

# **International Workshop: NATO/CCMS Pilot Study Pilot Study on the Use of Landscape Sciences for Environmental Assessment**

**St. Petersburg, Russia, 3-6 July 2006**

**Research Center for Interdisciplinary Environmental Cooperation,  
Russian Academy of Sciences**

## **Summary Report**

The final NATO/CCMS Landscape Sciences Pilot Study meeting was held in St. Petersburg, Russia according to the project goals and meeting agenda as listed on <http://www.nato.int/ccms/pilot-studies/lsea/lsea-index.htm>. The workshop was organized in conjunction with the INENCO Center of the Russian Academy of Sciences and included forty participants from 15 countries (11 NATO members and 4 Euro-Atlantic Partnership Countries).

The agenda was organized around the following topics:

### **1. Special Presentations on Landscape and Human Ecology, Russian Academy of Sciences members**

The NATO/CCMS Pilot Study participants were treated to a special session which focused on landscape science applications related to landscape theory, methodology, and the implementation of advanced technologies for landscape analyses specific to various geographies within Russia.

### **2. Research Results from the Pilot Study National Participants**

A total of 26 principal investigators from 15 countries presented their final research results related to their contributions to the NATO/CCMS Landscape Sciences Pilot Study.

### **3. NATO/CCMS Pilot Study Final Reports**

The emphasis of the St. Petersburg meeting was the development of both the *final summary* and *full technical* reports:

The official *Summary Report* will be coordinated by William Kepner and will consist of the following parts: (a) date of the study's

establishment, (b) stated objectives, (c) names of countries which participated, (d) historical résumé of the study's progress, to include highlights and any aspects which receive particular attention, (e) list of reports already issued, (f) information concerning publication of the full report, (g) conclusions, and (h) recommendations.

Recommendations will be solicited from the entire Pilot Study group of national participants. It has been proposed that the summary report will be sent to the CCMS Secretariat and that an oral presentation on the conclusions of the pilot study project will be presented to the CCMS National Representatives at their next scheduled Plenary Meeting in the fall of 2006.

The *Full Technical Report* will be published as a scientific book. The title is "Use of Landscape Sciences for the Assessment of Environmental Security" and it will be published under the NATO Security through Science Series using Springer Publications (The Netherlands). The book will contain contributions from the participating Pilot Study members and will also include selected invited papers. The editorial board consists of the following persons (in alphabetical order): B. Jones (US), W. Kepner (US), K. Krauze (Poland), F. Müller (Germany), I. Petrosillio (Italy), S. Victorov (Russia), and G. Zurlini (Italy). The book structure includes the following items:

- Introduction
- Environmental Security and Landscape Science
- Landscape Science Methodologies to Assess Environmental Security
- Landscape Indicators and Landscape Change Detection
- Integrated Landscape Studies of Catchments and Basins
- Assessments of Human-Environmental Systems in Landscapes
- Environmental Applications of Landscape Ecological Methods-Impact Assessments
- Synthesis- Integration and Perspectives
  - Landscape Ecological Methodology for the Assessment of Environmental Security
  - Demographic Change and Landscape Assessment-Using a Case Study to Evaluate the Potential of Landscape Ecology

- Security Items in the Future Development of Landscape Ecology
  - Concluding Remarks and Recommendations
  - Appendices

The full technical report is anticipated for completion in December 2006 and published in 2007.

#### **4. Potential for Future Cooperation and Projects**

The NATO/CCMS Landscape Sciences Pilot Study group discussed the possibility for future cooperation and projects as a continuation of the NATO Security Through Science (STS) Programme. The Landscape Sciences Pilot Study group sees itself as a unique network for using a science framework for environmental cooperation that has enjoyed great success in working together for six years. The Pilot Study group recognizes that NATO is currently restructuring to merge the STS and Environment and Society (CCMS) programmes into a single new committee and programme (i.e., Science for Peace and Security). All participants expressed their interest in developing more focused projects which might continue their collaboration together. In particular, the group is interested in priority research topics associated with scientific collaboration to counter threats to security, i.e. environmental security, water resource management, and human and social dynamics.

#### **4. Acknowledgements**

The NATO/CCMS Landscape Sciences Pilot Study Co-directors wish to express their sincere thanks to Dr. Gennady Menzhulin and all of his associates at the Research Center for Interdisciplinary Environmental Cooperation (Russian Academy of Sciences, St. Petersburg) for their efforts in organizing the 2006 final meeting and making it a great success. Further, we appreciate the genuine hospitality that was expressed to all the pilot study participants and we look forward to revisiting our friends and colleagues in St. Petersburg and collaborating with them again in the future.



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### **List of Participants**

- |                         |   |
|-------------------------|---|
| 1. Burkhard Benjamin    | University of Kiel, Germany                     |
| 2. Fjellstad Wendy      | Forest and Landscape Institute, Norway          |
| 3. Jones Kenneth Bruce  | U.S. Geological Survey, USA                     |
| 4. Haines-Young Roy     | University of Nottingham, UK                    |
| 5. Kepner William G.    | U.S. Environmental Protection Agency, USA       |
| 6. Knight C. Gregory    | Pennsylvania State University, USA              |
| 7. Kondratyev Sergey    | Institute of Limnology, Russia                  |
| 8. Krauze Kinga         | International Centre for Ecology of PAS, Poland |
| 9. Kumpula Timo         | University of Joensuu, Finland                  |
| 10. Kuvaldin Edvard     | Vavilov State Institute of Optics, Russia       |
| 11. Kuznetsov Volodymir | Institute of Ecological Problems, Ukraine       |
| 12. Laganovska Ance     | Ventspils University College, Latvia            |
| 13. Lazarescu Mihaela   | Institute for Environmental Protection, Romania |
| 14. Lenz Roman          | University of Applied Sciences, Germany         |
| 15. Li Bai-Lian         | University of California at Riverside, USA      |
| 16. Malkina-Pykh Irina  | INENCO Center of RAS, Russia                    |
| 17. Menzhulin Gennady   | INENCO Center of RAS, Russia                    |

18. Mueller Felix  
University of Kiel, Germany
19. Nedkov Stoyan  
Institute of Geography (BAS), Bulgaria
20. Nikolova Mariyana Kostadinova  
Institute of Geography (BAS), Bulgaria
21. Nurlu Engin  
Ege University, Turkey
22. Peterson Gleb  
INENCO Center of RAS, Russia
23. Petrosillo Irene  
University of Lecce, Italy
24. Potschin Marion  
University of Nottingham, UK
25. Pykh Yury  
INENCO Center of RAS, Russia
26. Sabbagh Jamill  
Institute for Regional Management, Germany
27. Savvateyev Sergey  
SPb University, Russia
28. Scotto di Tella Federica  
University of Lecce, Italy
29. Sopadze Gia  
Tbilisi State University, Georgia
30. Seppelt Ralf  
Centre for Environmental Research, Germany
31. Sogachev Andrey  
Helsinki University, Finland
32. Staneva Marieta  
NGO "SAFE", Bulgaria
33. Surin Vladimir  
INENCO Center of RAS, Russia
34. Swiaczny Frank  
Federal Institute for Population Research, Germany
35. Swiatek Anna  
Space Research Centre of PAS, Poland
36. Tiknius Algimantas  
Klaipėda University, Lithuania
37. Viktorov Sergey  
Institute of Space and Aerological Methods, Russia
38. Zagars Juris  
Ventspils University College, Latvia
39. Zaccarelli Nicola  
University of Lecce, Italy
40. Zurlini Giovanni  
University of Lecce, Italy