

Work package 21.000 Progress Report **March 2004 – February 2005** **List of Attachments**

All presentations that have been presented at the three AFES-PRESS GMOSS workshops during 2004 have been posted to the internet and may be downloaded at:

http://www.afes-press.de/html/download_gmooss.html

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Part 1: AFES-PRESS GMOSS workshops and scientific presentations (11 pages)

Attachment 1: Programme of First AFES-PRESS GMOSS workshop

**Friday, 19 March 2004, 8.30-10.15, Kafka Room [A13]
Reconceptualising Security I: Environmental Security**

Sponsor: Environmental Studies and International Security Studies

Chair: Hans Günter Brauch, Free University Berlin, AFES-PRESS, EU network of excellence (GMOSS):
[Introduction: EU-Network of excellence on security: Global Monitoring for Stability and Security \(GMOSS\) - AFES-PRESS contribution on Reconceptualising of security](#)

Speaker 1: Hans Günter Brauch (Free University of Berlin; AFES-PRESS & GMOSS):
[Reconceptualising Security: A Contribution to the Fourth Phase of Research on Human and Environmental Security and Peace \(HESP\)](#)

Speaker 2: Czeslaw Mesjasz (Krakow, Poland; GMOSS member):
[Security as Property of Social Systems](#)

Speaker 3: Ola Dahlman (Stockholm, Sweden; GMOSS member):
[Trust and Confidence as Basis for Security](#)

Speaker 4: Mohammad El-Sayed Selim (Cairo, Egypt; GMOSS partner):
[The Concept of Environmental Security in the Arab World](#)

Speaker 5: Richard Matthew (UCI, GECHS):
[Global Environmental Change and Human Security: Research on Social Vulnerability and Conflict](#)

Discussant: Ho-won Jeong (George Mason, USA)

**Friday, 19 March 2004, 10.30-12.15, Kafka Room [B09]
Reconceptualising Security II: Human Security**

Sponsor: International Security Studies and Peace Studies

Chair: Hans Günter Brauch, Free University Berlin, AFES-PRESS, GMOSS

Speaker 6: P. H. Liotta (US Naval War College, USA):
[An Uncertain Trinity: Ethics, Interests, and Human Security](#)
[Powerpoint presentation](#)

Speaker 7: Béchir Chourou (University of Tunis, Tunisia; GMOSS partner):
[The Concept of Human Security in the Arab World](#)

Speaker 8: Fabien Nathan (University of Geneva, Geneva; GMOSS):
[Disaster and Human Security](#)

Speaker 9: Ingemar Dorfer (FOI, Sweden; GMOSS member):
[Old and New Security Threats to Europe](#)

Speaker 10: Rhona Leibel (Metropolitan State University, Minneapolis, USA):
[Security is Now the Sturdy Child of Terror: Research After September 11](#)

Discussant: Jürgen Dedring (New York University)
Julie Harrelson-Stephens (University of Texas, Dallas)

Attachment 2: Programme of Second AFES-PRESS GMOSS workshop

Tuesday, 6 July

Session 1: Tuesday, 6 July 2004 14:00 - 15:30

Water and Security [EU Network of Excellence GMOSS]

Joint Session of the Commissions on Environment, Security and Global Political Economy

Chair: Czeslaw Mesjasz (Poland), co-editor of the book on Reconceptualising Security [GMOSS]

[Introduction: Hans Günter Brauch \(Germany\): Global Monitoring for Stability & Security \(GMOSS\) - Contributing to GMES](#) [GMOSS, chief book editor]

[Paper 1: Annabelle Houdret \(Germany\), Free University of Berlin & Paris VIII: Water scarcity and conflict - a matter of institutional sustainability](#) [GMOSS, book contributor].

[Paper 2: Fabien Nathan \(France\), Graduate Institute of Development Studies \(IUED\) and NCCR-NS/IP8, Geneva: Urban water-related risks as a growing concern for security](#) [GMOSS, book contributor].

[Paper 3: Mara Tignino \(Italy\), Graduate Institute of International Studies, Geneva: The legal response to the world's water crisis](#) [GMOSS, book contributor].

[Paper 4: Ursula Oswald \(Mexico\), National University, Mexico: Water and its security in semi-arid environment](#) [book co-editor].

[Discussant: Hans Günter Brauch](#) [GMOSS, lead editor of the book on reconceptualising security]

Session 2: Tuesday, 6 July 2004 16:00 - 17:30

Survival Dilemma, Economic Security and Alternative Security Strategies [EU Network of Excellence GMOSS]

Joint Session of the Commissions on Environment, Security and Disarmament and Global Political Economy

Chairs: Wayne Reynolds (Australia), chair of the Security Commission

[Introduction: Hans Günter Brauch \(Germany\): From Sussex \(1986\) to Sopron \(2004\): 18 years of the Security and Disarmament Commission - Towards new goals](#) [GMOSS, book lead editor]

[Paper 5: Hans Guenter Brauch \(Germany\): From a Hobbessian Security to a Grotian Survival Dilemma](#) [GMOSS, book lead editor]

[Paper 6: Czeslaw Mesjasz \(Poland\): Economic Security](#) [GMOSS, book co-editor].

[Paper 7: John Garofano \(USA\): Alternative Security Strategies](#) [USNWC, book contributor]

Discussants: Ursula Oswald (Mexico), co-chair of the Environment Commission and book-coeditor; Caroline Higgins (USA), Political Economy Commission

Friday, 9 July 2004

Final Plenary Meeting on Environment, Development and Peace

CHAIR: Bernadette Methuin, South Africa

SPEAKERS/PANELLISTS:

Ursula Oswald, Mexico: Water and Peace

[Hans Guenter Brauch, Germany: Global Environmental and Climate Change and Conflicts: Towards a Peace Research Agenda for Environmental Conflict Avoidance in the 21st Century](#)

Jean Kamau, Kenya: Ecofeminism in Africa

Attachment 3: Programme of Third AFES-PRESS GMOSS workshop

Third AFES-PRESS GMOSS Workshop on Reconceptualising Security in an Era of Globalisation

Final Programme Version

Opening Session

**Wednesday, 8 September 2004, 17.00 -18.00
Special Tour of the Peace Palace, The Hague**



Wednesday, 8 September 2004, 18.30 - 19.15

Reception

Hosted by Institute for Environmental Security, The Hague

Wouter Veening, Director, Institute for Environmental Security

**Goals and Work of the Institute for Environmental Security,
The Hague - Brussels - Washington**

Opening Session at the same venue, 19.15-20.15

Co-Chair: [Hans Günter Brauch](#), Free University of Berlin, [John Grin](#), University of Amsterdam and [Czeslaw Mesjasz](#), Economic University of Cracow

- **Prof. Dr. John Grin**, University of Amsterdam: Welcome to the Workshop
- **PD Dr. Hans Günter Brauch**, Free University of Berlin: [The Three Worldviews of Hobbes, Grotius and Kant: Foundations of Modern Thinking on Peace and Security - Contextual Change and Reconceptualisation of Security](#)
- **Prof. Ursula Oswald**, UNAM/CRIM, former minister of environment, Morelos, Mexico, former president of the International Peace Research Association (IPRA): [Peace, environment and security: A gender perspective from the Third World - IPRA 40 years after Groningen](#)
- **Prof. Dr. Peter H. Liotta**, Executive Director of the Pell Center for International Relations and Public Policy, Newport, R. I., USA: A poem on Hugo Grotius and the perennial theme of war and peace

Wednesday, 8 September 2004, 20.30 - 23.00

Opening dinner for speakers, discussants and other invited guests at a restaurant to be announced hosted by NATO

Thursday, 9 September 2004

14:00-15:30: Panel 1: Towards Reconceptualising Security

Chair: [Ursula Oswald](#), former President of IPRA, Univ. of Mexico, UNAM, CRIM, Mexico

[Hans Günter Brauch](#), Free University of Berlin, Germany: [Introduction: Global Monitoring for Stability & Security \(GMOSS\) Contributing to GMES](#)

Paper 1: [Hans Günter Brauch](#), Free University of Berlin, Germany: [Conceptual quartet: Security linkages with peace, development and environment](#)

Paper 2: [John Grin](#), University of Amsterdam, The Netherlands: Security and (late) modernity

Paper 3: [Czeslaw Mesjasz](#), Economic University of Cracow, Poland: [Security as an Analytical Concept](#)

Discussant: [Navnita Behera Chadha](#), Univ. of Delhi, India

15:45-17:15: Panel 2: Political and Energy Security in the MENA

Chair: [Bechir Chourou](#), University of Carthage, Tunisia

Paper 4: [Alberto Bin](#), Political Affairs and Security Policy Division, Head, Regional Affairs and Mediterranean Dialogue: NATO's Role in the Mediterranean and the Middle East after the Istanbul Summit

Paper 5: [Abdullah Sahar Mohammad](#), Kuwait: Energy Security: A political and economic security perspective from the Arab world

Paper 6: [Selim Kapur](#), Univ. of Cukurova, Faculty of Agriculture, Dept. of Social Science, Adana: [Energy, water and food security: Security relevance of the Eastern Anatolia project](#), [Abstract](#)

Discussant: [Hans Günter Brauch](#), Free University of Berlin, Germany

17:30-19:00: Panel 3: Human Security in the MENA

Chair: [Hans Guenter Brauch](#), Free University of Berlin, Germany:

Paper 7: [Tobias Debiel](#), Executive Director, Institute for Development and Peace, Univ. of Duisburg, Germany: [Extended vs. Human Security: The Need for an Integrated Security Concept for Development, Foreign, and Security Policy](#)

Paper 8: [Bassam Hayek](#), Director, Environmental Research Center. Royal Scientific Society, Amman, Jordan: [Environmental, water or food security in the Arab world with a focus on Jordan](#)

Paper 9: [Bechir Chourou](#) (Tunisia): Human security in the Maghreb

Discussant: Larry Swatuk (Canada), University of Gaberone, Botswana

19:15 - 20:15: Second Evening Session with three presentations, Contributions of Remote Sensing to Security Research

Chair: [Hans Günter Brauch](#), Free University of Berlin, Germany

Paper 10: [Niels Wielaard](#), Sar Vision, Wageningen: Space Agencies and Remote Sensing Monitoring Systems

Paper 11: [Philippe Steeghs](#), TNO, The Hague: Space-based remote sensing Applications for non-military security issues

Paper 12: [Iain Shepherd](#), JRC, GMOSS Science Coordinator: [GMOSS and GMES: Application of remote sensing for security decision-making in the wider European Union](#)

20:30 - 23:00 Dinner for invited guests only hosted by
NATO and AFES-PRESS GMOSS

Friday, 10 September 2004

9:00-10:30: Panel 4: Environmental and Human Security in Israel and Palestine: Three Perspectives

Chair: [Ursula Oswald](#), former President of IPRA, UNAM, CRIM, Mexico

Paper 13: [David Newman](#), Ben Gurion University of the Negev, Department of Politics and Government, Israel: [Conceptualisation of and Debate on Environmental and Human Security in Israel](#)

Paper 14: [Mohammed Dajani](#), Director, American Studies Institute, Al Quds University, Jerusalem: Concepts of Environmental and Human Security in Palestine

Paper 15: [Robin Twite](#), IPCRI, Jerusalem: [Environmental and Human Security Issues in Israel and Palestine](#)

Discussant: [John Grin](#), University of Amsterdam, The Netherlands

10:45-12:15: Panel 5: Environmental and Human Security Issues in North Africa and in Latin America

Chair: [Navnita Behera Chadha](#), Univ. of Delhi, India

Paper 16: [Ghazi Ali](#), Environment Ministry, Algiers. Algeria: [Desertification as an environmental and human security challenge in the Sahara region \(in french\)](#), [Abstract](#)

Paper 17: [Ursula Oswald](#), Univ. of Mexico, UNAM, CRIM, Mexico: [Human Security in Latin America with special emphasis in Mexico](#)

Discussant: [Hans Günter Brauch](#), Free University of Berlin, Germany

13:45-15:15: Panel 6: Water and Food Security in Sub-Sahara Africa

Chair: [Peter H. Liotta](#), Executive Director, Pell Center for International Relations and Public Policy, Newport, R. I., USA

Paper 18: [Emad Adly](#), General Coordinator, Arab Network for Environment and Development, Egypt: [Water and food security in the River Nile Basin: The perspectives of governments and NGOS in the major downstream country Egypt](#)

Paper 19: [Larry Swatuk](#) (Canada), University of Botswana, Gaborone, Botswana: [Environmental Security in Practice: Transboundary natural resources management](#)

Discussant: [Ursula Oswald Spring](#), Univ. of Mexico, UNAM, CRIM, Mexico

15:30-17:00: Panel 7: Environmental Security in Africa, Central Asia and Latin America

Chair: [Bechir Chourou](#), University of Carthage, Tunisia

Paper 20: [Navnita Behera Chadha](#), Univ. of Delhi, India: [Security in the New Millennium: A South Asian Debate or Peace and Security: An Alternative Formulation in the Post-Cold War Era](#)

Paper 21: [Zarina Othman](#), Program of Strategic Studies and International Relations, Universiti Kebangsaan Malaysia: [Human Security Concepts, Approaches and Debates in Southeast Asia](#), [Abstract](#); [Presentation](#)

Paper 22: Eva Rakel, Humboldt University Berlin: [Environmental security debates in Eastern Europe and Central](#)

[Asia: Emerging debates in the OSCE/UNEP/UNDP context](#)

Discussant: [Czeslaw Mesjasz](#), Economic University of Cracow, Poland

17:15-18:45: Panel 8: Water and Security Linkages

Chair: [John Grin](#), University of Amsterdam

Paper 23: [Annabelle Houdret](#), Free University of Berlin & Paris VIII: [Water as a security concern: Conflict or Cooperation?](#)

Paper 24: [Fabien Nathan](#), Graduate Institute of Development Studies (IUED) and NCCR-NS/IP8, Geneva: [Water-related natural disasters as insecurity](#)

Paper 25: [Mara Tignino](#), Graduate Institute of International Studies, Geneva: [Reflections on the Legal Regime of Water during Armed Conflicts](#)

Discussant: [David Newman](#), Ben Gurion Univ., Israel

Third Evening Event, Friday, 10 September 2004

20.00 pm - 23.00

Farewell Buffet Dinner for all Speakers hosted by NATO

Keynote After Dinner Speech

Chair: Dr. Navnita Behera-Chadha, Delhi University, India

PD Dr. Hans Günter Brauch, Free University of Berlin and AFES-PRESS: [Introducing the book project, especially of part II on philosophical, ethical and religious contexts \(10-15 minutes\)](#)

Prof. Dr. Hassan Hanafi, Director, Department of Philosophy, University of Cairo, Egypt: Security Conceptualisation in Arab Philosophy and Ethics & Muslim Perspectives

Saturday, 11 September 2004

9:30-11:00: Panel 9: Nordic Theoretical Perspectives on Security

Chair: [Hans Günter Brauch](#), Free University of Berlin, Germany

Paper 26: [Magnus Ekengren](#), Stockholm: ['Functional' security in Wider Europe - towards a framework for analysis of the European Security and Defence Policy, Abstract](#)

Paper 27: [Ole Jacob Sending](#), NUPI, Norway: [The Security-Development Nexus, Abstract](#)

Paper 28: [Peter Liotta](#), Director, Pell Center, Newport, R. I., USA: Alternative Security Futures

Discussant: [Czeslaw Mesjasz](#), Economic University of Cracow, Poland

11:30-13:00: Panel 10: Alternative Security Futures and Terrorism

Chair: [Hans Günter Brauch](#), Free University of Berlin, Germany

Paper 29: [Gunhild Hoogensen](#), University of Tromsø, Norway: [Non-state actors as referents: terrorist networks](#)

Paper 30: [Pablo Pareva Alcaraz](#), Barcelona and Georgetown University, Washington, DC: Counter-Terrorist Strategies in Southeast Asia: Risks and Lessons, [Abstract](#)

Paper 31: [Mohammed Dajani](#), Director, American Studies Institute, Al Quds University, Jerusalem: The big Dreams and the Small Hope for Peace in the Middle East

Discussant: [John Grin](#), University of Amsterdam, The Netherlands

Attachment 4: Google Search of GMOSS Workshops, 8 February 2005

- [\[PDF\] 3rd AFES-PRESS GMOSS Workshop, 9 Sept. 2004](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
Page 1. 3rd AFES-PRESS **GMOSS Workshop**, 9 Sept. 2004 ... Page 2. Third AFES-PRESS **GMOSS Workshop** The Hague, The Netherlands, 8-11 September 2004 within the ...
www.afes-press.de/pdf/Hague/Brauch_Introduction_03.08.pdf - [Similar pages](#)
- [\[PDF\] 2nd AFES-PRESS GMOSS Workshop, 9 July 2004 http://www.afes-press. ...](#) File
Format: PDF/Adobe Acrobat - [View as HTML](#)
Page 1. 2nd AFES-PRESS **GMOSS Workshop**, 9 July 2004 <http://www.afes-press.de/html/download.html> Page 2. 40 th Anniversary Conference of IPRA ... www.afes-press.de/pdf/Brauch_Sopron_Plenary.pdf - [Similar pages](#) [[More results from www.afes-press.de](#)]
- [\[PDF\] Report on GMOSS Workshop "Change Detection for Security ...](#)
File Format: PDF/Adobe Acrobat - [View as HTML](#)
Page 1. Report on **GMOSS Workshop** "Change Detection for Security Applications"
GMOSS – Working Group 20300 Oberpfaffenhofen, Germany ...
www.sic.rma.ac.be/gmooss/ChangeDetection/GMOSSWorkshop-Discussion.pdf - [Similar pages](#)
- [GMOSS Workshop Participants](#)
GMOSS. Data Integration and Visualization WP 20200. **Workshop** Meeting at EUSC (31 st Jan - 01 st Feb 2005). Meeting Agenda. Monday 31 st Jan 2005. ...
www.sic.rma.ac.be/gmooss/DataVisualisation/Torrejon/agenda.htm - 3k - 7 Feb 2005 - [Cached](#) - [Similar pages](#) [[More results from www.sic.rma.ac.be](#)]
- [next months](#)
... in Istanbul ST, JT Preparation of integration effort (joint **GMOSS work-shop** in Istanbul at WISC) Progress Report on third AFES-PRESS **GMOSS workshop** in The ...
gmooss.jrc.cec.eu.int/meetings/rma/nextmonths.html - 14k - [Cached](#) - [Similar pages](#)

Attachment 5: Other Talks of HG Brauch on Reconceptualising of Security

[See complete list at: http://www.afes-press.de/html/download_hgb.html]

Keynote Addresses and Presentations by Hans Günter Brauch

October 2004

- **Hans Günter Brauch: Impact of Global Warming and Non-Conventional Water Resources: Potential of solar thermal desalination to defuse water as a conflict issue - A conceptual contribution to conflict resolution and long-term conflict avoidance**, [Scientific Paper](#) and [Powerpoint Presentation](#) at the Second International Israeli Palestinian Conference: Water for Life in the Middle East, 10th - 14th October 2004, Porto Bello Hotel, Antalya, Turkey.
[Website of Organisers](#)
[Conference Programme](#)
Conference Abstracts
[IPCRI](#)
[Final Statement](#)

September 2004

- [Hans Günter Brauch: Introducing the book project, especially of part II on philosophical, ethical and religious contexts](#), Introduction of Keynote Speaker at the Third AFES-PRESS-GMOSS workshop, 5th Pan-European Conference on International Relations, The Hague, The Netherlands, 10 September 2004.
- [Hans Günter Brauch: Conceptual quartet: Security linkages with peace, development and environment](#), Presentation at the Third AFES-PRESS-GMOSS workshop, 5th Pan-European Conference on International Relations, The Hague, The Netherlands, 9 September 2004.
- [Hans Günter Brauch: Introduction: Global Monitoring for Stability & Security \(GMOSS\) Contributing to GMES](#), Third AFES-PRESS-GMOSS workshop, 5th Pan-European Conference on International Relations, The Hague, The Netherlands, 9 September 2004.
- [Hans Günter Brauch: The Three Worldviews of Hobbes, Grotius and Kant: Foundations of Modern Thinking on Peace and Security - Contextual Change and Reconceptualisation of Security](#), Opening speech at the Third AFES-PRESS-GMOSS workshop, 5th Pan-European Conference on International Relations, The Hague, The Netherlands, 8 September 2004.
- [Hans Günter Brauch: Landscape Ecology and Environmental Security, Threats, Challenges, Vulnerabilities and Risks - Common and Differentiated Trends in the Mediterranean During the 21st Century](#), Keynote speech at the NATO CCMS Pilot Study, Use of Landscape Sciences for Environmental Assessment, Pilot Study Meeting at Lecce (Italy), 5-9 September 2004, [Linkages among Landscape Assessment, Quality of Life and Environmental Security](#).
- **Hans Günter Brauch: "Climate Change and Long-term Impacts in the Mediterranean Region. Environmental Security, Conflicts and Conflict Avoidance"**, [Speech in Session VII: Commitments, Mechanisms and Political Challenge of UNFCCC](#), Ankara Climate Change Conference, 1-3 September 2004, The Republic of Turkey, Ministry of Environment and Forestry, UNDP.

July 2004

- [Hans Günter Brauch: Global Monitoring for Stability & Security \(GMOSS\) Contributing to GMES, Book Project: Reconceptualising Security](#), 40th Anniversary Conference of IPRA, Peace and Conflict in a Time of Globalisation, Sopron, Hungary, 5-9 July 2004, 6 July 2004, 14:00 - 15:30: Water and Security, Joint Session of the IPRA Commissions on Environment, Security and Global Political Economy
- [Hans Günter Brauch: From Sussex to Sopron IPRA Security Commission: \(1986-2004\)](#), 40th Anniversary Conference of IPRA, Peace and Conflict in a Time of Globalisation, Sopron, Hungary, 5-9 July 2004, 6 July 2004, 16:00 - 17:30: Reconceptualising Security, Survival Dilemma and Alternative Security Strategies, Joint Session of the Commissions on Environment, Security and Global Political Economy
- [Hans Günter Brauch: From a Hobbesian Security to a Grotian Survival Dilemma](#), 40th Anniversary Conference of IPRA, Peace and Conflict in a Time of Globalisation, Sopron, Hungary, 5-9 July 2004, 6 July 2004, 16:00 - 17:30: Reconceptualising Security, Survival Dilemma and Alternative

Security Strategies, Joint Session of the Commissions on Environment, Security and Global Political Economy

- **Hans Günter Brauch: [Global Environmental and Climate Change and Conflicts: Towards a Peace Research Agenda for Environmental Conflict Avoidance in the 21st Century](#)**, 40th Anniversary Conference of IPRA, Peace and Conflict in a Time of Globalisation, Sopron, Hungary, 5-9 July 2004, Friday, 9 July 2004, 11:00 - 12:30 Plenary: Peace and Ecology

May 2004

- **Hans Günter Brauch: ["Global Change and Environmental Conflict Avoidance Towards a Research and Policy Agenda"](#)**, [The Hague Conference on Environment, Security and Sustainable Development](#), 9-12 May 2004, The Peace Palace, The Hague, Netherlands.

