

Report from the US Forest Service visit to Poland, September 5-11, 2007

Draft

US FS delegation consisted of:

Ann Bartuska, Deputy Chief for Research and Development, WO
Andrzej Bytnerowicz, Senior Scientist, PSW RS, Riverside, CA
Mark Kubiske, Plant Physiologist, Northern RS, Rhinelander, WI
Cindy Miner, Communications and Applications Director, PNW RS, Portland, OR
W. Keith Moser, Research Forester and Team Leader, Northern RS, St. Paul, MN
Borys Tkacz, Forest Health Monitoring Program Manager, WO

1. September 5, 2007 – European Forest Institute meeting

In the morning session Ann Bartuska gave a key-note presentation “Why international cooperation in forest research?”

During lunch, Ann Bartuska and Andrzej Bytnerowicz met with Julius Novotny, General Director of the National Forest Centre in Zvolen, Slovakia. Present at the meeting were: Konstantin von Teuffel (Coordinator of IUFRO 6.06.00), Piotr Paschalis (IUFRO Board Member), Neils E. Koch (IUFRO Vice President for Research), and Risto Paivinen (EFI Director). Julius Novotny invited US FS to research collaboration with his National Forest Centre in the area of climatic change and air pollution effects on forest health and carbon sequestration in the Carpathian Mountain forests. He indicated that his Centre is well supported by the national funds (state forests). Julius Novotny invited Ann Bartuska to visit the National Forest Centre in 2008.

2. September 6, 2007 – 1st day of the IUFRO European Congress “Forests and Forestry in the Context of Rural Development”

In the morning session, Ann Bartuska gave an invited talk “Forests and forestry in the context of rural development – the US perspective”.

During lunch, Ann Bartuska, Borys Tkacz, W. Keith Moser and Andrzej Bytnerowicz met with Dan Aldea, Director of Romsilva (Romanian State Forests), Ovidiu Badea (Team Leader at the Forest Research and Management Institute [ICAS] in Bucharest), and Gheorghe Parnuta (Deputy Director for Research at ICAS). Present at the meeting were also: Piotr Paschalis (IUFRO Board Member), Neils E. Koch (IUFRO Vice President for Research), Fergal Mulloy (University College Dublin, Ireland), and Don K. Lee (IUFRO President). The Romanian delegation invited Ann Bartuska to visit Romania and to take part in the celebration of the 75th Anniversary of ICAS. Romanian scientists and managers would like to continue successful research collaboration with the US FS on air pollution and climate change effects on the Carpathian Mountain forests. The proposed research would focus on forest health, water and carbon resources, and biodiversity from a perspective of the effects of multiple abiotic and biotic stressors.

Romanian scientists have a well-established experience in forest inventory and analysis that would be used for calculation of carbon pools in forest ecosystems. Research could be conducted on the ozone research plots established in Romania in 1997 as well as on the ICP Forests Level I and II monitoring plots. In addition, Romania participates in the ILTER research at three forest locations (Bucegi, Rodna and Retezat National Parks). This may allow for seeking funds from the national Science Foundation (NSF) in the US.

In the afternoon, Andrzej Bytnerowicz co-chaired a session “Forest and Rural Development in the light of Global Change”. During the afternoon poster session, Andrzej Bytnerowicz presented a poster entitled “Air pollution from agricultural/urban areas as a major anthropogenic factor affecting Sierra Nevada forests”.

3. September 7, 2007 – 2st day of the IUFRO European Congress “Forests and Forestry in the Context of Rural Development”

In the morning, members of the US Fs delegation attended parallel session of the IUFRO European Congress. In the afternoon, Ann Bartuska participated as a panelist in a Plenary Session entitled “Future Research Agenda”.

