catalogue, planning and designing a new attractive UArctic Student portal and interface which includes the Study Catalogue, university profiles, student stories and information on mobility and mobility scholarships. A prototype of the new UArctic student portal will be launched as a side event at the Arctic Frontiers Conference in Tromsø in January 2014; b) meeting with all relevant stakeholders of the web project during the UArctic Council Meeting at Fairbanks, Alaska in June, presented and discussed the needs of member institutions as well as prospective students in relation to the project; c) development of an international reference group consisting of the UArctic GoNorth program team and representatives from International Offices/Marketing and Recruitment Units at UArctic member institutions; d) realized a Staff Development Workshop for UArctic member on 20-23 May in Levi (Finland), focusing on branding of higher education, online student recruitment and destination marketing; e) presentation of UArctic at the EAIE Conference in Istanbul September 2013 with an own marketing the organization, international cooperation and student exhibition stand mobility with and in the North, including Barents Region.

- 26 30 June, 2013, NArFU, Arkhangelsk: 7th UArctic Rectors' Forum held at NArFU,. Main theme: "The Northern Sea Route Logistics, Transportation and Infrastructure." Participated by 50 rectors and invited speakers from 8 Arctic countries. BEAR widely represented: 43 participants from 23 regional organizations;
- Initiating new and implementing on-going Arctic-focused research projects.

Supporting participation in European Union programs:

 Implementing on-going and planning new joint projects under the following IFI and funds: Erasmus+ Program, Kolarctic ENI CBC (II stage), Horizon 2020, etc.;

- Spring 2013: Submitting proposals for Kolarctic ENI CBC Program Documents re. the priorities and implementation rules;
- **20-21 November, 2013 Brussels, Belgium**: Holding the II Workshop "Research and innovation in the Barents Region/Horizon 2020" aimed planning participation of the Barents academic institutions and developing joint project proposals to Horizon 2020 Programme. Results and outcomes: attended by 45 representatives from 13 universities and leading research institutes in the Barents Region, information sessions on Barents options in Horizon 2020 Programme with invitation of EU officials and experts, three working group sessions on mapping out research potential for joint participation in Horizon 2020 and developing project applications (totally over 40 themes of potential projects identified under various working packages (ICT, Energy and Environment, Arctic issues), about 10 potential projects are currently under development) *please see also Priority 1, p.2;*
- Submitting proposals for RF Ministry of Education and Research re. Russian organizations participation in Horizon 2020 Programme and EU-Russia Year Calendar of Events and Activities;
- **November 2013**: Participation of Barents universities rectors in the Opening Ceremony of EU-Russia Year of Cooperation in Research.

Enhancing cooperation with Northern Dimension structures:

- Rendering support in implementing on-going and initiating new projects under Nordic Council of Ministers program (e.g. call for projects within Arctic-focused Cooperation Programme);
- Under the auspices of Russian and Finnish Ministries of Foreign Affairs negotiating the coordination of the Northern Dimension Institute by NArFU (Russia), St-Petersburg Higher School of Economics (Russia) and Aalto University. It is expected that NDI could provide an added-value to JWGER activities through establishing a link with Baltic Region academia and facilitating networking and experience exchange, fund-raising and project work, promoting cooperation and coherence in areas of mutual interest and within the regional policies and mandates;
- 11-12 November, 2013, NArFU, Arkhangelsk: Organizing the III Northern Dimension Parliamentary Forum. Representatives from European Parliament, Council of Federation of RF, Nordic Council, Baltic Assembly, Baltic Sea Parliamentary Conference of as well as from national parliaments and governments of Estonia, Finland, Iceland, Latvia, Norway, Russia, and Sweden met to discuss perspectives of regional cooperation. The overall theme of the III Forum was human issues in the Northern dimension. Speakers stressed the importance of trans-national cooperation and the necessity to create synergy between already existing forms of regional international cooperation. The participants shared the achievements of ongoing projects, summarized challenges in cooperation and outlined possible areas for future cooperation.