For more information; see [programme overview](#), [detailed programme](#), [other conference papers](#), and [background material](#).

March 2004

Four talks in Washington, D.C., USA

- **Hans Günter Brauch: ["Climate Change, Natural Disasters and Conflicts in the Mediterranean"](#)**, Global Disaster Information Network, [GDIN Conference 2004](#), Washington, D.C., 26-29 March 2004, U.S. Department of State and Hilton Hotel, Alexandria, SESSION 23c: Regional Cooperation - A comparative View, Latin America, the Caribbean, Europe and the Mediterranean, Saturday, 27 March, 3.45-6.00 pm.

[Abrupt Climate Change Workshop, Paris, 30 September- 1 October](#) [Draft papers](#) [Working Papers Library](#)

- **Hans Günter Brauch: [Abrupt Climate Change and Conflicts: Security Implications from a European Perspective - Hobbesian vs. Grotian Analyses](#)**, Talk & discussion organized by the Washington Office of the [Friedrich Ebert Foundation](#), 29 March 2004, 12-2pm, Carnegie Endowment for International Peace, The Choate Room, 1779 Massachusetts Avenue, NW, Washington, DC. ([Invitation text](#))
- [Background information by the PEW Center](#) on the film: The Day After Tomorrow: Could it Really Happen?
- On the Scientific basis: [U.S. National Research Council's Report in Brief on Abrupt Climate Change](#); and on the [book](#)
- The Study by Randall and Schwartz for the Pentagon on: "[An Abrupt Climate Change Scenario and Its Implications for United States National Security](#),"
- For the report by Hans Günter Brauch: [Climate Change and Conflicts](#)
- **Hans Günter Brauch: [Book Presentation: Security and Environment in the Mediterranean - Conceptualisation Security and Environmental Conflicts](#)** hosted by [the Henry Stimson Center](#), Washington, DC, 30 March 2004, 2-4 pm
- **Hans Günter Brauch: [Security and Environment in the Mediterranean. Long-term Human and Environmental Security Challenges for the Eastern Mediterranean during the 21st Century](#)** at the Woodrow Wilson International Center for Scholars, [Environmental Change and Security Project](#) Washington, D.C, 31 March, 10-11.30, [Event Summary by](#) Shannon Green and Meaghan Parker

Montreal, Canada, ISA Conference, 17-20 March

Friday, 19 March 2004, Reconceptualising Security I: Environmental Security

Chair: Hans Günter Brauch, Free University Berlin, AFES-PRESS, GMOSS:

[Introduction: EU-Network of excellence on security: Global Monitoring for Stability and Security \(GMOSS\) - AFES-PRESS contribution on Reconceptualising of security](#)

Speaker 1: Hans Günter Brauch (Free University of Berlin; AFES-PRESS & GMOSS):

[Reconceptualising Security: A Contribution to the Fourth Phase of Research on Human and Environmental Security and Peace \(HESP\)](#)

[Additional nine papers by other speakers](#)

Part II: AFES-PRESS GMOSS products: 2 books and editorial team (10 pages)

Hans Günter Brauch, John Grin, Czeslaw Mesjasz, Pal Dunay, Navnita Chadha Behera, Béchir Chourou, Ursula Oswald Spring, P. H. Liotta, Patricia Kameri-Mbote (Eds.):

Globalisation and Environmental Challenges: Reconceptualising Security in the 21st Century

(Berlin – Heidelberg – New York – Hong Kong – London – Milan – Paris – Tokyo:
Springer-Verlag, October 2006)

P.H. Liotta: Hugo Grotius and the perennial theme of war and peace (poem)

Forewords by global political leaders

High level UNO official (to be invited)

High level NATO official (invited)

High level EU official (invited)

Preface Essays

- **Ursula Oswald**, former minister of environment, Morelos, Mexico and former president of the International Peace Research Association (IPRA): Peace, environment, development and security: A gender perspective from the Third World – IPRA 40 years after Groningen
- **Amb. Jonathan Dean**, Union of Concerned Scientists, USA: Rethinking of Security: A Grotian perspective for a new transatlantic consensus

I. Introduction: Theoretical Contexts for Security Reconceptualisations since 1990

Chap. 1: **H.G. Brauch**: Introduction: structure of the book and key topics (revised goal paper)

Chap. 2: **C. Mesjasz, Poland**: Security as a property of social systems

Chap. 3: **J. Grin, Netherlands**: Security and (late) modernity

II. The Conceptual Quartet: Security, Peace, Development and Environment and its Dyadic Linkages

Chap. 4: **H.G. Brauch, Germany**: The conceptual quartet: Survey of the emergence of the security concept since 1789 and of its conceptual linkages with peace, development and environment since 1989

Chap. 5: **Katsua Kodama, Japan**: The classical peace and security linkages revisited (UN Charter)

Chap. 6: **Ursula Oswald, Mexico**: Peace and environment – its relevance for security: A gender perspective from the Third World

Chap. 7: **I. de Soysa, Sri Lanka, Norway**: Peace and development linkages

Chap. 8: **Pekka Haavisto, UNEP, Chairman, Post-Conflict assessment Unit, former minister of Environment and development, Finland**: Development and environment linkages: Concept of sustainable development

Chap. 9: **Ole Jacob Sending et al., Norway**: The Security and Development Nexus

Chap. 10: **Simon Dalby, Ireland, Canada**: Security and environment linkages revisited

III. Philosophical, Ethical and Religious Contexts for Conceptualisations of Security

Chap. 11: **Michael von Brück**, University of Munich: Security in Buddhism and Hinduism

Chap. 12: **Kurt W. Radtke**, Waseda University, Tokyo: Security in Chinese, Korean and Japanese philosophy and ethics

Chap. 13: **Wenchao Li**, TU and FU Berlin: Security in Confucianism and in Chinese philosophy and ethics

- Chap. 14: **Mitsuo and Tamayo Okamoto**, Shudo University, Hiroshima: Security in Japanese philosophy and ethics
- Chap. 15: **Anibha Gupta**, Wuppertal: Recontextualisation and Reconceptualisation of the fourfold values of life (Purusartha) in ancient Indian thought and their relevance for the reconceptualisation of security for the 21st century
- Chap. 16: **Naresh Dadhich**, Rajasthan Univ., Hon. Sec., Jaipur Peace Foundation, Editor, Gandhi & Peace Studies: Thinking on security in contemporary political philosophy and ethics in India
- Chap. 17: **Robert Eisen**, USA: Security in Jewish philosophy and ethics
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Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts

(Berlin – Heidelberg – New York – Hong Kong – London – Milan – Paris – Tokyo:
Springer-Verlag, March 2007)

Forewords by global political leaders

Secretary General of UNEP, Klaus Töpfer (confirmed)
High level NATO official (invited)
High level EU official (invited)

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- **R. Pachauri**, India, Chairman of the IPCC (confirmed)
- **Salvano Bricenio**, Venezuela, Director UN Strategy for Disaster Reduction (confirmed)

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- List of abbreviations
- Combined bibliography for all chapters of the book
- On the authors of forewords and prefaces, on the editors and contributors
- Detailed index Hexagon Series

On the Editors

- **Hans Günter Brauch** (Germany) is Privatdozent at the Free University of Berlin and chairman of AFES-PRESS. He was guest professor at the universities of Frankfurt on Main, Leipzig and Greifswald. He has published widely in English and German (with translations in eight languages) on security, climate, energy and on Mediterranean issues.
- **Navnita Chadha Behera** (India) is a Reader at Department of Political Science, Delhi University, India. She is the author of *State, Identity and Violence: Jammu, Kashmir and Ladakh* (2000); *State, People and Security: The South Asian Context* (Editor, 2001); *Perspectives on South Asia* (Co-editor, 2000); and, *Beyond Boundaries* (Co-author, 1997).
- **Béchir Chourou** (Tunisia) is Professor of International Relations at the University of Carthage-Tunis in Tunisia. He holds a Ph.D. in Political Science from Northwestern University (USA). He has published in Arabic, French and English on democracy in North Africa, on Euro-Mediterranean relations, and on food policy issues.
- **Pal Dunay** (Hungary) is senior fellow at the SIPRI; staff member of the Geneva Centre for Security Policy (GCSP). He was Assoc. Professor of International Law at Eötvös University in Budapest (1986-1996), visiting scholar at PRIO, Oslo; Institute for East-West Security Studies in New York, Netherlands Institute of International Affairs in Clingendael, PRIF. He served on the Hungarian delegation to the CFE and Open Skies negotiations.
- **John Grin** (Netherlands) is a Professor in policy science at the University of Amsterdam and he lectures on security issues at the NATO Defence College in Rome. He worked on international stability, arms control, military technology and strategic planning and presently focuses on the reflexive modernisation of socio-technological regimes.
- **Patricia G. Kameri-Mbote** teaches intellectual property rights law, law, science and technology, and gender and law at the Faculty of Law, University of Nairobi, an Advocate of the High Court of Kenya and Chair of Department of Private Law, Faculty of Law, University of Nairobi. She studied law in Nairobi, Warwick, Zimbabwe and Stanford.
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- **P. H. Liotta** (USA), Executive Director, the Pell Center for International Relations and Public Policy. His research interests include the study of geography and geopolitics (particularly in the Euro-Mediterranean, and Central and South Asia) as well the re-examination of security issues in the contemporary environment.
- **Czesław Mesjasz** (Poland) is Associate Prof. of management at the Cracow University of Economics; visiting professor at universities in France, Germany, Italy, Portugal, United Kingdom, USA. He worked and published on systems theory, conflict and negotiation, applications of systems approach in social sciences, security theory and international management.
- **Ursula Oswald Spring** (Mexico), Professor-Researcher at CRIM at National University in Mexico, General Secretary of Latin-American Council for Peace Research (CLAIP), former President of International Peace Research Association (IPRA), former Minister of Ecological Development in Morelos. She wrote 30 books and 158 scientific articles.

Part III: AFES-PRESS GMOSS criticisms of the first GMOSS game and proposals for alternative scenarios (49 page)

Attachment 7: AFES-PRESS Critique of the first game

Hans Günter Brauch, AFES-PRESS, WP 21.000

Mosbach, 25 October 2004

Dear all,

I shared the scenario with Fabien Nathan of our junior team who will join me this time at the GMOSS workshop. He expressed a “fundamental concern and objection against the scenario” developed by Ola and Wilhelm. He independently stressed many of my own earlier concerns that were disregarded by the drafters of the scenario. I also informed Prof. John Grin who reviewed this reply on both sides of the Atlantic and Prof. Czeslaw Mesjasz before and after he left for Italy. After close and intensive consultation among the four colleagues of our multinational team of senior and junior colleagues we do not support this scenario nor will we take any political responsibility for it. Let me summarise our fundamental scientific concerns. We did not share it with our colleagues in Egypt and Tunisia because it would undermine the trust and mutual respect we have developed during the past seven years of close cooperation.

1. GMOSS is a **network of excellence on security** in the 6th Framework Programme of Research.
2. According to our website our mission is: “The aim of the **GMOSS network of excellence is to integrate Europe’s civil security research** so as to acquire and nourish the autonomous knowledge and expertise base Europe needs if it is to develop and maintain an effective capacity for global monitoring using satellite earth observation. The science and technology encompassed within the Network includes: “investigations of present and future threats to security and the needs for exchange of information between stake-holders during crises”.
3. **GMOSS is not a network of defence planners, intelligence specialists and war gamers.** This scenario contradicts the task of GMOSS, weakens the support for GMES and contradicts **present security concepts and competencies of European institutions.**
4. Our major concern is that the scenario chosen has **no** research base, that the Hobbesian mindset chosen contradicts both the goals of Solana’s security strategy of December 2003, the diplomatic aims (France, UK, Germany towards Iran) and strategic goals of EU countries (e.g. Germany, Sweden) and the goal’s of GMOSS as well as of GMES.
5. Given the sensitivity of the EP debate on the role of the future EU Commissioner on Justice and Home Affairs R. B. we deeply advice the GMOSS coordinators to the utmost political caution and to consult with Commission officials whether they have any policy objections against this game. As this is not the result of research, it is **not an issue of scientific freedom but of political correctness and responsibility where the coordinator and the Commission official bears the political responsibility.**
6. **If this scenario should be leaked to the European Parliament or the press, GMOSS as well as the Commission may have severe political problems that could be damaging to GMOSS.**
7. We propose a different scenario of an **earthquake in Istanbul** that has some probability where the Commission has competencies to act, and where EU institutions exist to respond and where there are close synergies with the goals of GMES.
8. This scenario is **politically correct, insensitive** and where much knowledge on the integration between policymakers and the remote-sensing community can be gained.
9. Such a scenario can build on the **earthquake in Izmit of 1999** where close to 20.000 people died. There are **satellite images on the impact of that event** that can be used for the gaming session. There exists a lot of impact information by Turkish earthquake

experts, studies of the World Bank, the EIB, UNISDR that can be easily accessed on the website.

10. In such a scenario, experts from **ECHO (e.g. Dr. Peter Billing)** or UNISDR may be persuaded to participate. Such a simulation needs some research-based preparation.

Let me add a few comments on the first scenario of 19 October 2004 and on the Iranian scenario of 22 October. The scenario is a **worst-case scenario** from a **Hobbesian perspective** that seems to reflect many arguments of the **US neo-cons** (AEI, Heritage Foundation etc.) and of some US think tanks that are not neutral on the Middle East. The scenario focuses only on the military dimension as it affects the national security of some EU member states. The basic **narrow hard military security concept** contradicts the wider security concept adopted by most EU countries. It is totally insensitive to the goals of intercultural and interreligious co-operation that is associated with the legacy of Anna Lindh and that will be pursued by the Anna Lindh Foundation in Alexandria. The scenario is:

- a) **not research based**;
- b) **politically incorrect** and reflects and image that **takes one religion** and different wings (Shiites vs. Sunnites) as a **cause of the threat**.
- c) Basic assumptions may contradict the efforts of the new EU Anna Lindh foundation.
- d) The scenario is **outside** of the constraints of **international law** and of **European laws** (competencies between Council and Commission as well as of ESA).
- e) The *Homeland Security Commissioner* and a *European Surveillance Agency* has no legal basis in EU and ESA treaties, nor will it be acceptable for most EU governments (including France, Germany and Sweden)
- f) It is unclear which knowledge may be gained from this scenario for GMOSS and the EU.

Iranian assumptions

- There are obviously different perceptions in Washington and in Paris, Berlin and London (Guardian, 22 October 2004)
- Credibility of intelligence claims are muted after Iraq (see comments by Hans Blix, R. Ekeus in *Survival* (2004 on the fundamental misreading of evidence of Iraq by IISS).

EU competences

- Foreign and security policy is divided among three EU pillars:
 - 1: **community pillar**: **Magnus Ekengren**: functional security (on AFES-PRESS website): disaster assistance (now: **Wallström**, Patton, possibly soon: Ferrero-Waldner, Greek),
 - 2: Common Foreign and Security Policy: intergovernmental (Solana)
 - 3: Justice and home affairs (new Italian commissioner R.B. if approved by EP)
- All competencies are **intergovernmental** (no treaty-based competence of Commission) except for functional security (disaster response) within DG Environment.

EU Homeland Security Commissioner

- There is presently no legal basis in none of the EU treaties.
- The name reflects the perspective and innovation of the Bush Administration that is not shared by most EU countries including Sweden, Germany et al.
- It is unlikely that the European Council will approve such a transfer of sovereignty from the nation state to the Commission (Sweden may be expected to object such a transfer which may be in violation to its neutrality stance).
- Thus, the scenario is outside the present treaty framework of the EU and is purely hypothetical, at present totally unrealistic and thus irrelevant for any relevant knowledge.
- Europol already exists as an intergovernmental institution.

European Surveillance Agency

- There is no legal basis for such an institution in any of the EU or ESA treaties.
- European Satellite Agency in Spain exists that was taken over from WEU.

Counteracting terrorism is a task of the Council (Solana) not of the Commission (Patton, Ferrero-Waldner): coordination exists on the **intergovernmental** but not on community level.

Reference to: “**EU has decided**” which organ of the EU: Council or Commission? **Only the Council can decide**, Commission has no competencies *sua generis* in this area.

I repeat my severe doubts:

- a) **to game outside the legal framework of existing European institutions and treaties,**
- b) **Some assumptions of the game contradict the diplomatic and security goals of several European foreign and defence ministries as well as European institutions,**
- c) **The wording of the scenario may violate deep-held values of members of the GMOSS network but also the goals of many members in the European Parliament.**
- d) **What is the contribution to knowledge of such a “utopian” game that has no value consensus, political support and legal basis within the EU and its member states?**
- e) **What knowledge is to be gained from such an exercise for GMOSS?**

I think it may be a waste of scarce resources of GMOSS:

- a) to define the tasks *Homeland Security Commissioner - tasks and mandate*
- b) *Defining the tasks of the European Surveillance Agency*

Both institutions have no legal basis within EU and ESA treaties. Thus, any knowledge to be gained is **politically totally irrelevant**. Since our meeting in Salzburg in June I have suggested instead for a decision-making simulation **within the existing EU legal framework** or of one within and one outside the legal framework to compare both. But this is a political decision I think the GMOSS members should make as a group. **Surprise cannot replace a democratic decision**. In March gaming was not yet approved by the GMOSS majority. At present it is only an integration goal of WP 21.000, 21.100 and 21.200 and of Ola’s WP. The basic question as to what knowledge is to be gained for whom remains unanswered? Such a **politically incorrect and controversial, culturally insensitive scenario** may backfire and may totally undercut the weak support for gaming within GMOSS.

On part 2a (22 October 2004): These are two totally different scenarios:

- a) **Iranian case: Hard security scenario:** Council scenario: Solana
- b) **Refugee case: Soft humanitarian Scenario:** commission scenario (DG Justice and Home Affairs, DG Relex, DG Development, ECHO, EC Humanitarian Office)

According to Art. X of the NPT, each country can leave the NPT after three months as North Korea has done, and as the Bush Administration has done with the ABM treaty. There are a few states in the region that never signed nor ratified the NPT and BWC as well as the CWC. Does Iran have missiles to reach Israel? Which missiles with which payload? Are they under development, have they been tested, are they operational? What is the credibility of the intelligence claims that were disproved with regard to Iraq? Iran is between two declared nuclear states (Russia, Pakistan) and a non-declared one in the region. Do some states have the right for self-defence and others do not under international law? Who is to decide?

I find the Iran scenario a **worst case Hobbesian Scenario**, the Pentagon and US intelligence agencies have been dealing with for a long time. Since Iraq, the credibility of claims may be doubtful. I advise Ola and Wilhelm to read **Blix and Ekeus** who have been closer to the truth than many intelligence agencies (see the damaging assessment reports in the US and UK).

I find the **continuation of the Iran scenario** politically utmost unconvincing. The scenario lacks the subtlety of regional expert knowledge on the Persian Gulf. This was also reflected in the decisions of those countries who caused the quagmire in Iraq. The EU has no legal right to intervene. Not the EU but only the US can persuade Israel not to act and has successfully done so in 1991 when Israel was attacked with Scud missiles. Is there an export facility in Saudi Arabia through which 50% of Saudi oil exports pass. If so where is it?

The **assumptions of a scenario must be realistic**. The scenario as far as Europe is concerned must **operate in the framework of international law**. By Art. 2 of its unification treaty (2+4 treaty of 12.9.1990) Germany may only use its armed forces in compliance with its constitution and with the UN Charter. The Iranian threats in the scenario are at present unconvincing, as are the references to Sunni and Shiite opposition groups in Iran and Saudi Arabia.

Scenarios must be realistic and convincing and in a research network based on research. Often better and logically consistent information is publicly available in the literature and among sophisticated weapons and regional experts.

To summarise our criticism:

- a) **The threat scenario is unconvincing and not backed by research.** There is a huge sophisticated scientific literature on crises and the outbreak of war that is ignored.
- b) **The solution scenario is also highly unrealistic** because it relies on EU institutions that do not exist and are outside the present EU legal framework. They may never exist in the near future unless the European Council establishes them. The Commission cannot establish competencies that remain with the nation states and the Council.
- c) Thus, **the crucial question is what is to be gained by the game in terms of knowledge for whom?** For GMOSS? For DG Relex, DG Environment, DG Justice and Home affairs, the Council (Solana's office), or ECHO?
- d) Is such an unsophisticated, politically incorrect game worth the **high costs of some 25.000 Euros**, the time and hotel costs of the 50+ participants will amount to?