4. September 8, 2007 – field trip to Belchatow Lignite Mine area and Rogow Forest Experimental Station

The Belchatow Lignite Mine is located in Central Poland about 180 km SW of Warsaw. It is one of the largest European lignite mines producing annually 40 million tons of lignite burnt mostly in the nearby power plant. Lignite excavation at such a huge scale causes unfavorable environmental side-effects, such as large-scale destruction of forest and agricultural land, removal of soil down to 280 m depth, compromised water regime in the neighboring area, fugitive dust episodes, and others. In addition, the Belchatow Power Plant emits huge amounts of CO₂ (31.4 million tons/year – largest point source in EU) and SO₂ (140,000 tons/year – 4th largest point source in EU). The participants of the excursion had an opportunity to see the mine, power plant and a forest reclamation area at Mt. Kamiensk. They also got acquainted with various social, environmental and health aspects of life in the neighboring Kleszczow commune. Within the administrative boundaries of the commune most of the Belchatow lignite mine is located. Development of the Kleszczow commune is impressive due to a proactive management of the local administration and funds obtained from the Belchatow mine. The Kleszczow commune has been recently acknowledged as the most prosperous and best managed communes for the entire Poland.

The second part of the field trip was to the Rogow Forest Experimental station which belongs to the Warsaw Agricultural University Department of Forestry. Participants of the excursion saw the arboretum, IUFRO provenance trial for *Abies grandis* and other sylvicultural experiments, as well as the Centre for Nature and Forestry Education. One of the issues discussed with Polish scientists was the susceptibility of North American species planted in Poland to native forest pests.

5. September 10, 2007 – research seminar on future research collaboration between the US Forest Service and Polish forestry scientists.

The US FS delegation (Ann Bartuska, Andrzej Bytnerowicz, Mark Kubiske, W. Keith Moser and Borys Tkacz) and the Polish scientists representing forestry departments of the Warsaw Agricultural University (SGGW), Poznan Agricultural University, and Krakow Agricultural University, as well as the Forest Research Institute in Sekocin and the Institute of Dendrology in Kornik. The meeting was co-chaired by Piotr Paschalis and Andrzej Bytnerowicz. The US delegation presented 4 talks on various aspects of the US FS research: Ann Bartuska on climate change; Mark Kubiske on carbon sequestration; Borys Tkacz on forest health monitoring, and Keith Moser on a scientific approach to forest inventory analysis. The Polish delegates presented an overview of research in their institutions related to forest health monitoring, forest inventory, effects of air pollution, climate change and fires on forest ecosystems (biodiversity, carbon balance, water resources), production of bio-fuels from forest products, remote sensing, socio-economic issues, and others. After the formal presentations, discussion of potential topics for future collaboration took place. It was agreed that the US FS research priorities (change of forest resources from a perspective of multiple stressors acting in changing climatic conditions; better understanding of forest carbon pools under various management strategies addressing changing climate; improvement of forest health and inventory monitoring methodologies; and risk assessments for invasive species) also agree with major objectives of the present and future Polish forestry research. It was emphasized that a geographic area for the future collaborative research has to be defined. It was suggested that Carpathian Mountains could be selected as the area of such future research collaboration. Other Carpathian countries (Romania, Slovakia, Czech Republic and Ukraine) have already expressed their interest in broadening of the 1997 - 2002 international research on air pollution and climate change effects on the Carpathian forests. The new research would take into account multiple factors affecting forest health and productivity (air pollution, climatic factors, fires, insects, management practices) in a context of changing climate and socio-economic sphere.

Consequently, it was suggested that an outline of a collaborative project will be presented in a pre-proposal. It was suggested that a steering committee consisting of Piotr Paschalis, Andrzej Bytnerowicz, Keith Moser, Zbigniew Sierota and Maciej Skorupski will develop such a pre-proposal by October 15, 2007. This document will be distributed among all participants of the meeting for comments and suggestion for changes (responses due November 15, 2007). A full research proposal based on those comments, as well as responses from the Slovak, Romania, Czech and Ukrainian partners will be developed by December 31, 2007. Such proposal will be sent to various European, US and international agencies for funding considerations.

September 24, 2007

Andrzej Bytnerowicz