Conclusions:

In general the JWGER performance in 2013 was visible and result-oriented. has been evaluated as successful and productive. The chairmanship tasks achievement process was integrated into the activities of the Barents member-institutions. The synergy with other formats and models of regional cooperation in the North was achieved. The Working Group has proved itself as an important tool of intensifying cross-border cooperation in academic and research spheres in the Barents Region.

Officially, in December 2013 the JWGER co-chairmanship led by NArFU and UiT since November 2011 has terminated. Within the two years period of NArFU and UiT presidency, the Barents universities and research institutions have jointly achieved significant results that were highly evaluated by the Barents Euro-Arctic Council and Barents Regional Council and Committee.

Considering the fact that Norway handed over its chairmanship in BEAC to Finland, and Arkhangelsk Region took up the leadership on the regional level from Norbotten County of Sweden, as well as based upon the BEAC Senior Officials Council recommendation and support from the JWGER members, NArFU is expected to continue its chairmanship in JWGER for 2014-2015 period sharing this mission with the University of Lapland from Finland as a Co-chair. The new JWGER Co-Chair was nominated by University of Lapland: Ms. Outi Snellman, Director of International Relations, Vice-President of Administration. Taking into account successful coordination of the WG activities with UiT and the chairmanship rotation to Finland and Arkhangelsk Region, we assume that bilateral leadership by NArFU/UoL will benefit the Working Group by means of uniting the efforts and resources as well as using the national and regional chairmanships more strategically.

With the start-up of the new chairmanship period, the JWGER chairs plan to initiate discussion between JWGER members of the new priorities and action points for 2013-2015. Preliminarily, it is planned that the Group will continue strengthening and institutionalizing the JWGER membership, encouraging Barents institutions participation in Horizon 2020 Programme, achieving more synergy with other international cooperation formats and networks (especially Northern Dimension, Arctic Council, EU), enhancing cooperation with other thematic working groups and business community, organizing discussion arenas like conferences, workshops, etc. In the forthcoming stage the universities plan to defines the approaches on designing the Action Plan on Education and Research. Besides, on-going challenges are still to be debated, namely: stronger commitment from the national and regional level; better communication of HE&R as a tool; achieving transparency of HE systems in BEAR, recognition; mitigating misbalance in academic mobility; lack of funding programs covering the whole Barents Region, few bilateral funds; consolidation of research efforts for research-based education in member-institutions.

Reference List:

JWGER web page <u>http://www.beac.st/?DeptID=8557</u> JWGER Mandate <u>https://www.barentsinfo.fi/beac/docs/Mandate_of_the_JWGER_2009.pdf</u> JWGER Action Plan 2011-2013 <u>https://www.barentsinfo.fi/beac/docs/BEACJWGER_ActionPlan_2012-2013.pdf</u> JWGER members contact list <u>https://www.barentsinfo.fi/beac/docs/JWGERmemberscontactlist.pdf</u> JWGER presentation at BRC meeting <u>https://www.barentsinfo.fi/beac/docs/JWGER_Feb14_BRC_Rovaniemi_final.pdf</u>

JWGER activities visualization and dissemination:

http://www.narfu.ru/university/news/27483/ http://www.narfu.ru/university/news/47049/ http://www.narfu.ru/international/news/?ELEMENT_ID=51013 http://www.narfu.ru/university/news/51017/ http://www.narfu.ru/university/news/47514/ http://www.narfu.ru/life/news/main/95870/ http://www.narfu.ru/life/news/main/52999/ http://www.beac.st/events/Joint-Committee-on-Rescue-Cooperation-(JCRC)meeting/3cn33qja/JCRC_Levi_2_3_December_2013_Agenda_final.pdf http://www.northsweden.eu/english/news/barents-university-meeting.aspx http://www.northsweden.eu/english/news/roundtable-in-brussels.aspx www.arcticdialogue.com

Contribution provided by: University in Tromso, University in Nordland, Umea University, Institute of the Industrial Ecology Problems of the North, Kola Science Center, Russian Academy of Sciences (INEP KSC RAS), Ukhta State University, the Swedish University of Agricultural Sciences

Marina Kalinina, JWGER Chair Signature:

Lyubov Zarubina, JWGER Secretary Signature:

Date: January 31, 2014