Our AFES-PRESS proposal has been to game the interaction among existing institutions:

- e) **A realistic policy scenario has to rely on the following existing institutions**
 - Council, General Affairs Council, member governments (political level)
 - Council: **Justice & Home Affairs**; Commission: **DG Justice & Home Affairs**
 - European Satellite Centre in Spain, JRC. etc., **national space agencies, defence ministries (technical level)**
 - Europol (**technical and implementation level**)

Conclusion

Our conclusion is

- a) **develop a logically consistent realistic scenario that could occur any day**
- a) **game the behaviour of existing institutions**
- b) **test the interaction between the demand side: real policy-makers and the supply side the technical community, e.g. the remote sensing community.**

In order **not to spoil the game** and the enthusiasm of our Swedish friends and to be constructive our proposal is:

- We could **game a major earthquake**, e.g. in Istanbul (that may happen) and where we have data on the earthquake of Izmit (of 1999) that cost some 20.000 deaths. Legal basis exists (**Ekengren**: http://www.afes-press.de/pdf/Hague/Ekengren_functional_security.pdf)
- Data exist: UNISDR: Helena-Molin Valdes (Swedish): molinvaldes@un.org; World Bank, Provention Consortium (Safer Cities 12/2002, EIB, Turkish experts), Relief web
- Projections of such a mega-event exist by geologists and earthquake experts
- Satellite images exist on the Earthquake in Izmit (50 km outside of Istanbul).
- For such a realistic scenario, ECHO may be a gaming partner (Peter.Billing@cec.eu.int)
- **Decision-making simulations (games) require prior research, clear mandates** for the role participants within the competencies of existing institutions and clear goals with regard to the knowledge to be gained for GMOSS and GMES.

- The **highly developed** and complex **Model UN simulations** that are being played at many high-schools and political science departments globally are methodologically and politically much more advanced than the proposed crude and politically incorrect scenario.
- In order to **avoid that the proposed scenarios** may lead to a fundamental political controversy within GMOSS on the weaknesses and political insensitivities of the scenario that may prevent future gaming within GMOSS altogether, our AFES-PRESS team proposes:

We should use the time on **8 November, 13.30-18.00:**

- a) to present the ideas of the gaming paper co-authored by our team;
- b) present a fundamentally revised and politically correct and legally-based scenario Ola and Wilhelm should draft for discussion it instead of gaming it;
- c) As members of the analysis team, Fabien and Hans Günter would be willing to offer a fundamental critique;
- d) We should use this critical debate on the goals of GMOSS with regard to what we mean with security we have avoided so far both in March 2004 and should not be avoided in November as well.
- e) We have put 50 papers so far as a result of our three workshops on security concepts on the web that are available for the GMOSS community at: http://www.afes-press.de/html/download_gmoss.html.
- f) I would be willing on short notice to give a fundamental 30 minute powerpoint briefing on security concepts as the basis of different perceptions of security threats, challenges, vulnerabilities and risks within the mandate of GMOSS and GMES.

If you do not share our severe concerns about the scenarios developed by Ola and Wilhelm, as Democrats we accept majority decisions, but in this case we must insist that as members of the analysis group, Fabien and Hans Günter will be given an opportunity and at least 30 minutes to offer a fundamental critique of the many shortcomings of the used scenario.

We should also be given sufficient time to introduce the results of our three AFES-PRESS GMOSS workshops on **security concepts** as well as our proposals for the second stage on **security threats, challenges, vulnerabilities and risks for 2005-2006**.

My political concern is, if this scenario gets to the press, GMOSS could be in deep trouble with some parts of the European Parliament but also with parts of the Commission. I think, as Iain rightly indicated everything is **politically charged** within the EU. We should avoid to become an object of political controversy that would require the Commission to respond. **I encourage Hans-Joachim and Iain to discuss these concerns with C. Bernot.** Hans-Joachim and Iain may share this letter as the opinion of AFES-PRESS with her.

Not to be misunderstood, I was among the small minority who supported gaming in March and I still think it is a good tool for learning but to gain knowledge but the scenarios and the context must be research based, politically correct, culturally and religiously sensitive, within the framework of existing EU competencies and thus more realistic and avoid the many political pitfalls these two scenarios may provoke.

Our AFES-PRESS proposal is to get back to the drawing board to fundamentally revise both a) the scenario (challenge) and b) the institutional response. If this cannot be done within the next two weeks I would postpone the game to our next general workshop. **My guess is that the present game may be counter-productive to our goals, to advance the course of space applications for GMES, e.g. of environmental challenges and security threats.** I am sharing with you our coordinated thoughts **two days prior to the deadline of 27 October** that was given to us by Ola and Wilhelm for our response.

With kind regards

Yours Hans Günter
on behalf of the AFES-PRESS team

Appendix: I add some results of a quick Google search:

- a) **Present European space policy constraints**
- b) **Europol legal mandate.**

Tasks of European Satellite Centre: Contribution to Council (Solana)

<http://www.eurospacepolicy.org/report2.htm>

On 10 January 2003 the Catholic University of Leuven hosted the Second **European Space Policy Workshop** "The Stakeholders and Their Interests" which its Institute for International law co-organized with the space and telecommunications consultancy Systemics Network International.

former Prime Minister of Belgium

Mr Dehaene gave a description of the work of the European Convention up to the present. He noted that the achievements of the Convention exceeded original expectations. The result of the Convention will be a Constitutional Treaty with the following principal elements:

- Establishment of legal personality of the European Union
- **Removal of the "three-pillar" system**
- A Convention compliant with the structures of the Constitution
- Clear definition of the competences of the European Union

At the moment there was no intention to mention space in the Treaty. In practice this sector is part of the complementary competences of the EU in research and technology. Yet there is an inclination to consider space as a competence spread among member states, with some account being taken of its trans-border character. [N.B. After the workshop, space was indeed included in Art.3 of the first 16 Articles proposed by the Presidium to the Convention].

Mr Dehaene considered that it is very important to bring space into the picture, and to do so explicitly in the Treaty. In addressing questions of competence, the past must be taken into account. The role of ESA in the development of the European space sector was very considerable and this cannot be ignored.

Mr Dehaene's point of view is that ESA sooner or later will become an agency of the EU devoted to space. As an autonomous instrument within the EU it will be able to implement a coherent policy as it has the best tools at its disposal. It will develop as part, however, of a supranational body, contrary to the inter-governmental character which it has today.

In closing, Mr Dehaene mentioned that he would appreciate the Workshop's advice in addressing space as part of the Convention's work.

"Towards a Space Policy for the EU" - Kurt Vandenberghe, Cabinet of EC Commis. Busquin

The question Europe is facing in this regard is how to better identify and define in a coherent fashion what capacities are needed for Europe and how to realise them.

To meet these goals and to make sure that the EU has the proper instruments at hand, how do we organise ourselves,

- So that we valorise and reinforce the acquis of the ESA ;
- And increase and optimise investments in the most coherent way.

These institutional questions go to the heart of the Green Paper. Mr Vandenberghe expanded on two of them.

First, how to reinforce the political and legal basis to enable the EU to act efficiently in the field of space.

This is the link with the Convention on the future of Europe.

The EU is so far acting on the basis of treaty chapters concerning different policies (research, transport, external relations).

Would Europe not gain from having a proper chapter on space in the EU treaty, which would allow it more easily to overcome ambiguities and fragmentation and to launch ambitious initiatives at the service of its policies?

This immediately raises the second question of the relationship between the EU, ESA and the Member States. There we see an obvious win-win situation. ESA has the know-how and a system that has proved its merits.

For the Commission, and the EU more broadly, one of the questions is how to work with ESA so that ESA becomes an "implementing agency" for the EU, at least for the part that concerns EU policies.

For its part, the EU can bring to bear its competencies and its political force to help ensure a vibrant space sector and a competitive industry. It provides reference to competition rules, trade policy, standardization, etc.

ESA has traditionally taken care of organising the supply side (i.e. industry and research). The EU can take care of the demand side: rallying potential users of space-based services, particularly in the public sector, around joint user requirements which create a demand with critical mass at the European level. All this is a question of evolution.

The Green Paper has the intention to launch a wide debate on these questions. It will not yet provide the answers. The Commission intends to produce an ambitious White Paper later in the year on the basis of hopefully supportive and strong inputs from the public consultation.

"The Development of an Approach to Integration of Space Capabilities within the Defence, Security and Foreign Policy: Role of the EU" - Klaus Becher, IISS

Mr Becher pointed to the **differences in approach between the Europe and the United States in using space for defence purposes**. He also recalled the special place of space in the European integration process with **ESA as a specialised organisation outside the EU system and the traditional exclusion of defence matters from the EU's competencies**. In Europe, there are so far only modest observation and telecommunications capabilities (Helios, Skynet, Sicral, Syracuse), all conceived and operated on a national basis, supplemented by access to NATO's own communications satellites, some case-by-case use of US capacities and recourse to commercially available resources. For imagery exploitation, the EU can take advantage of its modest but fully operational satellite centre in Torrejón.

The use of space for security and defence is still a niche endeavour and is not yet firmly rooted in plans, budgets and institutions, except to some degree in France. The small scale of European investment in space assets for public infrastructure, including security and defence, has negatively affected demand for space products and services and put this industrial sector at a competitive disadvantage.

Space offers important strategic benefits of a practical nature. This is particularly relevant for defence. The added quality of information-based, accelerated operations strengthens the effectiveness of forces disproportionately and allows them to fulfil their missions for international peace and security better and more cost-effectively, **including the ESDP spectrum of tasks**. Space-based assets are also key enablers for continued European influence in transatlantic alliance and coalition operations.

The joint requirements for imaging satellites **formulated by France, Germany, Italy and Spain** are a good beginning but from there it is still a long way to an **integrated geospatial intelligence, surveillance and reconnaissance approach for Europe**. Most importantly, European efforts in this field ought to be directed not at creating "white elephants" but at the incremental improvement and practical integration of available operational capabilities in a field of rapidly advancing technology.

Discussion

Some participants expressed an opinion that the EU should become some kind of a "member state" of ESA. They doubted the benefits of ESA's integration in the EU structures as a specialized agency. Others, though, wondered why policy development should be sidelined in this way, as there were clearly issues of policy that could be addressed only at the level of the EU. Some participants mentioned current the problems with the Galileo project. It is important, all conceded, that arrangements are put in place for better coordination of activities than this case demonstrated. Some participants were pleading to search in a more pro-active way for synergies between ESA programme actions and applications addressing the needs of European citizens.

Some of the participants raised questions about the role of the military in future European space policy. For example, the ESA Convention enshrines the civil character of the Agency. Therefore, ESA cannot develop military applications without changing its fundamental treaty. The EU enjoys greater freedom in this regard, which implies it must assume a larger role. On the other hand, others pointed out that the manner of application of a Treaty could be steered by those who concluded it if all agree and the right mechanisms can be found.

Mr Vandenberghe considers it is too early to give a definite answer to the military space question. There is constant evolution in the space field. Policy must follow the evolution of events, but the debate is at least now under way. **Mr Dehaene's opinion is that a clarification competencies between the EU and member states is necessary to reinforced collaboration in the military field while there seem to be problems in the more limited competence of ESA.**

Mr Poncelet mentioned that one should not get blinded by the term "dual use". **In fact, most of contemporary space projects have "multiple use". Good examples of such projects are Envisat and GMES.**

Legal basis of Europol

Council Act of 26 July 1995 drawing up the Convention on the establishment of a European Police Office (Europol Convention) [Official Journal C 316 of 27.11.1995].

This Convention establishes a European Police Office, "Europol", to be located in The Hague, Netherlands. Its task is to improve the effectiveness of the competent authorities in the Member States and cooperation between them in an increasing number of areas.

- preventing and combating terrorism,
- unlawful drug-trafficking,
- trafficking in human beings,
- crimes involving clandestine immigration networks,
- illicit trafficking in radioactive and nuclear substances,
- illicit vehicle trafficking,
- combating the counterfeiting of the euro,
- money-laundering associated with international criminal activities.

2. Europol has the following principal tasks:

- to facilitate the exchange of information between Member States;
- to obtain, collate and analyse information and intelligence;
- to notify the competent authorities of the Member States without delay of information concerning them and of any connections identified between criminal offences;
- to aid investigations in the Member States;
- to maintain a computerized system of collected information.

3. Each Member State establishes or designates a national unit to carry out the tasks listed above. The national unit is the only liaison body between Europol and the competent national authorities. It sends Europol at least one liaison officer who is instructed by the national unit to represent its interests within Europol....

9. The budget is financed by contributions from the Member States and other occasional receipts. The accounts in respect of all income and expenditure entered in the budget together with the balance sheet showing Europol's assets and liabilities are subject to an annual audit. The audit is carried out by a joint audit committee, made up of three members appointed by the Court of Auditors of the European Communities.

IMPLEMENTING MEASURES

Council Act 97/C 221/01 [Official Journal C 221 of 19.07.1997]

Council Act of 19 June 1997 drawing up, on the basis of Article K.3 of the Treaty on European Union and Article 41 (3) of the Europol Convention, the Protocol on the privileges and immunities of Europol, the members of its organs, the Deputy Directors and employees of Europol.

Council Act 99/C 26/01 [Official Journal C 26 of 30.01.1999]

Council Act of 3 November 1998 adopting rules applicable to Europol analysis files.

Council Act 99/C 26/02 [Official Journal C 26 of 30.01.1999]

Council Act of 3 November 1998 adopting rules on the confidentiality of Europol information.

Council Act 99/C 26/03 [Official Journal C 26 of 30.01.1999]

Council Act of 3 November 1998 laying down rules concerning the receipt of information by Europol from third parties.

Council Act 99/C 26/04 [Official Journal C 26 of 30.01.1999]

Council Act of 3 November 1998 laying down rules governing Europol's external relations with third States and non-European Union related bodies.

Council Decision 99/C 26/05 [Official Journal C 26 of 30.01.1999]

Council Decision of 3 December 1998 supplementing the definition of the form of crime 'traffic in human beings' in the Annex to the Europol Convention.

Council Decision 99/C 26/06 [Official Journal C 26 of 30.01.1999]

Council Decision of 3 December 1998 instructing Europol to deal with crimes committed or likely to be committed in the course of terrorist activities against life, limb, personal freedom or property.

Council Act 99/C 26/07 [Official Journal C 26 of 30.01.1999]

Council Act of 3 December 1998 laying down the staff regulations applicable to Europol employees. Amended by the following Decisions:

Council Decision 99/C 364/02 [Official Journal C 364 of 17.12.1999]

Council Decision of 2 December 1999 laying down the staff regulations applicable to Europol employees, with regard to the establishment of remuneration, pensions and other financial entitlements in euros;

Council Decision C5-0089/1999 [Official Journal C 107 of 13.04.2000]

Council Decision amending the Council Act of 3 December 1998 laying down the staff regulations applicable to Europol employees, with regard to the establishment of remunerations, pensions and other financial entitlements in euros.

Act of the Management Board of Europol 99/C 26/08 [Official Journal C 26 of 30.01.1999]

Act of the Management Board of Europol of 1 October 1998 laying down its rules of procedure.

Act of the Management Board of Europol 99/C 26/09 [Official Journal C 26 of 30.01.1999]

Act of the Management Board of Europol of 15 October 1998 concerning the rights and obligations of liaison officers.

Act of the Management Board of Europol 99/C 26/10 [Official Journal C 26 of 30.01.1999]

Act of the Management Board of Europol of 15 October 1998 laying down the rules governing Europol's external relations with European Union-related bodies.

Council Act 99/C 25/01 [Official Journal C 25 of 30.01.1999]

Council Act of 18 January 1999 adopting the Financial Regulation applicable to the budget of Europol.

Repealed by Council Act 99/C 312/01 [Official Journal C 312 of 29.10.1999]

Council Act of 4 October 1999 adopting the Financial Regulation applicable to the budget of Europol.

Council Act 99/C 88/01 [Official Journal C 88 of 30.03.1999]

Council Act of 12 March 1999 adopting the rules governing the transmission of personal data by Europol to third States and third bodies.

Act of the joint Supervisory Body of Europol 99/C 149/01 [Official Journal C 149 of 28.05.1999]

Act No 1/99 of the joint Supervisory Body of Europol of 22 April 1999 laying down its rules of procedure.

Decision 99/C 149/02 [Official Journal C 149 of 28.05.1999]

Council Decision of 29 April 1999 extending Europol's mandate to deal with forgery of money and means of payment. **Corrigendum published in Official Journal C 229, 12.08.1999**

Council Act 99/C 149/03 [Official Journal C 149 of 28.05.1999]

Council Act of 29 April 1999 appointing the Director and Deputy Directors of Europol.

Communication 99/C 185/01 [Official Journal C 185 of 1.07.1999]

Communication concerning the taking up of activities of Europol.

Decision 99/C 364/01 [Official Journal C 364 of 17.12.1999]

Council Decision of 2 December 1999 adjusting the remuneration and allowances applicable to Europol employees.

Decision 2000/C 106/01 [Official Journal C 106 of 13.04.2000]

Council Decision of 27 March 2000 authorising the Director of Europol to enter into negotiations on agreements with third member States and non-EU related bodies.

Council Declarations [Official Journal C 106 of 13.04.2000]

Council declaration concerning the relations between Europol and third States and non-European Union-related bodies.

Council declaration concerning the priority to be given to third States and non-European Union-related bodies.

Council Decision C5-0090/1999 [Official Journal C 107 of 13.04.2000]

Council Decision adjusting the remuneration and allowances applicable to Europol employees.

Act of the Management Board of Europol 2001/C65/01 [Official Journal C 65 of 28.02.2001]

Act of the Management Board of Europol of 27 September 1999 laying down the rules on Europol personnel files.

Decision of the Management Board of Europol 2001/65/02 [Official Journal C 65 of 28.02.2001]

Decision of the Management Board of Europol of 16 November 1999 agreeing to the conditions and procedures laid down by Europol regarding taxes applicable to salaries and emoluments paid to Europol staff members for the benefit of Europol.

Decision of the Director of Europol 2001/65/03 [Official Journal C 65 of 28.02.2001]

Decision of the Director of Europol of 3 July 2000 adapting the amounts mentioned in the Europol Staff Regulations to the euro.

Decision of the Director of Europol 2001/65/04 [Official Journal C 65 of 28.02.2001]

Decision of the Director of Europol of 3 July 2000 adapting to the euro the amounts mentioned in the Annex to the Decision of the Management Board of Europol of 16 November 1999 with respect to taxes and the salary adjustment decided by the Council.

Annex to the Rules on the confidentiality of Europol information [Official Journal C 086 of 16.03.2001].

Council Act of 15 March 2001 amending the Staff Regulations applicable to Europol employees.

Council Decision of 15 March 2001 adjusting the basic salaries and allowances applicable to Europol staff [Official Journal C 112 of 12.04.2001].

Council act of 28 November 2002 drawing up a Protocol amending the Convention on the establishment of a European Police Office (Europol Convention) and the Protocol on the privileges and immunities of Europol, the members of its organs, the deputy directors and the employees of Europol [Official Journal C 312 of 16.12.2002].

FOLLOW-UP WORK

On 23 July 1996 the Council adopted an act drawing up, on the basis of Article K.3 of the Treaty on European Union, the Protocol on the interpretation, by way of preliminary rulings, by the Court of Justice of the European Communities of the Convention on the establishment of a European Police Office [Official Journal C 299 of 09.10.1996].

By a declaration made at the time of the signing of the Protocol, or even afterwards, Member States may accept the jurisdiction of the Court of Justice to give preliminary rulings on the interpretation of the Convention. In their declaration Member States may specify that either:

- any court or tribunal against whose decisions there is no judicial remedy under national law may request the Court of Justice to give a preliminary ruling on a question raised before it and concerning the interpretation of the Convention;
- or any court or tribunal may request the interpretation of a question raised before it.

On 29 April 1999, the Council adopted a decision extending Europol's mandate to deal with forgery of money and means of payment [Official Journal C 149 of 28.05.1999].

The decision states that the terms "forgery of money" and "forgery of means of payment" will mean the acts defined in Article 3 of the Geneva Convention of 20 April 1929 on the Suppression of counterfeiting currency, which applies to both cash and other means of payment.

Europol's mandate will extend to these offences from the date it starts activities.

On 30 November 2000, the Council adopted an act drawing up, on the basis of Article 43(1) of the Convention on the establishment of a European Police Office (Europol Convention), a Protocol amending Article 2 and the Annex to that Convention [Official Journal C 358 of 13.12.2000].

This Act extends Europol's powers to money laundering in general, regardless of the type of offence from which the laundered proceeds originate.

On 17 October 2000, the Council adopted a Decision on the establishment of a [Secretariat](#) for the Joint Supervisory Data Protection Bodies set up by the Convention on the Establishment of a European Police Office (Europol Convention), the Convention on the Use of Information Technology for Customs Purposes and the Convention implementing the Schengen Agreement on the gradual abolition of checks at the common borders (Schengen Convention) [2000/641/JAI - Official Journal L 271 of 24.10.2000].

On 30 November 2000, the Council adopted a recommendation to Member States in respect of Europol's assistance to joint investigative teams set up by the Member States. In this document, the Council describes how Europol can assist joint investigative teams and recommends that the Member States make full use of these possibilities.

Address : <http://www.statewatch.org/news/2002/feb/01eufbi.htm>

Agents in procedure - European Commission and Council of the Union

European Commission DG

DG Justice and home affairs

Council of the Union

Justice, Internal Security

pursuant to Article 30(2) of the Treaty on European Union, within a period of five years after the entry into force of the Treaty of Amsterdam on 1 May 1999, **the Council is to promote co-operation in a number of different areas, inter alia, through Europol.** The Tampere European Council in October 1999 stated that **Europol has a key role with respect to cooperation between Member States' authorities on cross-border crime investigation** in supporting Union-wide crime prevention.

Attachment 8: Comments of the “Junior Team” of the AFES-PRESS Research Group on the simulation game for the 1st GMOSS Brussels meeting, November 2004, and proposal for future activities

Annabelle Houdret, PhD researcher in Political Sciences, Centre Marc Bloch, Berlin

Mara Tignino, PhD researcher in International Law, HEI, Geneva

Fabien Nathan, PhD researcher in Development Studies, IUED, Geneva.

As “Junior Team” of the AFES-PRESS partner to the GMOSS, we express our concerns about the game which should be played in Brussels on the 8th of November. Although during the first six months of activities the GMOSS gave us the opportunity to develop stimulating network activities at the ISA Conference, the IPRA Conference and at the Fifth Pan-European Conference, the game proposed neither reflect our current studies and educational background nor our understanding of the principles guiding the European Union’s security concerns. Representing a team of three European countries which have played major roles in the second World War, we are at the same time a group of young scientists who grew up with the fundamental values of cooperation and multilateralism on which the EU is based.

Our concerns are based on several grounds which we would like to express to you. We believe it is very important to develop a real debate between ourselves and exchange or share our ideas on a friendly basis.

As a first activity which should be played by all GMOSS partners together, the game gives directions to the network. Beginning our meeting by such a simulation would orient all the rest of the discussions in the second and third days, shaping the overall strategy of the network for the future. Why not choosing to have a real debate among ourselves in the first place, before imposing the problematics and topics ?

Our concern is that the scenario is orientating the entire network around the threat of terrorism and so-called weapons of mass destructions, penalizing environmental security concerns. We would like to show firstly that environmental threats are serious, and of current, actual, immediate concern. Then, we will show that there is a strong need for satellite remote-sensing and GIS technologies for disaster prevention and monitoring in Europe, in order to lower this threat. Third we shall describe why the scenario is unacceptable for us, and finally we shall propose an alternative scenario.

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- II. The strong need for satellite remote-sensing and GIS technologies for disaster prevention and monitoring in Europe.**
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I. Environmental threats are tremendous, actual, current and immediate.

Since 20 years, terrorist attacks have killed and affected a few hundreds of people in Europe. In the greatest event, the Madrid attacks in March 2004, about 200 persons died. There also have been great economic damages.

These figures have nothing to see with those related to disasters. According to the International Federation of the Red Cross (IFRC)¹, between 1983 and 1992, 42,000 people

¹ IFRC, World Disaster Report 2003.

died in disasters and 6.7 million were affected in Europe; between 1993 and 2002, **35,000 people died** (more than one 9/11 and 175 “Madrids” a year in average), **22 million** were affected, and more than **106 Bn US\$ were lost in Europe**, which is a tremendous amount.

Here are some examples of the great devastations of natural disasters in Europe:

- The **summer 2002 floods** in Europe alone affected Czech Republic, Slovakia, Germany and Austria primarily, but also Italy, Spain, Russia, Romania and Hungary. More than half of Romania’s territory was affected. About 100 people died, hundreds of thousands were evacuated, and tremendous damages were caused, including the breakdown of bridges, roads, and infrastructures. According to MunichRe, the losses amount to more than 15 Bn € - 9.2 for Germany alone, of which hundreds of millions for the reconstruction of the Railway system.
- The Sept 7th 1999 **earthquake** that struck Athens and the Attica killed 143 persons, injured 750 and made hundreds of thousands of homeless people. It was also the most expensive earthquake ever in Greece, with destructions estimated to 3% of its GNP.
- The summer 2003 **heat wave** killed 15,000 people in France and many in other countries.
- The December 1999 **storms** caused more than 7 Bn € damages in Europe.

The list could be prolonged on dozens of pages. Environmental threats are thus already there. In terms of instability, disruptions, deaths, number of people affected, etc., it is probably the most serious threat Europe is facing right now. But the trends in damages are definitely on the increase. It is proven that in the near future there will be even more damages in Europe due to natural disasters. In that matter, Europe is following the global trends².

In face of such serious issues, Europe still lacks an integral and integrated technical system of risk management based on satellite imagery.

II. The strong need for satellite remote-sensing and GIS technologies for disaster prevention and monitoring in Europe.

1. A need recognized by the international and European community

According to the UN/OOSA,

“Earth observation satellites and other space-based technologies can contribute to providing significant and unique solutions in all disaster management areas: disaster mitigation, disaster preparedness, disaster relief and also disaster rehabilitation. Such solutions are already an integral part of disaster management activities in many developed and developing countries. Even though national capabilities in the use of space technologies in most of the countries worldwide are increasing at a significant rate, there is still a definite need to support the transfer and implementation of these available technologies³.”

Moreover, according to the United Nations :

“ Remote sensing shall promote the protection of mankind from natural disasters. To this end, States participating in remote sensing activities that have identified processed data and analysed information in their possession that may be useful to States affected by natural disasters, or likely to be affected by impending natural disasters, shall transmit such data and information to States concerned as promptly as possible⁴.”

² See Nathan. F., Nikitina, E. and ISDR, (i.p.) “Natural disasters and Human Security”, in GECHS, “Global Environmental Change and Human Security”, Chapter 12, Westview Press, Boulder, 2005.

³ The United Nations Office for Outer Space Affairs, “United Nations International Workshop on the Use of Space Technology for Disaster Management, first Announcement,” Munich, Germany, 18 – 22 October 2004.

⁴ United Nations General Assembly Resolution 41/65,1999, Principles Relating to Remote Sensing of the Earth from Outer Space, Principle 11.

The European Union, while setting up a GMES network for 2008, has explicitly recognized the security dimension of the environmental concerns for Europe and the need to shift from military to civil protection by creating intelligence based on integration of European capacities :

« The evolution of the environment at global and regional levels presents society with serious challenges, which at some stage may imply a risk to individuals. It is now increasingly recognised that negative trends in environmental quality and the depletion of vital resources carry a potential for conflict situations. This fact was given front-stage visibility in recent years due to the resurgence of highly damaging natural disasters, large scale degradation of economies in transition and the environmental effects of wars and conflicts.

Of immediate interest is the trend towards a more integrated perspective on security issues. The list of the so-called "Petersberg Missions" testifies to this change. The need for autonomous means of observation for analysing and evaluating international developments leading to potential crises is now set in the Amsterdam Treaty. At this stage, political emphasis is still on the setting up of military intervention capabilities supported by "early warning capability". Recently, a call for "serious efforts...in order for the Union to have a more strategic intelligence at its disposal in the future" has been made. The translation of those intelligence principles in the field of environment and resources remains to be done. In due course, GMES will explore such questions⁵. »

More than that, the GMES goal, according to the European Commission, explicitly focuses on the environment, excluding military matters, considered as secondary:

"From a Community point of view, the security component of the present initiative does not include military matters. The "S" in GMES covers the security and protection of the citizens related to environmental threats. The issue of crisis management and its bearing on an EU capacity for GMES will need to be considered at the appropriate time in the appropriate setting. GMES is therefore driven by the information needs of the European society in the fields of environment and security with an initial emphasis on global change, environmental stress and natural and man-made disasters. The political bearing for the definition of its priorities in the field of environment result from the Commission Communication on "A Sustainable Europe for a Better World" : A European Union Strategy for Sustainable Development ⁶»

In its Action Plan for 2004-2008 related to the GMES, the Commission highlights the need of developing Europe's monitoring capacities to reduce risks:

« A preliminary study shows that substantial savings could be made thanks to a better understanding of the events and improved forecasting, which would help to mitigate risks. GMES can assist through improved prediction, monitoring and assessment capabilities, in the preparation of strategies to cope with natural hazards and human-made disasters, thus contributing to the reduction of the resulting economic losses⁷. »

GMOSS, as part of the 6th Framework Programme, would then comply with some of its declared objectives : large-scale integrated assessment of land/soil degradation and desertification in Europe and related prevention and mitigation strategies ; long term forecasting of hydro-meteorological hazards and natural hazards monitoring ; mapping and management strategies ; improved disaster preparedness and mitigation.

⁵ GMES, *The concept*, Discussion paper drafted by the European Commission services in view of consultation with partners in the GMES initiative, p 4, « the Security dimension ».

⁶ Communication from the commission to the Council and the European Parliament, Global Monitoring for Environment and Security (GMES), Outline GMES EC Action Plan, Initial period : 2001-2003. COM(2001) 609 final, p 3, "European Strategy for Space".

⁷ Communication from the Commission to the European Parliament and the Council, Global Monitoring for Environment and Security (GMES): Establishing a GMES capacity by 2008 - Action Plan (2004-2008), Brussels, 3.2.2004, COM (2004) 65 final.

2. Existing political mechanisms and strategies to rely on

When focusing on remote-sensing to reduce disasters, GMOSS would be in position to participate to many European political mechanisms and strategies :

- **The Council of Europe Open Partial Eur-OPA Major Hazards Agreement** : its objective is to enhance multidisciplinary cooperation between States to ensure better prevention of, protection against and organization of relief in major natural and technological disasters through political, scientific and technical activities.

- **Central European Initiative (CEI)** : Cooperation Agreement on the forecast, prevention and mitigation of natural and technological disasters (www.ceinet.org)

- **European Community Humanitarian Aid Office (ECHO)** : its mandate is to provide emergency Assistance, relief, but also disaster preparedness and prevention to victims of natural disasters outside the European Union.

In its report, ECHO highlights :

« Identification and reduction of physical risks would include setting up early warning systems and community risk mapping to identify local hazards and vulnerability. The risk maps would combine empirical knowledge and scientific data (e.g. GIS, aerial photos, topographic information, and remote-sensing imagery). »⁸

Early Warning Systems, which are increasingly recognized as a tool to reduce disasters, definitely need satellite imagery to be more efficient. GMOSS would have a tremendous role to play in these matters.

- **The Medsafe Network** : the Medsafe Network is a co-operation platform aimed at enhancing communications and interaction between partners interested in Sustainable Safety in the Mediterranean.

- It could also take part to the forthcoming **Strategy for Soil Protection** :

« The actions to be taken in the near future to address soil protection are based on existing information, which is recognised as incomplete. For the long-term protection of soils it will be necessary to ensure the development of a more complete information basis, monitoring and indicators to establish the prevailing soil conditions, and to evaluate the impact of diverse policies and practices. (...) »

The monitoring system to be established should in so far as possible be based on existing information systems, databases and know-how. The principle of cost effectiveness will be taken into account. Such system should be designed in such a way that the data can be integrated into more comprehensive/multi-layered monitoring and reporting programmes, for example the Commission's Infrastructure for Spatial Information in Europe initiative⁹. »

3. Existing projects and programmes GMOSS could capitalize on

If Europe is still lacking of systematic monitoring capacities, GMOSS could capitalize on existing capacities and projects to develop the remote-sensing part of an integral natural

⁸ The evaluation of the 11 ECHO operations in the frame of the first dipecho action plan for the Andean Community, Final Report, synthesis, 15.2 : « Types of activities and expected results »

⁹ Communication from the Commission to the Council, the European Parliament, the Economic and Social Committee and the Committee of the Regions, « Towards a thematic strategy for soil protection », 8.2. Monitoring soil threats, Brussels, 16.4.2002, COM(2002) 179 final, p 32.

hazards and risk management system. Indeed, many scattered projects and organizations already exist in this area. Here are some of the most important ones:

Small projects:

- **EURAINSAT** : European satellite rainfall analysis and monitoring at the geostationary scale
- **ELDAS** : Development of a European Land Data Assimilation System to predict floods and droughts
- **FLOODMAN** : Near real-time flood forecasting, warning and management system based on satellite radar images, hydrological and hydraulic models and in-situ data.
- **DORSIVA** : Development of Optical Remote Sensing Instruments for Volcanological Applications
- **STRIM Programme** (Space Technologies for risk management) : “making risk managers more aware of the use of space techniques to improve risk management in the sphere of telecommunications, space imagery, positioning techniques¹⁰. »

Larger projects :

- Programmes of the Joint Research Center (JRC) in Disaster Reduction :

- Natural and Environmental Disaster Information Exchange System (NEDIES) :

It is a European Commission project developed in the framework of the DG Joint Research Centre Institutional Programme "Safety and Emergency Management for Man-Made and Natural Hazards" aimed to support EU policies, mainly those of the Civil Protection and Environmental Emergencies Unit of DG Environment, in the area of prevention, mitigation and management of natural risks and accidents. The project is being conducted at the Institute for the Protection and Security of the Citizen of the Joint Research Centre in Ispra.

- Major Accident Hazards Bureau (MAHB)

The MAHB is a special Unit within the Joint Research Centre's Institute for the Protection and Security of the Citizen, Technological and Economic Risk Management Unit, dedicated to scientific and technical support for the actions of the European Commission in the area of the control of Major Industrial Hazards.

- Natural Hazards Project

The Natural Hazards Project is managed by the LMU Unit of the JRC Institute for Environment and Sustainability . The Weather Driven Natural Hazards Project aims at demonstrating the ways in which existing EU knowledge of Remote Sensing can be used by Planners and Civil Protection bodies to help mitigate the effects of Natural Disasters. The activities will develop technologies and provide tools to our partner organisations within Europe.

- With the European Space Agency (ESA):

- DISMAN : Disaster Management Database

It is an ESA Disaster Information Online Service

¹⁰ Council of Europe Eur-Opa Major Hazards Agreement, Assessment of 16 years' activities in the Eur-Opa Major Hazards Agreement, APCAT(2002) 34, Strasbourg, 20 September 2002, 3. scientific and technical activities, p 5.

http://www.coe.int/T/E/Cultural_Co-operation/Disasters/Activities/Programmes/Risk_Management_-_Decision_support/D%20-%20STRIM.asp

- MEDNET : Environmental Network for the Knowledge and Management of the Marine and Coastal Territory within the Mediterranean Sea

Finally, the GMOSS could capitalize on the experience of the **UNEP/GRID**, whose Mission Statement is the following :

"GRID-Arendal provides environmental information, communications, and capacity building services for information management and assessment. Established to strengthen the United Nations through its Environment Programme (UNEP), our focus is to make credible, science-based knowledge understandable to the public and to decision-making for sustainable development."

III. Why the scenario is unacceptable as such

In the previous sections we have tried to demonstrate the urgency and gravity of the environmental threats, and the usefulness for GMOSS to reorientate around these issues to comply with many international and European norms and objectives, including the 6th Framework Programme, the GMES, and many others. GMOSS would then would answer to a very strong need and would be able to capitalize on existing programmes and competencies for a better integration to reduce the enormous devastations due to disasters.

Now the AFES-PRESS "Junior Team" expresses its concerns specifically about the proposed scenario of the simulation game to be played in Brussels on the 8th of November 2004.

The first concern is about the lack of integration; the second is about the contradiction with the research in social sciences; the third is about the ideological character of the scenario; and the fourth is the opacity and secrecy of the organization as opposed to networking.

1. Disregard of the GMOSS integration principle

Although the aim of the GMOSS network of excellence "is to integrate Europe's civil security research so as to acquire and nourish the autonomous knowledge and expertise base Europe needs if it is to develop and maintain an effective capacity for global monitoring using satellite earth observation"¹¹, this objective is viewed only from one-side perspective, namely a security research founded on a unilateral state's perspective without any consideration of the importance of the multilateral approach expressed in the European and international legal framework, and which has been the basis of the system of international relations for the last 50 years.

While the aims of GMOSS are to "integrate Europe's civil security research" and "nourish the autonomous knowledge and expertise" in this area, the scenario of the game ignores a consistent part of scientific analysis on the topics mentioned in the outline of the game. Approaches to civil security are not taken into account in the political responses the game refers to. Instead, the definition of potential threats as well as the development of the responses to these threats are exclusively based on military and intelligence options, thereby ignoring the actual broad understanding of security issues by the UN and the EU and the goal of the EU to strengthen its capacities in prevention and conflict resolution.

¹¹ <http://intelligence.jrc.cec.eu.int/gmooss/gmooss.html>

Furthermore, the game, which is suggesting a framework similar to the one developed by the US, not only ignores a consistent part of research conducted by social scientists and legal scholars, but it also does ignore the development and the chances of an autonomous European research. It does not either develop an autonomous European response to terrorist threats but imitates responses implemented by the US-government. The efficiency and the effects of these policies on other security-related issues are highly contested even within the US. This is contradictory to both of the aims affirmed in the GMOSS mission statement.

Integration is based on the consideration that in Europe several types of research exist. Nevertheless, in the proposed game only one component of the European research appears. If GMOSS wants to consider terrorist attacks as an issue of common research, such issue ought to be dealt under multiple perspectives, not imposing on all of us some peculiar views and approaches.

The scenario developed by some members of the GMOSS and in particular the suggestion of creating a Homeland Security Commission and an European Surveillance Agency do not have any legal basis within the European legal framework.

For these reasons the scenario of this game does not comply with the aims declared by the GMOSS.

2. Disregard of the growing debate on security within the social sciences

The proposed scenario is not only contradicting the objective of integration. It is also misleading in terms of security efficiency. Indeed, the Hobbesian focus of security - State-centered, enemy-oriented, with technical and repressive solutions - is not capable of attacking the root causes of terrorism, war and violence. Such analyses skip the necessary diagnostics on the social, economical, and political causes of violence. In the academic world as well as in the international community, there is a growing debate on « Human Security », and an increasing awareness of the obsolescence of « hard security » thinking and methods inherited from the Cold War. A Grotian and social sciences perspective, much more efficient to reduce violence in the world, is needed. It has been developed and enhanced in the social sciences at least since the 19th century.

3. Ideological and dangerous character of the scenario

The scenario is also ideological. It is developing a political vision based on mistrust and « hard » responses. It stigmatizes some countries and regions, and designates migrants as a threat. It is almost identical to the worldview of the current US administration, up to the terminology. As you know, George Bush's « Department of Homeland Security » has reduced all budgets devoted to non-terrorist threats, including disaster prevention and mitigation (previously handled by the Federal Emergency Management Agency, FEMA).

By endorsing the scenario, we encourage the European Union to isolate itself from the rest of the world. It also promotes an increased surveillance of its citizen inside its boundaries to target and stop inner enemies before they strike.

More than that, the scenario is developing Huntington's self-fulfilling prophecy of the clash of civilizations. Instead, it is widely acknowledged that Huntington's views are not only false (almost universally criticized in the field of the International Relations Studies, and contradictory with social sciences' researches on civilizations, cultures and societies), but also

dangerous, as self-fulfilling. Security is closely related to the way one thinks about it. Therefore, the scenario itself is a dangerous threat towards Europe's security.

4. Opacity and secrecy of the organization (vs. networking)

Besides the above mentioned critique on the content, the way this scenarios have been developed surprised us considerably. The policy of secrecy that has been adopted in this process fundamentally contradicts the idea of a network whose aim is to build trust between various European partners. Especially when such politically sensitive topics as security scenarios are developed, mutual trust and cooperation are the only basis for a sustainable partnership.

IV. For an alternative scenario proposal

For all the reasons exposed in parts I, II and III, we strongly believe it would be much more productive to focus on a "complex emergency" such as an earthquake in Turkey, a candidate country. Firstly, this could help lowering the pressure between the EU and Turkey by focusing on cooperation between the two entities. Indeed, we know there will be big earthquakes in the future, and it is very doubtful that in the coming years Turkish cities at risk will comply with prevention measures, like their already existing and legally-binding building codes (see <http://www.anglia.ac.uk/geography/radix>). This poses a big threat to security that Europe has the capacity to deal with. As an example, the 1999 Izmit Earthquake has killed more than 17,000 people.

This also could serve to raise awareness on the necessary pre-disaster risk management in order to avoid such disasters and their difficult management, for which many European agencies could play a big role (financing risk mitigation, earthquake-resistant buildings, etc.). It could also be oriented towards a sustainable reconstruction, i.e. not to rebuild the same way, but earthquake-resistant, saving thousands of lives.

Echo and Dipecho already have a system of disaster management, in relation with many scientific centres and institutions. It could be intelligently improved in that respect. The benefits for the GMOSS and EU would be great: promoting cooperation around a real problem, improving the existing institutional setting, thinking differently about security, highlighting the importance of Europe for Turkey, promoting what is positive in the European model, etc.

Therefore, we encourage the organizing committee of the simulation game and all the partners to rethink about a less sensitive and more useful scenario, more environmentally-driven, grounded in reality and in Europe's institutions and spirit. The Turkish case would be a great opportunity to think together about a forthcoming emergency and advance our organizational skills, as well as cooperation for an improved common security.

For all the reasons mentioned before, we also encourage the entire Network to make a shift from the terrorist threats to the environmental threats and develop cooperation policies with the existing bodies and in compliance with Europe's goals and needs, as suggested in part II.

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I. EU TEXTS ON SPACE ACTIVITIES AND DISASTER MANAGEMENT

Treaty establishing a Constitution for Europe (2004)

Article 13: Areas of shared competence

1. The Union shall share competence with the Member States where the Constitution confers on it a competence which does not relate to the areas referred to in Articles 12 and 16.

2. Shared competence applies in the following principal areas:

- . internal market,
- . area of freedom, security and justice,
- . agriculture and fisheries, excluding the conservation of marine biological resources,
- . transport and trans-European networks,
- . energy,
- . social policy, for aspects defined in Part III,
- . economic, social and territorial cohesion,
- . environment,

- . consumer protection,
- . common safety concerns in public health matters.

3. In the areas of research, technological development and space, the Union shall have competence to carry out actions, in particular to define and implement programmes; however, the exercise of that competence may not result in Member States being prevented from exercising theirs.

Framework Agreement between the European Community and the European Space Agency (2003)

WHEREAS the European Community and the European Space Agency ("ESA") consider that closer cooperation between them will strengthen the peaceful use of space as an important tool to contribute to European cohesion and economic growth and will allow space-related activities to be brought to a wider political, economic, scientific, environmental and social framework more directly at the service of European citizens;

WHEREAS each Party is confident that such cooperation will create added value for the benefit of European citizens;

WHEREAS the Parties recognise that they have specific complementary and mutually reinforcing strengths and are committed to cooperating in an efficient and mutually beneficial manner and to avoiding any unnecessary duplication of effort;

ARTICLE 1

Purpose of the Cooperation

The aim of this Framework Agreement is to address the following issues:

1. The coherent and progressive development of an overall European Space Policy. Specifically, this policy shall seek to link demand for services and applications using space systems in support of the Community policies with the supply of space systems and infrastructure necessary to meet that demand.

2. The establishment of a framework providing a common basis and appropriate operational arrangements for an efficient and mutually beneficial cooperation between the Parties with regard to space activities in accordance with their respective tasks and responsibilities and fully respecting their institutional settings and operational frameworks. The cooperation under this Framework Agreement between the Parties aims at:

(a) securing Europe's independent and cost-effective access to space and the development of other fields of strategic interest necessary for the independent use and application of space technologies in Europe;

(b) ensuring that the overall European Space Policy takes into particular account the general policies pursued by the European Community;

(c) supporting Community policies by using space technologies and space infrastructures where appropriate and promoting the use of space systems in support of sustainable development, economic growth and employment;

(d) optimising the use of expertise and available resources and contributing to the consolidation of the close cooperation between the European Community and ESA, thereby linking the demand and supply of space systems within a strategic partnership;

(e) achieving greater coherence and synergy of research and development in order to optimise the use of resources available in Europe, including the network of technical centres.

ARTICLE 2

Principles of Cooperation

1. The cooperation between the Parties shall be pursued in the light of the common objectives as defined under Article 1, with due regard to their respective tasks and responsibilities and their respective institutional settings and operational frameworks.
2. Each Party shall take the decisions necessary for the implementation of this Agreement, as described in Article 4, in accordance with its own internal procedures.
3. Bearing in mind the nature of space technologies and infrastructures, both Parties, in implementing this Agreement, shall take into account their security dimension.

ARTICLE 3

Fields of Cooperation

1. The Parties have identified the following specific fields of cooperation:
 - science
 - technology
 - earth observation
 - navigation
 - communication by satellite
 - human space flight and micro-gravity
 - launchers
 - spectrum policy related to space.
2. The Parties may identify and develop new fields for cooperation.

ARTICLE 4

Implementation

1. For the implementation of this Agreement each Party shall undertake, in compliance with its own prerogatives, legal instruments and procedures, such actions as are required to achieve the purpose of the cooperation provided for in Article 1.
2. Such actions shall aim at fostering the utilisation of space research and development and space applications in the public and private sectors, the promotion of the adoption of legislative, regulatory and standardisation measures in this sector, the funding and carrying out of joint initiatives pursuant to Article 5.

3. Each Party shall refer to the competencies and capabilities of the other, whenever an action is necessary, to pursue the purpose of the cooperation, and shall provide the other Party with expertise and support in its own specific fields of competence.

ARTICLE 5

Joint initiatives

1. Subject to paragraph 3, the joint initiatives to be carried out by the Parties may take, without being limited to, the following forms:

- (a) the management by the ESA of European Community space-related activities in accordance with the rules of the European Community;
- (b) the participation by the European Community in an optional programme of the European Space Agency, in accordance with Article V.I.b of the ESA Convention;
- (c) the carrying out of activities which are coordinated, implemented and funded by both Parties;
- (d) the creation by the Parties of bodies charged with pursuing initiatives complementary to research and development activities, such as the provision of services, the promotion of operators formation and the management of infrastructures;
- (e) the carrying out of studies, the organisation of scientific seminars, conferences, symposia and workshops, the training of scientists and technical experts, the exchange or sharing of equipment and materials, the access to facilities, and the support of visits and exchanges of scientists, engineers or other specialists.

2. When the implementation of a joint initiative requires a detailed definition, it shall be provided for in specific arrangements to be entered into between the Parties. Whenever applicable, such specific arrangements should include at least:

- (a) the overall mission definition;
 - (b) a description of the objectives;
 - (c) a consolidated set of user requirements;
 - (d) a work plan;
 - (e) an appropriate management scheme;
 - (f) the role and financial implications of the Parties;
 - (g) an industrial policy scheme;
 - (h) budgetary aspects;
 - (i) rules of intellectual property rights, rules of ownership including the transfer of ownership, the implementation principles including voting rights, and the participation by third Parties.
- Both Parties shall work out guiding principles in addition to these specific arrangements as soon as possible.

3. Any financial contribution made by one Party in accordance with a specific arrangement shall be governed by the financial provisions applicable to that Party. Under no circumstances shall the European Community be bound to apply the rule of "geographical distribution" contained in the ESA Convention and specially in Annex V thereto. Compliance with the rules relating to financial control and auditing of the Party contributing to the joint initiatives, or of both Parties in case of joint contribution, shall apply to any joint activity.

ARTICLE 6

Consultation and information

1. The Parties shall consult each other regularly in order to coordinate their activities to the fullest extent. Each Party shall inform the other of any initiatives within its own decision-making process, in the fields of cooperation under Article 3, which may be of interest to the other Party.
2. The Parties shall exchange all information at their disposal which may be required for the implementation of this Agreement, subject to their respective rules.
3. Except when otherwise provided, the Parties shall not disclose any information exchanged in connection with this Agreement to any persons other than those employed by them or officially entitled to handle such information nor shall they use it for commercial purposes. Such disclosure shall extend only so far as may be necessary for the purpose of this Agreement set out in Article 1 and shall be in strict confidence.

ARTICLE 7

External dimension of the cooperation

1. Each Party shall inform the other of its activities of an international dimension which may be of interest to the other Party.
2. Whenever appropriate a Party may, in relation to any matters relevant to its international activities, consult the other Party.
3. Once a specific arrangement has been concluded between the parties in accordance with Article 5, the external aspects of this joint activity vis-à-vis third parties shall be pursued jointly by the parties in accordance with that specific arrangement.

ARTICLE 8

Coordination and facilitation of cooperative activities

1. The coordination and facilitation of cooperative activities under this Agreement shall be accomplished by regular joint and concomitant meetings of the Council of the European Union and of the Council of ESA at ministerial level ("Space Council").
2. The objectives of the joint and concomitant meetings shall include the following:
 - (a) providing orientations supporting the achievement of the objectives of this Agreement and identifying actions required;
 - (b) making recommendations, in particular related to the main elements of the specific arrangements;
 - (c) advising the parties on ways to enhance cooperation consistent with the principles set out in this Agreement;
 - (d) reviewing the effective and efficient functioning of this Agreement.

3. A Secretariat shall assist the concomitant meetings and shall elaborate the initiatives deriving from the implementation of this Agreement. The Secretariat shall implement the guidelines provided by the concomitant meetings of the two Councils. The Secretariat shall establish its own rules of procedure and be composed of officials of the Commission of the European Communities and of the ESA Executive. The Parties shall undertake, in accordance with their respective rules and procedures, to contribute to the required administrative support.

4. Without prejudice to the Parties' internal decision-making procedures, the Secretariat shall consult on a regular and informal basis high-level representatives of the Member States of the European Community and of the European Space Agency, with the purpose of reaching common understanding on issues related to the implementation of this Agreement.

ARTICLE 9

Exchange of personnel

1. The Parties may second members of their staff to each other for specified periods in order to share expertise and develop mutual understanding.

2. Rules for the implementation of this Article shall be established by the Secretariat, as referred to in Article 8, and be agreed to in the form of a specific arrangement under this Framework Agreement.

ARTICLE 10

Public relations

1. The Parties undertake to coordinate in advance their public-relations, press and media activities concerning any joint public activities relating to subjects covered by this Agreement.

2. In all relevant media activities, the role of each Party in this Agreement shall be clearly identified and mentioned.

3. The detailed arrangements for implementing public relations activities provided for in this Article shall be adopted jointly.

ARTICLE 11

Settlement of disputes

1. Any disputes which may arise between the Parties relating to the interpretation or application of this Agreement shall be submitted for direct negotiations within the Secretariat.

2. If it is not possible to settle the dispute in accordance with paragraph 1, either of the two Parties may notify the other of the appointment of an arbitrator. The other Party shall then appoint its own arbitrator within a period of two months. The arbitrators shall then appoint a third arbitrator within one month.

3. The arbitrators' decisions shall be taken by majority vote.

4. The award of the Arbitration Tribunal shall be final and binding on the Parties.

5. Each Party to the dispute shall take the appropriate steps required to implement the arbitrators' decisions.

ARTICLE 12

Entry into force, duration, amendments and termination

1. This Agreement shall enter into force on the date of the last written communication by which the Parties notify each other that their respective internal procedures necessary for its entry into force have been completed.

2. This Agreement shall remain in force for four years from the date of its entry into force. It shall be automatically extended for subsequent periods of four years unless either of the Parties notifies the other Party in writing, at least one year before the expiry of any of its periods of duration, of its intention to terminate it. This Agreement shall terminate upon the expiry of twelve months after the receipt of written notification by one Party sent by the other Party.

3. The termination or expiry of this Agreement shall not affect the validity of the specific arrangements entered into between the Parties in accordance with Article 5, which shall remain in full force and effect until the terms for their execution or termination take place.

4. This Agreement shall be amended only by written agreement between the Parties.

5. This Agreement is not intended to modify or supersede any previous agreements entered into between the Parties, which shall remain in full force and effect in accordance with their own terms and provisions.

ARTICLE 13

Signature and authenticity

This Agreement shall be drawn up in duplicate in the Danish, Dutch, English, Finnish, French, German, Greek, Italian, Norwegian, Portuguese, Spanish and Swedish languages, each of these texts being equally authentic.

WHITE PAPER

Space: a new European frontier for an expanding Union **An action plan for implementing the European Space policy¹² (2003)**

The Union is the largest provider of development aid in the world. Space technologies can strengthen its development efforts, and help other countries to develop access to information, raise skills levels and better manage their resources. In addition to supporting the creation of commercial communication infrastructures, space technologies such as Earth observation and global positioning systems can be employed in a variety of tasks including: **protecting soils and managing water resources; monitoring crop development and forecasting food production; providing early warning for flood and fire risk; monitoring the tropical forest; preventing ground-motion hazards; ensuring coastal and maritime monitoring; forecasting, preventing and managing natural disasters.**

¹² EU White Paper, p.9.

GREEN PAPER: European Space Policy¹³ (2003)

The Union has given a commitment to support a sustainable development policy, in particular for the benefit of developing countries. This has been translated, in particular, into commitments made at the World Summit on sustainable development convened in Johannesburg in August 2002. Earth observation, particularly for meteorological and environmental purposes, is a field of excellence in Europe, thanks in particular to achievements under ESA programmes in this area (e.g. Meteosat, managed by the EUMETSAT Agency, Envisat). Space applications of this type contribute to global monitoring of changes on the planet, for example as regards meteorology, climate, oceans and vegetation. It also enables more effective management of natural resources and stricter control of environmental parameters and regulations. **Capacities for managing environmental crises are also beginning to be developed. However, space solutions of this type are still generally under-utilised, due in particular to the experimental and fragmentary nature of the system components available.** The Global Monitoring for Environment and Security (GMES) initiative specifically strives to find a range of coherent solutions operational by 2008. At global level, it has been shown that space systems can play a decisive role in implementing and monitoring the application of international treaties through surveillance and control. In the case of the Kyoto protocol, the commitments given by the Union represent a substantial effort in economic terms. The Union should have the capacity to ensure that the partners to the agreement meet their commitments, it should also determine the effect of emission reductions. Europe may better exploit its participation in this type of agreement by the development and offer of space techniques for monitoring and control, as it has recently shown with the Envisat satellite.

Contributing to sustainable development via space

Environmental aspects: protection and surveillance of the global environment

- Observation satellites can provide rapid and coherent information on forest changes and land cover and use, which are factors affecting global climate change. During the past decade, the planet lost 94 million hectares of forest.

- Radar satellite monitoring of atmospheric temperature and water surface provide valuable indications to assess the rise in ocean levels and global warming. They also enable monitoring of glacier contraction and ice floe movements.

- Satellite systems can also be effective in detecting and monitoring oil slicks at sea.

Economic and social aspects: impact of space on transport

- The use of satellite navigation systems such as Galileo makes it possible for air navigation to rationalise earth-based infrastructure, which tends to be redundant and costly, by replacing conventional navigation aids by satellites. Numerous possibilities are offered to maritime and terrestrial navigation, particularly to simplify and make more reliable management tasks and the control of operators and administrations.

- Studies carried out when the Galileo programme was being devised indicate that macroeconomic benefits, which can be achieved over a 20-year period amount to about €18 billion, combined with the creation of 145000 jobs. [source: Price Waterhouse].

¹³ EU Green Paper, p.22-23.

Comment on EU documents

1. The EU Policy on Space: A Shared Competence with Member States

In this document will take into account the new legal framework of the EU, namely the EU Constitution approved by its Member States on 29 October 2004.

In its Section III, the European Constitution, dealing with the Union competences, indicates the areas where the EU has an exclusive or a shared competence with Member States.

Article 13, dealing with the areas of shared competences, confers in the space area a shared competence with Member States and not an exclusive competence. Article 13.3 states that: “In the areas of research, technological development and space, the Union shall have competence to carry out actions, in particular to define and implement programmes; however, the exercise of that competence may not result in Member States being prevented from exercising theirs”.

2. The European Space Agency Activities in field of the Disaster Management with the EU

The Framework Agreement between the European Community and the European Space Agency signed in 2003 (EC and ESA Framework Agreement) provides the legal basis for the activities conducted by the European Space Agency with the EU. Article 1 indicates that one of the aims of this Framework Agreement is to promote the use of space systems in support of sustainable development¹⁴ which includes the monitoring of environmental issues.

Earth observation, particularly for meteorological and environmental purposes, is a field of excellence in Europe, thanks in particular to achievements under ESA programmes in this area (e.g. Meteosat, managed by the EUMETSAT Agency, Envisat). Space applications of this type contribute to global monitoring of changes on the planet, for example as regards meteorology, climate, oceans and vegetation. It also enables more effective management of natural resources and stricter control of environmental parameters and regulations. Capacities for managing environmental crises are also beginning to be developed. However, space solutions of this type are still generally under-utilised, due in particular to the experimental and fragmentary nature of the system components available.¹⁵

At the Gothenburg Summit in June 2001, the European Council called for “establishing by 2008 a European capacity for global monitoring of environment and security”. As a response, the Global Monitoring for the Environment and Security (GMES) was set-up jointly by the European Commission and the European Space Agency as an initiative to provide independent, operational and relevant information in support of a range of policies serving sustainable objectives such as environment, agriculture, fisheries, transport, regional development. It will also support objectives linked to early warning and rapid damage assessment in natural disasters.

The EU, in its White Paper *Space: a new European frontier for an expanding Union An action plan for implementing the European Space policy*¹⁶ and in its Green Paper,¹⁷ has given

¹⁴ See Document 1.

¹⁵ EU Green Paper p.22. See Document 2

¹⁶ See Document

¹⁷ See Document

a commitment to support a sustainable development policy. However, these texts provides for general objectives which have to be developed by member States.

Given that the EU space policy continues to be an area of shared competence with Member States and the White and Green Papers only provide the general aims which have to be pursued by EU States, this policy has to be considered within the legal framework established by International Law.

INTERNATIONAL TEXTS ON SPACE ACTIVITIES AND DISASTER MANAGEMENT

Principles Relating to Remote Sensing of the Earth from Outer Space

(United Nations General Assembly Resolution 41/65, 1999)¹⁸

The General Assembly,

Recalling its resolution 3234 (XXIX) of 12 November 1974, in which it recommended that the Legal Subcommittee of the Committee on the Peaceful Uses of Outer Space should consider the question of the legal implications of remote sensing of the Earth from space, as well as its resolutions 3388 (XXX) of 18 November 1975, 31/8 of 8 November 1976, 32/196 A of 20 December 1977, 33/16 of 10 November 1978, 34/66 of 5 December 1979, 35/14 of 3 November 1980, 36/35 of 18 November 1981, 37/89 of 10 December 1982, 38/80 of 15 December 1983, 39/96 of 14 December 1984 and 40/162 of 16 December 1985, in which it called for a detailed consideration of the legal implications of remote sensing of the Earth from space, with the aim of formulating draft principles relating to remote sensing,

Having considered the report of the Committee on the Peaceful Uses of Outer Space on the work of its twenty-ninth session and the text of the draft principles relating to remote sensing of the Earth from space, annexed thereto,

Noting with satisfaction that the Committee on the Peaceful Uses of Outer Space, on the basis of the deliberations of its Legal Subcommittee, has endorsed the text of the draft principles relating to remote sensing of the Earth from space,

Believing that the adoption of the principles relating to remote sensing of the Earth from space will contribute to the strengthening of international cooperation in this field,

Adopts the principles relating to remote sensing of the Earth from space set forth in the annex to the present resolution.

Annex

Principles Relating to Remote Sensing of the Earth from Outer Space

Principle I

For the purposes of these principles with respect to remote sensing activities:

(a) The term “remote sensing” means the sensing of the Earth’s surface from space by making use of the properties of electromagnetic waves emitted, reflected or diffracted by

¹⁸ Adopted without vote. In International Law means that this resolution have been adopted by consensus rather than by a vote. In other terms there are no stated objections from State delegations.

the sensed objects, for the purpose of improving natural resources management, land use and the protection of the environment;

(b) The term “primary data” means those raw data that are acquired by remote sensors borne by a space object and that are transmitted or delivered to the ground from space by telemetry in the form of electromagnetic signals, by photographic film, magnetic tape or any other means;

(c) The term “processed data” means the products resulting from the processing of the primary data, needed to make such data usable;

(d) The term “analysed information” means the information resulting from the interpretation of processed data, inputs of data and knowledge from other sources;

(e) The term “remote sensing activities” means the operation of remote sensing space systems, primary data collection and storage stations, and activities in processing, interpreting and disseminating the processed data.

Principle II

Remote sensing activities shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic, social or scientific and technological development, and taking into particular consideration the needs of the developing countries.

Principle III

Remote sensing activities shall be conducted in accordance with international law, including the Charter of the United Nations, the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, and the relevant instruments of the International Telecommunication Union.

Principle IV

Remote sensing activities shall be conducted in accordance with the principles contained in article I of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, which, in particular, provides that the exploration and use of outer space shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development, and stipulates the principle of freedom of exploration and use of outer space on the basis of equality. These activities shall be conducted on the basis of respect for the principle of full and permanent sovereignty of all States and peoples over their own wealth and natural resources, with due regard to the rights and interests, in accordance with international law, of other States and entities under their jurisdiction. Such activities shall not be conducted in a manner detrimental to the legitimate rights and interests of the sensed State.

Principle V

States carrying out remote sensing activities shall promote international cooperation in these activities. To this end, they shall make available to other States opportunities for participation therein. Such participation shall be based in each case on equitable and mutually acceptable terms.

Principle VI

In order to maximize the availability of benefits from remote sensing activities, States are encouraged, through agreements or other arrangements, to provide for the establishment and operation of data collecting and storage stations and processing and interpretation facilities, in particular within the framework of regional agreements or arrangements wherever feasible.

Principle VII

States participating in remote sensing activities shall make available technical assistance to other interested States on mutually agreed terms.

Principle VIII

The United Nations and the relevant agencies within the United Nations system shall promote international cooperation, including technical assistance and coordination in the area of remote sensing.

Principle IX

In accordance with article IV of the Convention on Registration of Objects Launched into Outer Space and article XI of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, a State carrying out a programme of remote sensing shall inform the Secretary-General of the United Nations. It shall, moreover, make available any other relevant information to the greatest extent feasible and practicable to any other State, particularly any developing country that is affected by the programme, at its request.

Principle X

Remote sensing shall promote the protection of the Earth's natural environment. To this end, States participating in remote sensing activities that have identified information in their possession that is capable of averting any phenomenon harmful to the Earth's natural environment shall disclose such information to States concerned.

Principle XI

Remote sensing shall promote the protection of mankind from natural disasters. To this end, States participating in remote sensing activities that have identified processed data and analysed information in their possession that may be useful to States affected by natural disasters, or likely to be affected by impending natural disasters, shall transmit such data and information to States concerned as promptly as possible.

Principle XII

As soon as the primary data and the processed data concerning the territory under its jurisdiction are produced, the sensed State shall have access to them on a non-discriminatory basis and on reasonable cost terms. The sensed State shall also have access to the available analysed information concerning the territory under its jurisdiction in the possession of any State participating in remote sensing activities on the same basis and terms, taking particularly into account the needs and interests of the developing countries.

Principle XIII

To promote and intensify international cooperation, especially with regard to the needs of developing countries, a State carrying out remote sensing of the Earth from space shall, upon request, enter into consultations with a State whose territory is sensed in order to make available opportunities for participation and enhance the mutual benefits to be derived therefrom.

Principle XIV

In compliance with article VI of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, States operating remote sensing satellites shall bear international responsibility for their activities and assure that such activities are conducted in accordance with these principles and the norms of international law, irrespective of whether such activities are carried out by governmental or non-governmental entities or through international organizations to which such States are parties. This principle is without prejudice to the applicability of the norms of international law on State responsibility for remote sensing activities.

Principle XV

Any dispute resulting from the application of these principles shall be resolved through the established procedures for the peaceful settlement of disputes.

The Space Millennium: Vienna Declaration on Space and Human Development

(United Nations General Assembly Resolution 54/68, 1999)¹⁹

***Recognizing* the importance of space science and space applications for the fundamental knowledge of the universe, education, health, environmental monitoring, management of natural resources, disaster management, meteorological forecasting and climate modelling, satellite navigation and communications, and the major contribution that space science and technology make to the well-being of humanity and specifically to economic, social and cultural development,**

***Noting* the benefits and applications of space technologies in addressing the unprecedented challenges to sustainable development, and noting also the effectiveness of space instruments for dealing with the challenges posed by the pollution of the environment, depletion of natural resources, loss of biodiversity and the effects of natural and anthropogenic disasters,**

1. *Declare* the following as the nucleus of a strategy to address global challenges in the future:

(a) Protecting the Earth's environment and managing its resources: action should be taken:

(i) To develop a comprehensive, worldwide, environmental monitoring strategy for longterm global observations by building on existing space and ground capabilities,

¹⁹ Adopted without vote.

through the coordination of the activities of various entities and organizations involved in such efforts;

(ii) To improve the management of the Earth's natural resources by increasing and facilitating the research and operational use of remote sensing data, enhancing the coordination of remote sensing systems and increasing access to, and the affordability of, imagery;

(iii) To develop and implement the Integrated Global Observing Strategy so as to enable access to and the use of space-based and other Earth observation data;

(iv) To enhance weather and climate forecasting by expanding international cooperation in the field of meteorological satellite applications;

(v) To ensure, to the extent possible, that all space activities, in particular those which may have harmful effects on the local and global environment, are carried out in a manner that limits such effects and to take appropriate measures to achieve that objective;

(b) Using space applications for human security, development and welfare: action should be taken:

(i) To improve public health services by expanding and coordinating space-based services for telemedicine and for controlling infectious diseases;

(ii) To implement an integrated, global system, especially through international cooperation, to manage natural disaster mitigation, relief and prevention efforts, especially of an international nature, through Earth observation, communications and other space-based services, making maximum use of existing capabilities and filling gaps in worldwide satellite coverage;

(iii) To promote literacy and enhance rural education by improving and coordinating educational programmes and satellite-related infrastructure;

(iv) To improve knowledge-sharing by giving more importance to the promotion of universal access to space-based communication services and by devising efficient policies, infrastructure, standards and applications development projects;

(v) To improve the efficiency and security of transport, search and rescue, geodesy and other activities by promoting the enhancement of, universal access to and compatibility of spacebased navigation and positioning systems;

(vi) To assist States, especially developing countries, in applying the results of space research with a view to promoting the sustainable development of all peoples;

(c) Advancing scientific knowledge of space and protecting the space environment: action should be taken:

(i) To improve the scientific knowledge of near and outer space by promoting cooperative activities in such areas as astronomy, space biology and medicine, space physics, the study of near-Earth objects and planetary exploration;

(ii) To improve the protection of the near-Earth space and outer space environments through further research in and implementation of mitigation measures for space debris;

(iii) To improve the international coordination of activities related to near-Earth objects, harmonizing the worldwide efforts directed at identification, follow-up observation and orbit prediction, while at the same time giving consideration to developing a common strategy that would include future activities related to near-Earth objects;

(iv) To protect the near and outer space environments through further research on designs, safety measures and procedures associated with the use of nuclear power sources in outer space;

(v) To ensure that all users of space consider the possible consequences of their activities, whether ongoing or planned, before further irreversible actions are taken affecting future utilization of near-Earth space or outer space, especially in areas such as astronomy, Earth observation and remote sensing, as well as global positioning and navigation systems, where unwanted emissions have become an issue of concern as they interfere with bands in the electromagnetic spectrum already used for those applications;

(d) Enhancing education and training opportunities and ensuring public awareness of the importance of space activities: action should be taken:

(i) To enhance capacity-building through the development of human and budgetary resources, the training and professional development of teachers, the exchange of teaching methods, materials and experience and the development of infrastructure and policy regulations;

(ii) To increase awareness among decision makers and the general public of the importance of peaceful space activities for improving the common economic and social welfare of humanity;

(iii) To establish and/or strengthen national mechanisms to coordinate the appropriate development of space activities and foster the participation of all the sectors concerned;

(iv) To improve the sharing of information on and use of spin-offs from space activities, in particular between developed and developing countries, by making use of appropriate communications technologies;

(v) To encourage all States to provide their children and youth, especially females, through appropriate educational programmes, with opportunities to learn more about space science and technology and their importance to human development and to participate fully in activities related to space science and technology, as an investment in the future;

(vi) To create, within the framework of the Committee on the Peaceful Uses of Outer Space, a consultative mechanism to facilitate the continued participation of young people from all over the world, especially young people from developing countries and young women, in cooperative space-related activities;

(vii) To consider the creation of awards to recognize outstanding contributions in space activity, in particular for youth;

(e) Strengthening and repositioning of space activities in the United Nations system: action should be taken:

- (i) To reaffirm the role of the Committee on the Peaceful Uses of Outer Space, its two subcommittees and its secretariat in leading global efforts for the exploration and peaceful use of outer space relating to significant global issues;
 - (ii) To assist in the improvement of the capacity-building process in developing countries and countries with economies in transition by emphasizing the development and transfer of knowledge and skills, by ensuring sustainable funding mechanisms for the regional centres for space science and technology education, affiliated to the United Nations, by enhancing support for the United Nations Programme on Space Applications through the provision of adequate resources, and by participating in the implementation of the new strategy of the Programme arising from UNISPACE III;
 - (iii) To encourage the increased use of space-related systems and services by the specialized agencies and programmes of the United Nations system and by the private sector around the world, where appropriate, in order to support United Nations efforts to promote the exploration and peaceful uses of outer space;
 - (iv) To promote the efforts of the Committee on the Peaceful Uses of Outer Space in the development of space law by inviting States to ratify or accede to, and inviting intergovernmental organizations to declare acceptance of, the outer space treaties⁴ developed by the Committee and by considering the further development of space law to meet the needs of the international community, taking into particular account the needs of developing countries and countries with economies in transition;
 - (v) To further consider the agenda structure and working methods of the Committee on the Peaceful Uses of Outer Space and its two subcommittees to better reflect issues of global concern, including international cooperation in space activities, taking into particular account the needs of developing countries and countries with economies in transition, as set out in the report of the Committee on its fortieth session;⁵
 - (vi) To strengthen the coordination of mutually beneficial activities between the Committee on the Peaceful Uses of Outer Space and other United Nations entities;
- (f) Promoting international cooperation: action should be taken to follow up the decision by the States participating in UNISPACE III:
- (i) To take note of the recommendations of the regional preparatory conferences for Africa and the Middle East, for Asia and the Pacific, for eastern Europe and for Latin America and the Caribbean that are relevant to efforts made at the global and regional levels, as set forth in sections A and B, respectively, of the annex to the present Declaration, and to call upon the international community, to the extent feasible, to consider those recommendations in appropriate forums;
 - (ii) To establish a special voluntary United Nations fund for the purpose of implementing the recommendations of UNISPACE III, in particular the activities of the regional centres for space science and technology education, taking into account the recommendations of the regional preparatory conferences. All States should be invited to support the fund financially or in kind in an annual letter from the Secretary-General that will, *inter alia*, identify priority project proposals for enhancing and assisting technical cooperation activities, in particular for human resource development. The Secretariat will provide annually to the Committee on the Peaceful Uses of Outer Space a report listing those States which have responded to the Secretary-General's invitation;

(iii) To adopt measures aimed at identifying new and innovative sources of financing at the international level, including in the private sector, in order to support the implementation of the recommendations of UNISPACE III in developing countries;

(iv) To encourage all States and international organizations to strengthen their efforts in promoting the peaceful uses of outer space for the benefit and in the interest of all States, taking into particular account the interest of developing countries and countries with economies in transition, by facilitating programmes and activities between “space-faring” and “non-spacefaring” countries, as well as among developing countries, and involving civil society, including industry.

World Summit on Sustainable Development Plan of Implementation (Johannesburg 2002)

(...)

119.septies Promote the development and wider use of earth observation technologies, including satellite remote sensing, global mapping and geographic information systems, to collect quality data on environmental impacts, land use and land-use changes, including through urgent actions at all levels to:

(a) Strengthen cooperation and coordination among global observing systems and research programmes for integrated global observations, taking into account the need for building capacity and sharing of data from ground-based observations, satellite remote sensing and other sources among all countries;

(b) Develop information systems that make the sharing of valuable data possible, including the active exchange of Earth observation data;

(c) Encourage initiatives and partnerships for global mapping.

119.octies Support countries, particularly developing countries, in their national efforts to:

(a) Collect data that are accurate, long-term, consistent and reliable;

(b) Use satellite and remote-sensing technologies for data collection and further improvement of ground-based observations;

(c) Access, explore and use geographic information by utilizing the technologies of satellite remote sensing, satellite global positioning, mapping and geographic information systems.

119.noviens Support efforts to prevent and mitigate the impacts of natural disasters, including through urgent actions at all levels to:

(a) Provide affordable access to disaster-related information for early warning purposes;

(b) Translate available data, particularly from global meteorological observation systems, into timely and useful products.

119.diciens Develop and promote the wider application of environmental impact assessments, inter alia, as a national instrument, as appropriate, to provide essential decision-support information on projects that could cause significant adverse effects to the environment.

119.undeciens Promote and further develop methodologies at policy, strategy and project levels for sustainable development decision-making at the local and national levels, and where relevant at the regional level. In this regard, emphasize that the choice of the appropriate methodology to be used in countries should be adequate to their country-specific conditions and circumstances, should be on a voluntary basis and should conform to their development priority needs.

Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters²⁰ (2000)

Preamble

RECOGNISING the potential applications of space technologies in the management of disasters caused by natural phenomena or technological accidents, and in particular Earth observation, telecommunications, meteorology and positioning technologies;

RECOGNISING the development of initiatives concerning the use of space facilities for managing natural or technological disasters;

RECOGNISING the interest shown by rescue and civil protection, defence and security bodies and the need to respond to that interest by making space facilities more easily accessible;

DESIROUS to strengthen international cooperation in this humanitarian undertaking;

HAVING REGARD to United Nations Resolution 41/65 of 1986 on remote sensing of the Earth from space;

BELIEVING that by combining their resources and efforts, they can improve the use of available space facilities and increase the efficiency of services that may be provided to crisis victims and to the bodies called upon to help them;

HEREBY AGREE AS FOLLOWS:

Article I - Definitions

For the purposes of this Charter:

The term "natural or technological disaster" means a situation of great distress involving loss of human life or large-scale damage to property, caused by a natural phenomenon, such as a cyclone, tornado, earthquake, volcanic eruption, flood or forest fire, or by a technological accident, such as pollution by hydrocarbons, toxic or radioactive substances;

The term "Charter" means this text;

The term "crisis" means the period immediately before, during or immediately after a natural or technological disaster, in the course of which warning, emergency or rescue operations take place;

²⁰ Available at: http://www.disasterscharter.org/main_e.html

The term "space data" means raw data gathered by a space system controlled by one of the parties, or to which that party has access, and transmitted or conveyed to a ground receiving station;

The term "information" means data that have been corrected and processed by the parties using an analysis program, in preparation for use in crisis management by one or more associated bodies in aid of the beneficiaries; it forms the basis for the extraction of specific products for use on location;

The term "space facilities" means space systems for observation, meteorology, positioning, telecommunications and TV broadcasting or elements thereof such as on-board instruments, terminals, beacons, receivers, VSATs and archives;

The term "parties" means the agencies and space system operators that are signatories to the Charter;

The term "associated bodies" means the rescue and civil protection, defence and security bodies or other services referred to in Articles 5.2 and 5.3;

The term "cooperating bodies" refers collectively to the various bodies and institutions, referred to in Article 3.5 of the Charter, with which the parties cooperate;

The term "crisis victims" means any State or community for whose benefit the intervention of the parties is sought by the associated bodies.

The term "beneficiary bodies" means all the bodies benefiting from information intended for crisis management; for example, the authorities and bodies concerned in countries affected by a disaster. Certain associated bodies may also be beneficiaries at the time of a disaster.

Article II - Purpose of the Charter

In promoting cooperation between space agencies and space system operators in the use of space facilities as a contribution to the management of crises arising from natural or technological disasters, the Charter seeks to pursue the following objectives:

- supply during periods of crisis, to States or communities whose population, activities or property are exposed to an imminent risk, or are already victims, of natural or technological disasters, data providing a basis for critical information for the anticipation and management of potential crises;
- participation, by means of this data and of the information and services resulting from the exploitation of space facilities, in the organisation of emergency assistance or reconstruction and subsequent operations.

Article III - Overall organisation of cooperation

3.1 The parties shall develop their cooperation on a voluntary basis, no funds being exchanged between them.

3.2 The Charter shall be open, in accordance with the provisions of Article VI below, to space agencies and national or international space system operators wishing to cooperate in it.

3.3 The administrative, operational and technical coordination needed to achieve this cooperation shall be provided by a Board on which each party is represented and an executive Secretariat for implementation of the Charter.

3.4 The authorities and bodies concerned in a country affected by a disaster (beneficiary bodies) should request the intervention of the parties either directly through the rescue and civil protection, defence and security bodies of the country to which one of the parties belongs or of a State belonging to international organisations that are parties to the Charter (associated bodies) or where appropriate via a cooperating body acting in partnership with an associated body. The country affected by a disaster may also make a direct approach to the parties' Secretariat but, for the purposes of the intervention itself, the bodies concerned in that country must engage a partnership with one or more associated bodies.

The above provisions in no circumstances prevent parties intervening on their own initiative.

3.5 The European Union, the UN Bureau for the Coordination of Humanitarian Affairs and other recognised national or international⁶ organisations, whether governmental or non-governmental, are bodies with which the parties may have cause to cooperate in pursuance of the Charter (cooperating bodies). The Board shall maintain a regularly updated list of cooperating bodies.

Article IV - Contributions by the parties

The parties shall use their best endeavours in the conduct of this cooperation, which shall proceed on the following basis:

4.1 Space facilities available for use

The parties shall undertake to maintain an up-to-date list of the available space facilities under their management and, as far as possible, of such space facilities under the management of private or public operators as may be called upon to supplement the parties' own facilities. In particular, the list shall specify for each space system the following details:

- mission characteristics
- orbital characteristics
- operational condition
- programming procedure
- products and services provided by ground systems.

4.2 Scenario-writing

The parties shall together analyse recent crises for which space facilities could have provided or did provide effective assistance to the authorities and rescue services concerned. A report, structured according to the crises identified and the types of situation encountered, and highlighting possible contributions by existing facilities, shall be prepared by the Secretariat in consultation with the associated bodies described in Article V below and where appropriate with cooperating bodies.

Moreover, the parties shall keep abreast of new methods being developed in applied research for warning of, anticipating and managing disasters. Once these new methods (or technologies) have been identified and validated by the design authorities and associated bodies, they may, with the Board's approval, be subjected to pre-operational implementation

testing. A test report and an assessment of the areas of application of the method would then be prepared by the Secretariat.

Lastly the Secretariat shall be responsible for designing and proposing, on the basis set out above, scenarios for each type of crisis. Each scenario shall state the conditions under which the parties.⁷ would coordinate, in the event of a crisis being identified, their action in supplying appropriate information and services, access to the available space facilities being planned accordingly. These scenarios, approved by the Board and regularly updated, shall constitute the basis for action in the event of identification of a crisis.

4.3 Identification of a crisis situation

A crisis situation exists primarily where so identified by a country affected by a disaster and at least one associated body seeking the intervention of the parties under the terms of the Charter, in accordance with the provisions of Article 3.4 above.

The Secretariat shall handle all associated body requests and shall thus have the authority, once it has identified a crisis situation, to arrange for the appropriate action to be taken.

4.4 Planning of space facility availability in the event of a crisis

In the event of a crisis, the parties shall use their best endeavours to plan the availability of space facilities or arrange for it to be so planned.

Such planning shall reflect the provisions described in the corresponding scenarios defined in Article 4.2 above. In the event of an alert or potential crisis, the parties may, in anticipation, plan the availability of the satellite systems under their control.

4.5 Organisation and assistance on completion of planning arrangements

The parties shall use their best endeavours, in accordance with the identified crisis scenarios, to supply associated bodies and, where appropriate, beneficiary bodies with data, and if necessary associated information and services, gathered by the space facilities.

Implementation of the procedures described in the scenarios implies coordination of tasks between the parties, possibly leading to combining of the available resources:

- access to data archives
- merging of the data to aid understanding of pre-crisis situations
- access to data acquired at the time of the crisis
- merging of those data to report on the crisis
- routing of information to the user
- access to all the technological resources available -telecommunications, data collection, navigation.

The procedures for accessing and integrating data or other services (telecommunications, data collection, navigation) to obtain specific products shall, as far as possible, be stipulated in the scenario descriptions.

Article V - Associated bodies

5.1 The role of associated bodies in intervention by the parties is defined in Article 3.4.

5.2 An associated body shall, for the purposes of this Charter, be an institution or service responsible for rescue and civil protection, defence and security under the authority of a State whose jurisdiction covers an agency or operator that is a party to the Charter, or of a Member State of ESA or of an international organisation that is a party to the Charter.

5.3 Any entity or service authorised to this effect by the Board may also be considered an associated body.

5.4 The parties shall ensure that associated bodies which, at the request of the country or countries affected by a disaster, call on the assistance of the parties undertake to:

- alert the Secretariat as soon as possible in the event of a crisis and designate their points of contact;
- promptly provide the Secretariat with the necessary details;
- use the supplied information only for the purposes defined with the Secretariat;
- take part as necessary in the relevant meetings organised by the Secretariat;
- report on the use made of the data, information and services supplied and prepare an assessment of each case for which intervention took place;
- confirm that no legal action will be taken against the parties in the event of bodily injury, damage or financial loss arising from the execution or non-execution of activities, services or supplies arising out of the Charter;
- meet any other condition agreed with the Secretariat or Board..9

Article VI - Accession

6.1 It is the intent of the parties to encourage the widest possible accession to the Charter by agencies and national or international space system operators.

Requests to adhere to the Charter may be made by any space system operator or space agency with access to space facilities which agrees to contribute to the commitments made by the parties under Article IV above and is willing to assume the responsibilities of a party under the terms of the Charter.

6.2 The Board shall examine accession requests and formulate its recommendations to the parties to the Charter within 180 days of their submission. In doing so, it shall consider that any new accession must, in particular:

- bring a significant contribution by the acceding party to the intervention capacity required for the purposes of the Charter and a commitment to bear its share of the common costs;
- help to achieve the objectives of the parties;
- be such as not to compromise normal deployment of the systems already in place.

On the basis of such recommendations by the Board, any accession shall require the unanimous approval of the parties to the Charter.

Article VII - Entry into force, expiry and withdrawal

7.1 The Charter shall enter into force on the day of its signature by at least two parties. It may be terminated at any time by mutual consent of the parties. Any party may withdraw from the Charter after notifying, with 180 days' notice, the other party or parties in writing of its intention to do so. The possibility of pursuing the mission in a modified form shall be

examined by the parties. The party intending to withdraw shall endeavour to maintain continuity of its current contribution.

7.2 Subject to the provisions of Article 7.1 above, the Charter shall remain in force for a period of five years from the date of its entry into force, and shall be automatically extended for subsequent periods of five years.

Article VIII - Implementation

The implementation arrangements for this Charter shall be defined by the parties meeting in the Board.

IN WITNESS WHEREOF, the undersigned have signed the Charter in two originals, one in the French and one in the English language, both texts being equally authentic.

Comment on International Documents

1. Introduction

The progressive development and codification of international law constitutes one of the principal responsibilities of the United Nations in the legal field. An important area for the exercise of such responsibilities is the new environment of outer space and, through the efforts of the United Nations Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee, a number of significant contributions to the law of outer space have been made. The United Nations has, indeed, become a focal point for international cooperation in outer space and for the formulation of necessary international rules.

A significant first step was the adoption by the General Assembly in 1963 of the *Declaration of Legal*

Principles Governing the Activities of States in the Exploration and Use of Outer Space (1963 Declaration of Legal Principles)

The years that followed saw the elaboration within the United Nations of five general multilateral treaties, which incorporated and developed concepts included in the 1963 Declaration of Legal Principles:

- The *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies* (General Assembly resolution 2222 (XXI), annex)—adopted on 19 December 1966, opened for signature on 27 January 1967, entered into force on 10 October 1967;
- The *Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space* (resolution 2345 (XXII), annex)—adopted on 19 December 1967, opened for signature on 22 April 1968, entered into force on 3 December 1968;
- The *Convention on International Liability for Damage Caused by Space Objects* (resolution 2777 (XXVI), annex)—adopted on 29 November 1971, opened for signature on 29 March 1972, entered into force on 1 September 1972;

- The *Convention on Registration of Objects Launched into Outer Space* (resolution 3235 (XXIX), annex)—adopted on 12 November 1974, opened for signature on 14 January 1975, entered into force on 15 September 1976;
- The *Agreement Governing the Activities of States on the Moon and Other Celestial Bodies* (resolution 34/68, annex)—adopted on 5 December 1979, opened for signature on 18 December 1979, entered into force on 11 July 1984.

Moreover, the United Nations oversaw the drafting, formulation and adoption of five General Assembly resolutions, including the 1963 Declaration of Legal Principles. These are:

- The *Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space*, adopted on 13 December 1963 (resolution 1962 (XVIII));
- The *Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting*, adopted on 10 December 1982 (resolution 37/92);
- The *Principles Relating to Remote Sensing of the Earth from Outer Space*, adopted on 3 December 1986 (resolution 41/65);²¹
- The *Principles Relevant to the Use of Nuclear Power Sources in Outer Space*, adopted on 14 December 1992 (resolution 47/68);
- The *Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States, Taking into Particular Account the Needs of Developing Countries*, adopted on 13 December 1996 (resolution 51/122).

The 1967 *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies*, could be viewed as furnishing a general legal basis for the peaceful uses of outer space and providing a framework for the developing law of outer space. The four other treaties may be said to deal specifically with certain concepts included in the 1967 Treaty. The space treaties have been ratified by many Governments and many others abide by their principles.

2. UN Space Law and the International Management of Natural Disaster Mitigation, Relief and Prevention Efforts

Space technologies can play important roles in the reduction of disasters. The use of such technologies can be particularly useful in the risk assessment, mitigation and preparedness phases of disaster management. Space technologies are also vital to the early warning and management of the effects of disasters.

In its resolution 54/68 of 6 December 1999, the General Assembly endorsed the resolution entitled *The Space Millennium: Vienna Declaration on Space and Human Development*²² (1999 Vienna Declaration). This Declaration included a number of recommendations, one of which called for action to be taken to implement an integrated, global system, especially

²¹ See Document 1.

²² See Document 2.

through international cooperation, to manage natural disaster mitigation²³, relief and prevention efforts, especially of an international nature, through Earth observation, communications and other space-based services, making maximum use of existing capabilities and filling gaps in worldwide satellite coverage.

In this perspective, the *United Nations Programme on Space Applications* is implementing a *Natural Resources Management and Environmental Monitoring Programme* (NRM&EM) to support countries in incorporating space-based solutions for solving environmental monitoring and natural resources management issues.

Space technologies play important roles in the areas of natural resources management and environmental monitoring. Remotely sensed data, in particular, provide an unparalleled view of the Earth for studies that require synoptic or periodic observations such as inventory, surveying, and monitoring in agriculture, hydrography, geology, mineralogy, land cover, land use and environment.

The NRM&EM Programme builds upon several on-going initiatives: the goals addressed in the *UN Millennium Declaration*, the plan forward presented in the *Plan of Implementation of the World Summit on Sustainable Development* held in Johannesburg in 2002 are the most relevant ones.

The *UN Millennium Declaration*, adopted in September 2000 by all 189-member states of the United Nations, defines a key framework for global cooperation in the 21st century. The vision described in the Declaration addresses issues related to peace, cooperation and sustainable development. The Declaration translates fundamental values and principles into well-defined objectives in the form of eight Millennium Development Goals, and is considered a concrete and ambitious agenda to significantly improve the human condition by 2015. Space-based technologies and space in a broader sense offer significant and unique solutions to many of the target goals set by the *Millennium Declaration*.

Additionally, the contribution of space science and technology was also well identified during the *World Summit on Sustainable Development* (WSSD) that took place in Johannesburg in 2002. The WSSD Plan of Implementation makes explicit reference to the utilisation of space-based facilities for the support and implementation of sustainable development actions.²⁴

3. UN Agencies and Institutions using Space Technologies in the Disaster Management

a. International Strategy for Disaster Reduction (ISDR)

Recognition of the fact that disasters were an increasing problem led to the launching of the International Decade for Natural Disaster Reduction for the period 1990-1999, which, in turn, led to the establishment of the ISDR, a global strategy with two institutional components. The first one is the Inter-Agency Task Force for Disaster Reduction and the second component is the secretariat of the Task Force. The International Strategy focuses on consolidating a global strategy to encourage and facilitate concerted action to reduce risk and vulnerability to natural and related technological and environmental hazards, bringing together governments, business, academia and civil society at the international, regional and local level facilitating concerted action and dialogue among experts, decision makers and project managers.

²³ See Document 2, point 1.b (ii).

²⁴ See Document 3.

In 2003, the ISDR promoted two activities that provided opportunities to focus on space technology for disaster management: the first was the Euro-Mediterranean Forum on Disaster Reduction, held in Madrid, from 6 to 8 October 2003, and the second was the Second International Conference on Early Warning, held in Bonn, from 16 to 18 October 2003.

b. Office of the United Nations High Commissioner for Refugees (UNHCR)

The UNHCR is mandated to lead and coordinate international action to protect refugees and resolve refugee problems worldwide. In order to carry out its mandates, UNHCR is increasingly using space-based technologies such as satellite imagery and global navigation satellite systems to help manage refugee camps around the globe.

c. Office for the Coordination of Humanitarian Affairs (OCHA)

The work of the OCHA focuses on three core areas: (a) policy development and coordination functions in support of the Secretary-General, ensuring that all humanitarian issues, including those which fall in gaps between existing mandates of agencies, such as protection and assistance for internally displaced persons, are addressed; (b) advocacy of humanitarian issues with political organs, notably the Security Council; and (c) coordination of humanitarian emergency response on the ground, by ensuring that an appropriate response mechanism is established through Inter-Agency Standing Committee consultations. In order to support its coordination activities during humanitarian emergency response, the OCHA is increasingly using space-based technologies.

d. United Nations Educational, Scientific and Cultural Organization (UNESCO)

The work of the UNESCO is focusing on building a culture of prevention to counter disasters and reduce vulnerability of populations at risk. UNESCO is engaged in the assessment and mitigation of risks arising from hazards of geological origin (earthquakes, tsunamis, volcanic eruptions and landslides) and contributes to the study of hazards of meteorological origin (storms, floods, prolonged drought and desertification).

UNESCO also fosters information, education, transfer of data and experience among countries and communities aiming at integrating geohazard knowledge and expertise in decision-making processes in order to encourage the adoption of policies and actions for sound planning and management of land-use and construction techniques and to promote the development of preventive and preparedness plans, including the implementation of global to local warning systems.

4. Other Initiatives dealing with the Uses of Space Technologies in Disaster Management

a. The Charter on Cooperation to Achieve the Coordinated Use of Space in the Event of Natural or Technological Disasters²⁵

Following the 1999 Vienna Declaration the European and French space agencies (ESA and CNES) initiated the *Charter on Cooperation to Achieve the Coordinated Use of Space Facilities in the Event of Natural or Technological Disasters* (also known as the International Charter Space and Major Disasters) with the Canadian Space Agency (CSA) signing the Charter on October 20, 2000. The institutions participating in the Charter are the European Space Agency (ESA), the Centre national d'études spatiales (CNES) of France, the Canadian

²⁵ See Document 4.

Space Agency, the Indian Space Research Organization, the National Oceanic and Atmospheric Administration (NOAA) of the United States of America, and the Comisión Nacional de Actividades Espaciales (CONAE) of Argentina.

In 2003 the United Nations Office for Outer Space Affairs was accepted as a cooperating body to the Charter, which enables it to have access to support in the event of disasters concerning the United Nations system and Member States. This mechanism was for example used in 2003 in response to floods in Nepal, in the Dominican Republic as well as in response to landslides in The Philippines.

The International Space and Major Disasters Charter enables countries where a natural or technological disaster has occurred to receive a unified system of space data derived from satellite images to support disaster mitigation activities.

The only bodies authorized to request the services of the Charter are the authorized users, who have been given the single confidential phone number. An authorized user is a civil protection, rescue, defense or security body from the country of a Charter member. Those eligible to become members of the Charter include space agencies and national or international space system operators.

The International Charter on Space and Major Disasters is the expression of a collective response. It put space technology at the service of rescue authorities in the event of a major disaster. The Charter is increasingly recognised as the most successful example of joint satellite operations providing tangible benefits. The civil protection community recognises this mechanism as a valuable tool, which had started attracting a wider community through United Nations organisations.

b. An European Example of the Use of the Charter

November 21, 2002 - As the oil tanker Prestige was floundering off the coast of Spain, the Canadian satellite RADARSAT-1 was dispatched, under the International Charter Space and Major Disasters, to acquire images in support of relief efforts being undertaken. The RADARSAT-1 image was processed by Radarsat International and delivered to the French Space Agency for interpretation. Delivered to the Environment Division of the European Commission and the Spanish authorities in Galicia, this image has helped validate the terrain elevation and define the area of the disaster and has been characterised as being very valuable to their ongoing efforts.

The International Charter on Space and Major Disasters partners have activated the Charter following a request received through the European Commission on November 14, 2002. Space-agencies, members of the International Charter, tasked their satellites to capture images over the disaster area. These space-based resources include the Canadian Space Agency's RADARSAT-1, the European Space Agency's ERS-2 radar satellite and Envisat, the French space agency's optical SPOT satellites. Note that the RADARSAT-1, which was the only satellite available at the time of the request, captures data in any weather conditions, day and night.

b. Committee on Earth Observation Satellites (CEOS)

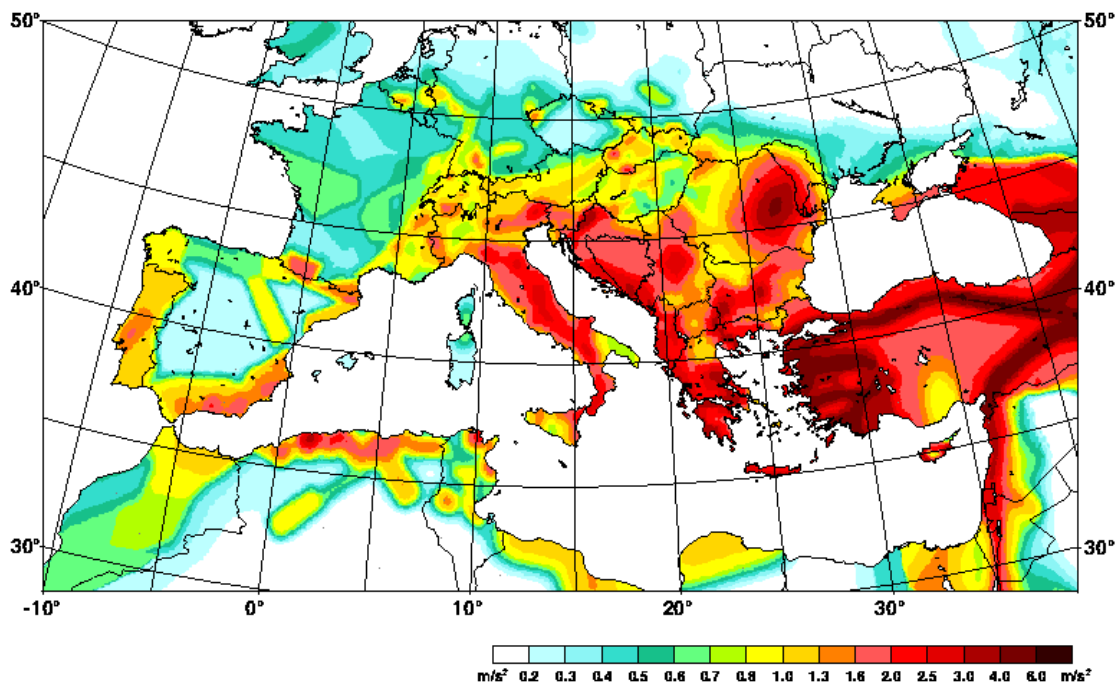
The CEOS is an international organization charged with coordinating international civil space-borne missions designed to observe and study the Earth. CEOS, whose membership is comprised of space agencies and other national and international organizations, is recognized as the major international forum for the coordination of Earth observation satellite programmes and for interaction of those programmes with users of satellite data worldwide.

Attachment 10: Proposal 1: GMOSS Workshop: Earthquake in Istanbul

Istanbul Technical University prior to the WISC conference in Istanbul

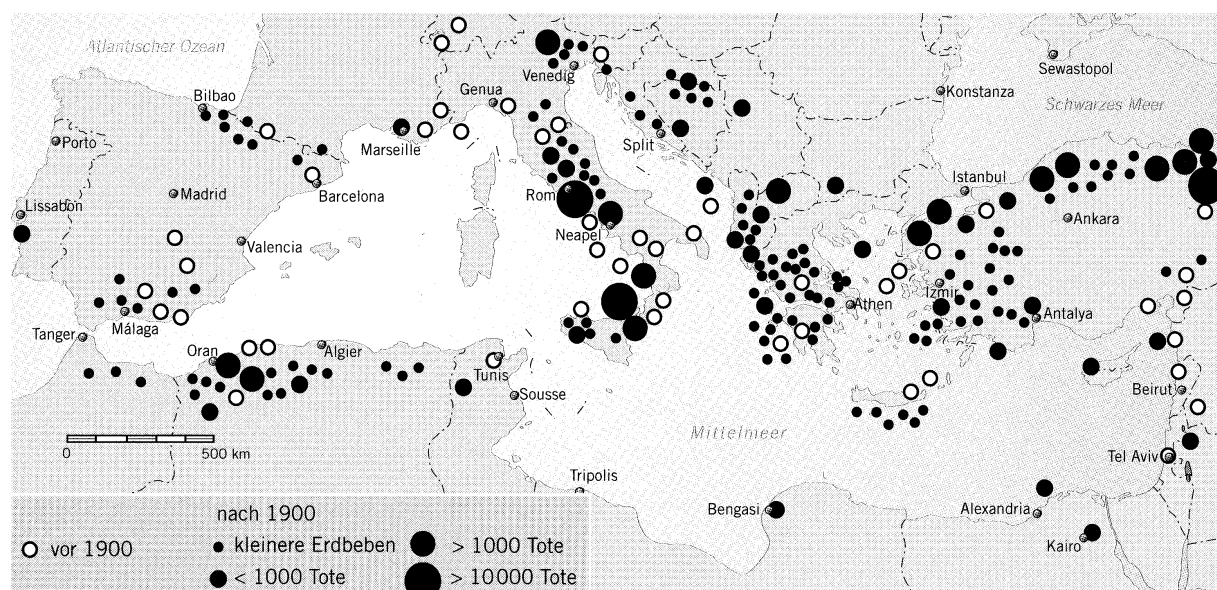
For the years from 1975 to 2001, in the Mediterranean geophysical disasters caused most fatalities (especially in Turkey, Italy and Algeria), while hydro-meteorological disasters (winter storms in France, drought in Spain, Albania, Syria and Morocco) caused an increasing number of affected people. Turkey, a prospective EU candidate country, is most vulnerable.

Figure 1: Seismicity in the Mediterranean region (source: UNESCO, RELEMR)



Since 1900, about 60 major earthquakes have been recorded for the Mediterranean space, about 20 in north-western Turkey. During the 20th century, globally earthquakes caused about 1.5 million, and in the Mediterranean at least 250,000 fatalities, especially in the coastal regions that have grown rapidly and thus experienced most of the material damages.

Figure 2: Earthquakes in the Mediterranean during the 20th Century (Wagner 2001: 214, based on Villevielle 1997: 12)



In Turkey most of the listed events were earthquakes that also caused the most fatalities (and most people that were affected). The compilation based on data published by Munich Re indicates that earthquakes have been the major cause of natural disasters in South-eastern

Europe and Turkey during the 20th century. In 1998 and 1999, among the 100 major disasters worldwide for both years, there were three earthquakes and one flood event in Turkey.

On 17 August 1999, the worst natural disaster in Turkey in 60 years, struck Izmit, Istanbul, Gölcük, Kocaeli, Skarya and Yalova. This earthquake lasted only 45 seconds and had an intensity of XI (MSK). It damaged and destroyed about 300,000 houses, damaged 50,000 businesses, including major losses to industry and the ports, as well as to roads, motorways and bridges. Both the water and the power supply was disrupted. According to the entry in the MR NatCat Service, about 15,000-17,200 people died, 32,000 were injured, and about 600,000 persons lost their home. Munich Re estimated the economic losses due to this single event to US\$ 12,000 million and the insured losses at US\$ 600 million.

Based on Munich Re data, table 1 lists for Turkey after 1995 five events of severe floods and heavy storms. Between 6 and 22 May 1998, Turkey experienced the worst rainfall in 60 years, including large hail, landslides and mudslides that flooded and isolated hundreds of villages. As a result thousands of houses were flooded, hundreds of houses and many businesses and vehicles were destroyed. In addition many roads, railroads were damaged and 25 bridges were destroyed, and power and communication lines were cut. This single event caused major losses to agriculture amounting to US\$ 1,100 million (cotton crops), but also to livestock (poultry and cattle). As a result of this event 27 people died and several hundred were made homeless. Munich Re estimated the total losses of this flood at US\$ 2 billion.

Table 1: Damages from Major Catastrophes in Turkey (1900-2001)

Country	Date	Event	Areas Affected	Deaths	Losses in mio. US\$	
					Economic	Insured
Turkey	1268	Earthquake	Kilikia	60,000		
	29.4.1903	Earthquake	Malazgirt	6,000		
	26.12.1939	Earthquake	Erzincan	32,740	20	
	26.11.1943	Earthquake	Tosya-Ladik	4,013	25	
	1.2.1944	Earthquake	Bolu-Gerede	3,959	25	
	19.8.1966	Earthquake	Varto	2,500	35	
	28.3.1970	Earthquake	Gediz	1,086	9	
	24.11.1976	Earthquake	Muradiye, Manisa, Caldiran	3,626	25	
	30.10.1983	Earthquake	East Anatolia	1,346		
	13.3.1992	Earthquake	Erzincan	547	750	
	1.5.1995	Flash floods	East, Bitlis		23.5	
	8.-14.7.1995	Floods	Istanbul, Ankara, Trabzon	70	30	
	1.10.1995	Earthquake	Dinar area, Evciler, Afyon	94	205	
	3.-5.11.1995	Flash floods	Izmir, Karsiyaka, Antalya	61	50	
	6.-22.5.1998	Floods	North, South	27	2,000	
	27.6.1998	Earthquake	Southeast, Adana,	144	550	>1
	17.8.1999	Earthquake	Southwest, Izmit, Kocaeli	>17,200	12,000	600
	12.11.1999	Earthquake	Northwest, Düce, Adapazari	835	1,000	40
	Dec. 2001	Storm, floods	Mereson, Izmir, Istanbul, Ankara	4	30	

Since 1950, the population in many earthquake prone areas has rapidly increased and is projected to increase further, e.g. for Istanbul from 1 million in 1950 11.4 million in 2015.

Table 3: Growth of Urban Centers in Greece and Turkey, 1950-2015 (million, UN 2002)

City	1950	1955	1960	1965	1970	1975	1980	1985	1990	1995	2000	2005	2010	2015
Athens	1.8	2.0	2.2	2.4	2.5	2.7	3.0	3.0	3.0	3.1	3.1	3.1	3.1	3.1
Istanbul	1.08	1.37	1.74	2.20	2.79	3.60	4.40	5.41	6.54	7.66	8.96	9.95	10.72	11.36
Ankara	0.54	0.69	0.87	1.09	1.35	1.71	1.89	2.21	2.54	2.83	3.16	3.38	3.58	3.78
Izmir	0.48	0.56	0.66	0.77	0.89	1.05	1.22	1.47	1.74	1.97	2.21	2.39	2.55	2.70

There has been some discussion among geophysicists and earthquake specialists that an earthquake may hit Istanbul within the next 20 to fifty years. The impact of the last earthquake in Izmit, just 50 km outside of Istanbul, was dramatic.

In Turkey 23 of 63 reported events (1975-2001) were earthquakes that caused most fatalities (26,087) and affected 2,377,128 persons. The earthquake with the highest economic losses (US \$12 billion) and the second highest fatalities in the 20th century occurred on 17 August 1999 when 17,200 persons died. According to an ISDR report the continued high vulnerability of Turkey is attributable to: a) population growth and urbanization; b) the failure to - apply existing building regulations consistently, and c) the siting of industrial facilities wherever space is available, with no regard for environmental protection rules. In this earthquake 321,000 people lost their jobs and about 600,000 became homeless. On 16 November 1999, the World Bank granted two loans totaling US \$757.53 million, and on 9 February 2000, the European Investment Bank provided a EUR 450 million facility. The impact would be more severe if a future earthquake should strike Izmir, Istanbul or Ankara due to high population density in sectors with informal housing. Geologists have predicted a major earthquake with an intensity of 7 up to 7.9 on the Richter scale with a probability of 62% during the next 30 years when the population of Istanbul and its density will have significantly increased.

Let me conclude:

1. Thus, the event has a **certain (62%) probability**, the impact may be a mega-catastrophe and the worst possible event in European history and for the European Union and its prospective candidate country.
2. The European Union has already a **functional security competency** (Ekengren 2004) to act jointly against such a catastrophe.
3. **NATO** has spent 15% of its Collaborative Linkage grants in Turkey on **earthquake studies**. Turkey has been involved in 10 CCMS studies on **non-traditional threats** to security, among them on the security of narrow waterways. The NATO Science Committee launched a working group on combating the effects of future earthquakes that resulted in several earthquake studies. In 2000, a NATO study started on mapping the Marmara fault. One aspect has been the assessing earthquake impacts on urban areas.
4. During the NATO Istanbul summit three Turkish institutes were awarded a prize for achievements in research on the prevention of the consequences of earthquakes and for their work in fostering cooperation between NATO and partner countries.
5. **The Euro-Atlantic Disaster Response Coordination Centre has been a major actor in NATO's civil emergency planning.**
6. Italian project in framework of Barcelona process on civil emergency training.

AFES-PRESS proposes herewith a one day workshop of **GMOSS remote sensing specialists and the Turkish earthquake specialists** led by Prof. Mustafa Erdik, Bosphorus University in Istanbul, and with Turkish experts on oil spills and tanker accidents to discuss:

- a) remote sensing capabilities for **earthquake impact assessment**;
- b) remote sensing capabilities for the impact assessment of a **major accident with an oil tanker in the Bosphorus**;
- c) remote sensing capabilities for the **impact assessment of a terrorist attack on sensitive infrastructure** (oil pipeline from Caspian Sea to Mediterranean) in the region;

Such a workshop would be highly policy-relevant and may lead to a policy relevant *off the record* gaming session in Brussels where both **NATO and EU (DG Environment, Civil Protection)** and other actors could be involved. Such an effort needs much preparation and additional funding that could lead to **integrated research projects with Turkish colleagues** and could thus make a direct contribution to the negotiation process for Turkish EU membership that may be launched by the European Council in December. Such an effort would be in **full compliance with Solana's European Security Strategy** to contribute to damage prevention. The **GMOSS** network of excellence could thus make a major policy relevant contribution.

Part IV: AFES-PRESS GMOSS critique, funding proposal, and training (3 pages)
Attachment 11: AFES-PRESS 3rd draft for the GMOSS Brochure, 20.1.2005

It is generally agreed that the concept of security has widened and deepened and that new military threats as well as environmental challenges, manifold vulnerabilities and risks have evolved since 1990 on the agenda.

In order to answer some of these questions the GMOSS partners are working in two main directions. Firstly defining how globalisation, climate change, desertification, water scarcity, population changes, urbanisation and food needs, as well as disasters and migration affect Europe's security and secondly developing a hierarchy of both hard military threats from malicious attacks, and soft non-military security threats, challenges, vulnerabilities and risks (e.g. related natural hazards and disasters that were partly also caused by human behaviour).

Since 1990, in most EU countries a wide security concept has emerged that has included besides the narrow military and diplomatic also economic, societal and environmental dimensions. A consensus exists among many UN institutions and EU countries that security has not any longer only the nation state as a referent but that it is also "human-centred" (K. Annan). Security focuses on both "freedom from fear" and "freedom from want" (human security). Table 1 illustrates five dimensions (widening) and five referents or levels of security analysis (deepening), and sectoral (water, food, health, livelihood) security concepts.

There is no global consensus what we mean by security or which (military, political, economic, societal and environmental) security threats, challenges, vulnerabilities and risks are most imminent, most probable or most destructive or which rapid-onset (earthquakes, drought, storms, floods, tsunamis) or slow-onset (due to global environmental change) hazards and disasters may become security issues. Security perceptions differ and are influenced by the worldviews of analysts and the mindsets of policymakers. The security reality and the knowledge thereof are socially constructed.

Tour of the Peace Palace in The Hague prior to the Third AFES-PRESS GMOSS workshop



Furthermore, AFES-PRESS concentrated on

- forming an editorial team of eight colleagues;
- committing 200 authors from all part of the globe,
- negotiating a publication contract for two volumes with the major scientific publisher Springer.
- Maintaining an AFES-PRESS GMOSS website section where all papers and activities are posted



Co-editors at work after the workshop in The Hague (from left to right: Liotta (USA), Mesjasz (Poland), Chourou (Tunisia), Grin (Netherlands), Oswald (Mexico), Brauch (Germany), Behera (India))

In August 2004 publication agreements were signed with Springer for two volumes on: "Globalisation and Environmental Challenges: Reconceptualising Security

Table 1: Vertical Levels and Horizontal Dimensions of Security Concept in North/South

Security dimension ⇒ Level of interaction (reference point) ↓	Military security	Political security	Economic security	Environmental Security ↓	Social (societal) security
Human →			Energy, food, health, livelihood security concepts		
Societal/Community					
National security	Primary U.S. focus		EU countries focus on national and regional		
International/Regional	European security issues on 5 security dimensions				
Global/Planetary →			Energy sec.	Food security	Health sec.

AFES-PRESS focused on security challenges in the 21st century by linking the environmental and security dimensions of GMES. AFES-PRESS organised three workshops with major international conferences:

- 45th Annual ISA Convention Montreal, Quebec, Canada, March 17-20, 2004 [all papers are at: http://www.afes-press.de/html/download_isa.html]
- 20th IPRA Conference in Sopron (Hungary), 5-9 July 2004 [papers are at: http://www.afes-press.de/html/download_sopron.html]
- 5th Pan-European Conference on International Relations, The Hague, 9-11 Sept. 2004 [Papers are at: http://www.afes-press.de/html/the_hague.html]

in the 21st Century" and "Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts". It will include contributions from other GMOSS partners.

A preliminary classification of post-cold-war malicious threats to security by FOI has begun. Preliminary results indicate a shift of the "old threats" – nuclear attack, border conflict – from Europe to Asia. In post-modern Europe the most probable threats are from proliferation of weapons of mass destruction, terrorism and organized crime. Future work will aim to map these threats more precisely in order to focus a part of the research effort in the work packages aimed at monitoring or mitigating these threats.

Attachment 12: AFES-PRESS CONTRIBUTION TO GEMOSEC APPLICATION

2.2 BACKGROUND

THE FOLLOWING TEXT WAS REDRAFTED BY AFES-PRESS:

Security as “freedom from fear and want” is a basic social value of humankind. According to a classic definition by WOLFERS „Security, in an *objective sense*, measures the absence of threats to acquired values, in a *subjective sense*, the absence of fear that such values will be attacked.” The *perception* of security threats, challenges, vulnerabilities and risks depends on the worldviews or traditions of the analyst and on the mind-set of policy-makers and their advisers. Security has also been a key concept of two competing schools of a) *war, military, strategic or security studies*, and b) of *peace and conflict research* that has focused on war prevention.

With the end of the Cold War, the narrow military and political security concept has been extended to include economic, societal and environmental dimensions. It has also been deepened from “national or alliance security” to include individuals and humankind, societal groups, regions and the globe as referent objects of securitisation. Two fundamentally different concepts of security coexist, a narrow state-centered political and military “national” security concept and a wide security concept that focuses on human beings (human security) or the citizen (security for the citizen). Within the UN system a “human-centred concept” of security has evolved.

The European Union, being neither a nation state nor a federation of states, nor having its own citizens, has difficulties in making the “nation-state” or its “citizens” the referent of its security policy. In September 2004, a distinguished group of security experts proposed a “Human Security Doctrine for Europe” to implement the Solana European Security Strategy. In the framework of the new European constitution a scientific debate is needed on the development of a specific new security concept that combines “supranational elements” with a “human-centred” focus.

Security is one of the basic needs of mankind, both individually and collectively. It is an important prerequisite for economic growth, investments and job creation as well as a powerful driving force for human ingenuity. Over time the definition and perceptions of security have changed due to external and internal conditions. With the end of the Cold War, Europe and the rest of the world faced new security challenges. The attack of September 11 2001 added a perception of new vulnerabilities of industrialised countries. But also large-scale non-military security threats, challenges, vulnerabilities and risks to people sharpened both collective and individual anxieties. The distinction between hard military and soft non-military dangers, activities and priorities is blurred. Economic globalisation has been challenged by transnational terrorism and international crime, and both created new security problems in the early 21st century. The sciences’ traditional deep division into military research, isolated pockets of technological research, and the social and political sciences is coming into question. Terrorism and international crime have not only led to the globalisation of our security dependence, but also to emerging fields concerned with non-military security research, the redefinition of threats, and society’s response options.

The interdisciplinary character of the RTN re-establishes public ownership of security as a normal function of society rather than (as in the Cold War model) conflates security thought, analysis and policy with the much narrower and secretive world of military defence. It is precisely through the network proposed here, and through the work of initiatives like GMOSS, that a response to the human and societal demands for security can begin to incorporate so-called ‘soft’ security issues: human, environmental, natural, etc. Interdisciplinary and coordinated research is of critical importance to generate both the technologies and the understanding that we need to adjust to new dangers. Technology provides information on threats, contributes to protection and, where appropriate, enables society to counter them. But a prerequisite is that a consensus exists within society on the nature of these dangers to security, and the political will and the means to put preventive activities and countermeasures in place. Thus, the training of the next generation of young scientists is crucial for developing a dialogue across disciplinary boundaries and for establishing the necessary contacts, and by all that to begin providing the basis for sound decision-making on security issues both at home and abroad.

Attachment 18: Seminar: Reconceptualising Security in the 21st Century

FU Berlin, OSI Graduate Seminar: 21.2.-23.2. 2005, 9.00–18.00, Room 21-E in OSI

- 1. 22.11.2004: Introduction on the facets of the security concept and distribution of seminar topics**

Monday, 21 February

- 2. 9.00-10.30: Was the contextual change of 1989 or 2001 instrumental for a conceptual change of security?**

R-1: Brauch: Introduction: What triggers reconceptualisations of security: international context or scientific revolutions?

R-2: Urquia: Global international contextual changes: a) Vienna concert, b) Versailles treaty, c) Yalta summit, d) B. wall

- 3. 10.45-12.15: What influences security perceptions: Traditions, worldviews, mindsets on security**

R-3: Wilgus: The English School: Three traditions of Hobbes, Grotius and Kant (M. Wight)

R-4: Sottsas: What security means for policy makers: Role of mindsets (K. Booth) and/or operational codes

- 4. 13.00-14.30: Conceptual quartet of peace, security, development & environment: Reconceptualisations since 1990**

R-5: Schüttler: The classical relationship: security and peace linkages since the UN charter

R-6: Nge: The new relationship: security with development and/or environment

- 5. 14.45-16.15: Widening and deepening of security during the 1990s: The Copenhagen school**

R-7: Daimer: Widening: the five dimensions: political, military, economic, societal, environmental

R-8: Kim: Meaning of security in other cultures and regions of the world: e.g. in South and East Asia

- 6. 16.30-18.00: Cultural contexts for a reconceptualisation of security in Africa**

R-9: Aikens: Reconceptualising of National and Human Security in (West) Africa

R-10: Yopa: (Re)conceptualising societal and/or environmental security in Africa

Tuesday, 22 February

- 7. 9.00-10.30: Spatial context and referents of security concepts: two cases**

R-11: Höfer: Concepts of regionalism and regional security

R-12: Reichel: Globalisation and global security concepts

- 8. 10.45-11.30: Reconceptualisation of security in scientific disciplines since 1990**

R-13: Weum: Reconceptualisation of international security since 1990

- 9. 11.45-13.15: Reconceptualising the dimensions of security (scientific and political debates since 1990)**

R-15: Siegel: (Re)conceptualising of political and military dimensions: debate in Europe and in the US

R-16: Gebauer: (Re)conceptualising societal and/or environmental security

- 10. 14.00-15.30: Security conceptualisation of causes of global environmental change and of fatal effects**

R-17: Pentzlin: Environmental challenges for security, e.g. climate change, desertification and/or water degradation/scarcity

R-18: Benz: Fatal outcomes of Global Environmental Change: disasters/distress migration as security threats or challenges?

- 11. 15.45-18.00: Institutional security concepts revisited for the 21st century (UNDP, UNESCO, OSCE, NATO, EU)**

R-19: Hensen: Reconceptualisation of security within the UN-system: UN, UNDP, UNESCO

R-20: Dubreuil: Reconceptualisation of security within European institutions: EU or NATO

R-20a: Schönrock: Reconceptualisation of security within European institutions: OSCE

Wednesday, 23 February

- 12. 9.00-10.30: Sectoral security concepts revisited for the 21st century**

R-21: Brauch: Introduction: Sectorialisation of Security: Food, health, water and livelihood security concepts

R-22: Rother: Energy security concepts: an assessment

- 13. 10.45-12.15: Global and regional environmental and human security revisited**

R-23: Brauch: Introduction: Three phases of environmental security research

R-24: Herkt: Comparing human security concepts: The human security network vs. the Human Security Commission

- 14. 12.45-14.15: Reconceptualising security for the 21st century: Threats, challenges, vulnerabilities, risks**

R-25: Ehmann: New subjective security threats, challenges, vulnerability and risks in the 21st century

R-26: Brauch: Additional remarks: New objective security threats, challenges, vulnerability and risks in the 21st century

- 15.00-18.00: Towards a more Secure World: Special Event Friedrich-Eberst-Stiftung, Hiroshima-Str.17**

AG Friedensforschung und Europäische Sicherheitspolitik
Peace Research and European Security Studies (AFES-PRESS) e.V.
PD Dr. habil. Hans Günter Brauch, Alte Bergsteige 47, 74821 Mosbach, 13 March 2005
☎ 49-6261-12912 📠 49-6261-15695 📧 afes@afes-press.de ☐ <http://www.afes-press.de>

WP 21.000: Security concepts, early warning and conflict prevention

Work package leader – AFES-PRESS (contact: Hans Günter Brauch, Germany)

Deputy work package leader – Heinz Krummenacher, Swisspeace

Partners:

AFES-PRESS

Swisspeace

JRC, Early Warning Activities and/or coediting of a book (invited, not yet confirmed)

In the post World War II era “security” was defined in a very narrow sense as “national” and “alliance security”. It encompassed all forms of military threats and indirect warfare, while non-military aspects of existential threats to mankind were not in the focus of those who defined the security concept. This slightly changed in the 1970s when in the aftermath of two energy crises the concept was expanded to include international economics. Twenty years later, as Cold War tensions faded and accelerating globalisation demonstrated individual nation states’ vulnerability, an even broader political discussion emerged on what constitutes security. On the one hand it was argued that the growing number of economic, ecological, and societal risks demanded a redefinition of the security concept, and on the other hand it was more and more questioned whether the nation state was able to come up with the adequate response strategies to meet the new security challenges. Generally, the attitude gained ground that the assumptions and institutions that had governed international security policy in the past were a poor fit with the new realities. While the necessity to redefine the security concept was more and more acknowledged in the 1990s, especially within the foreign policy and development assistance communities, it was never clearly delineated. The failure to do so led to a major drawback as the war on terrorism has become the paramount security issue after September 11. This single event sufficed to completely eclipse two decades of discussions on a broader definition of security.

In our joint view, a renewed narrowing of the security debate to the “new form of terrorism” and on “homeland security” does not reflect the assessments of most EU and other European countries. Firstly, because the risk emanating from Islamic terrorism is vastly exaggerated, secondly – and more important – because non-military threats to state and human security remain a reality and exceed the terrorist danger by far. Ecological threats such as climatic change, deforestation, soil degradation due to overcultivation, overgrazing, erosion, salinisation, and waterlogging are root causes of violent conflicts all over the world. Environmental decline, however, only occasionally leads directly to violence. More often, the link between environmental pressure and violent conflict is not that obvious. Its impact on a nation’s security is only felt indirectly when ecological deterioration leads to poor economic performance and, therefore, political instability. Economic conditions in sub-Saharan Africa, for example, reached catastrophic dimensions during the past two decades, and a large share of the economic woes can be traced to Africa’s dependence on a fragile and abused natural resource base.

In this regard, the new WP 21.000 builds on the rich experience of Swisspeace in the context of the ENCOF project (Bächler/Spillman) on environment and security linkages, on the work of the Swiss National Centre of Competence in Research North-South (NCCR North South) in which staff members of Swisspeace and AFES-PRESS are already involved, as well as on the activities of the United Nations University (UNU), and its new institute on Environment and Human Security (UNU-EHS) in which AFES-PRESS staffers are involved.

This social science research in which AFES-PRESS, Swisspeace and other partners are involved is of direct relevance for the:

- **European Commission:** for the *Strategic Objectives 2005-2009: Europe 2010: A Partnership for European Renewal - Prosperity, Solidarity and Security* announced by the President and Vice-president of the Commission (26.1.2005, COM(2005) 12 final, and all follow-up documents (Commission Work Programme for 2005, 26.1.2005, COM(2005) 15 final; Roadmaps for the Commission Work Programme 2005 on security; GMES, 3.2.2004, COM(2004) 65 final). The Barroso Commission has outlined these **Strategic Objectives 2005-2009** on security:
 - The European institutions must tackle the risks faced by citizens in their daily life ... Freedom can only be enjoyed within a framework of security provided by law.
 - Security is also about the ability of citizens to run their daily life on a secure basis. This can be **put at risk by natural disasters, environmental or health crises and transport and energy threats**: The Union has a role to play at all stages: **risk prevention, early warning, crisis management, and acting in solidarity with the victims of disasters**.

The Barroso Commission refers to the task of the following DGs: a) 3.1. Security and Justice in Europe (DG Freedom Security and Justice), b) 3.2. Managing risk in the modern world (DG Env, Civil Protection), c) 4.1. a stronger actor in the world economy (DG Trade), 4.2. Global solidarity (DG Dev, External Assistance, ECHO), and 4.3 Making Security worldwide (DG Relex, European Neighbourhood Policy, DG Enlargement).

WP 21000 will contribute to:

- **Managing risk in the modern world** (DG Env, Civil Protection) with studies focusing on environmental (**environmental security**) and health risks (**health security**), “threats of floods or droughts following climate change” (**human security**), “risk of terrorist attacks and energy supply crises”, **energy security** and renewable energies;
 - **Global solidarity** (DG Dev, ECHO), **economic security** by promoting “stable international growth founded on sustainable development” and “commitment to human rights”, including the Millennium development goals promoting “sustainable development and poverty reduction through effective multilateralism” in human security considerations;
 - **Making Security worldwide** (DG Relex): “External action is also required to tackle stability and security issues at their root by strongly promoting sustainable development through both multilateral and bilateral channels.
- **European Council:** the implementation of the decisions adopted at the European Councils in Nice (2000), Gothenburg (2001), Madrid (2002) and for the Solana report on: “*Improving the Coherence and Effectiveness of the European Union action in the Field of Conflict Prevention* (2000) and subsequent documents of the Commission and Council, as well as for the European Security Strategy of 12 December 2003: *A secure Europe in a better World*. Among the key goals of this *Solana strategy* are:
 - European countries are committed to dealing peacefully with disputes and cooperating through common institutions;
 - **Security is a precondition of development**. Conflict not only destroys infrastructure, including social infrastructure; it also encourages criminality, deters investment and makes normal economic activity impossible. A number of countries and regions are caught in a cycle of conflict, insecurity and poverty.

- **Competition for natural resources – notably water** – which will be aggravated by **global warming** over the next decades, is likely to create further turbulence and **migratory movements** in various regions.
- **Energy dependence** is a special concern for Europe.
- **None of the new threats is purely military**, nor can any be tackled by purely military means. ... Economic instruments serve reconstruction, and civilian crisis management helps restore civil government. The European Union is particularly well equipped to respond to such multi-faceted situations.
- The European Union's interests require a continued **engagement with Mediterranean partners**, through more effective economic, security and cultural cooperation in the framework of the Barcelona Process. A **broad engagement with the Arab world** should also be considered.
- The development of a stronger international society, well functioning international institutions and a rule-based international order is our objective. We are committed to upholding and developing International Law.
- We want international organisations, regimes and treaties to be effective in confronting threats to international peace and security, and must therefore be ready to act when their rules are broken.
- In a condition of a **rule-based international order law evolves in response to developments such as proliferation, terrorism and global warming**.
- We need to be able to **act before countries** around us deteriorate, when signs of proliferation are detected, and before humanitarian emergencies arise. **Preventive engagement can avoid more serious problems in the future.**
- This is a world of new dangers but also of new opportunities. The European Union has the potential to make a major contribution, both in dealing with the threats and in helping realise the opportunities.

For the “green strategy” adopted by the European Council in Thessaloniki, June 2003.

- **Human Security Network.** The following European countries are involved in the **Human Security Network**: *Austria*, Ireland *Netherlands*, Norway, *Greece*, Slovenia and *Switzerland*, four are represented with GMOSS staff members. The goals of the HSN are:

A humane world where people can live in security and dignity, free from poverty and despair ... In such a world, every individual would be guaranteed freedom from fear and freedom from want, with an equal opportunity to fully develop their human potential. **Building human security is essential to achieving this goal.** In essence, *human security means freedom from pervasive threats to people's rights, their safety or even their lives.* Human security has become both a new measure of global security and a new agenda for global action. **Safety is the hallmark of freedom from fear**, while well-being is the target of **freedom from want**. Human security and human development are thus two sides of the same coin, mutually reinforcing and leading to a conducive environment for each other.

- **GMES**, a joint **non-military initiative** of ESA and the European Commission with a mandate to focus on non-military security challenges, treats, vulnerabilities and risks
- **GMOSS**: and its mission: “to integrate **Europe's civil security research** so as to acquire and nourish the autonomous knowledge and expertise base Europe needs if it is to develop and maintain an effective capacity for global monitoring using satellite earth observation”

During the first year the partners of this new WP have contributed to these goals:

- AFES-PRESS has conducted three workshops on security concepts at major international social science conferences, has build up a global network of 200 scientific authors that will result in two major scientific volumes to be published by Springer, a major high quality scientific publisher: Hans Günter Brauch, John Grin, Czeslaw Mesjasz, Navnita Chadha Behera, Béchir Chourou, Ursula Oswald, P. H. Liotta, Patricia Kameri-Mbote

(Eds.): Vol. 1: Globalisation and Environmental Challenges: Reconceptualising Security in the 21st Century (2006); vol. 2: *Facing Global Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts* (2007).

- Within the framework of the FAST programme, a *Swisspeace* study group looks at environmental causes of violent conflicts and tries to describe the preconditions under which ecological stress leads to large scale intra- or interstate violence. We thereby hypothesise that most often violence is not the direct result of resource scarcity or environmental depletion but the outcome of very complex processes in which environmental, economic, social, and political variables play a major role. Methodologically we base our work on event data analysis and the FAST early warning data bank which contains more than 150'000 different events for approximately 20 countries and regions.
- During the first 12 months, JRC and Swisspeace have been using event analysis to identify potential crises. JRC use Reuters news-feeds whereas Swisspeace have a network of in-field observers. It is found that the in-field observers are more accurate but the number of countries covered is smaller – 22 instead of 99. In low-media coverage countries such as Pakistan the information they provide is unrivalled. Both sets of indicators capture escalation and de-escalation in political tension that could lead to potential instability. When such indicators are interpreted by trained country experts they can strengthen decision-making abilities with regard to short term country instability monitoring.

Goals:

- **Achieving scientific excellence in the social science research on peace and security** issues based on high academic scientific and professional standards;
- **Acting as the scientific interface of GMOSS to the international social science community on peace research and security studies;**
- **Acting as the scientific interface within GMOSS to the other socio-political work packages** (WP 21.100, WP 21.200, WP 21.300) **and of the application work packages** (WP 20.400 Treaty monitoring, WP 20.600 Monitoring populations, WP 20.700 Monitoring infrastructure, WP 20.800 monitoring borders, WP 20.900 Rapid mapping and damage assessment of urban areas and infrastructure).
- **Conducting original scientific research** and introducing the research results on security to GMOSS based on *open, unclassified sources* that can be published without clearance.
- **Offering platforms for remote sensing specialists** to present their research at major social science conferences focusing on security (ISA, SGIR, IPRA, IHDP, WISC etc);
- **Cooperating based on a wide security concept** on basic conceptual issues of security (concepts, threats, challenges, vulnerabilities and risks);
- **Conducting joint research on issues of early warning and conflict prevention;**
- **Providing scientific platforms for the support, communication and interaction** for Ph.D. candidates in the social sciences (political science, sociology, geography, international law);
- Offering our experience in maintaining high qualitative scientific standards

Tasks:

- Contributing to social science research on security concepts, challenges, threats, vulnerabilities and risks (AFES-PRESS), resulting in scientific books based on both scientific workshops at major international social science conferences (“spreading excellence”) as well as internal GMOSS workshops (“integration”);
- Contributing to both scientific and policy relevant efforts of early warning of conflicts: a) development of a prognosis model on conflict and cooperation, and b) analysis of relationship between environmental change and violent conflicts (Swisspeace/AFES-PRESS);

- Contributing to both scientific and policy relevant efforts early warning of hazards (AFES-PRESS) in cooperation with UNU-EHS, UN-ISDR, Platform on Early Warning;
- Contributing to a conceptual debate on mainstreaming of early warning activities of conflicts and hazards (Swisspeace/AFES-PRESS);
- Proposing integration of early warning goals into sectoral and regional policies of the EU, of the UN system and of the human security network
 - a) Common Foreign and Security Policy (3rd pillar, DG Relax)
 - b) Green diplomacy of the EU (Thessalonica decision, June 2005)
 - c) Regional policies of the EU: Euro-Mediterranean Partnership
 - d) Human Security Network (Netherlands, Switzerland, Austria, Greece)

Participation of AFES-PRESS staff in other work packages within GMOSS:

- **WP 20400: Treaty Monitoring: B. Jasani (Kings), M.Candy (FZJ), Dunay/Brauch (AFES-PRESS);**
- **WP 21100: Gaming (FOI, OD, et al.), A-P: Mesjasz/Brauch;**
- **WP 21200: Responding to Crises (DLR): A-P: Biro/Brauch/Kinnas;**
- **WP 21300: European Security Policy (Kings, TNO, RMA): A-P: Brauch/Dunay/Mesjasz**

Potential outside partners [WP contact persons]:

- 1) United Nations University, Tokio [Schnabel, Swisspeace]
- 2) United Nations University, UNU-EHS, Bonn [Brauch, AFES-PRESS]
- 3) United Nations Climate Secretariat, Bonn [Brauch]
- 4) United Nations Convention to Combat Desertification Secretariat, Bonn [Brauch]
- 5) UNISDR, Early Warning Platform (Geneva/Bonn) [Nathan, Brauch]
- 6) UNEP, DEWA, Nairobi and Post-Conflict Assessment Unit [Brauch]
- 7) NATO, Science division (Brussels): desertification in Mediterranean [Brauch]
- 8) IFRC, Geneva [Kinnas, Tignino, Nathan]
- 9) UNEP, UNDP, Geneva [Kinnas, Nathan, Tignino]
- 10) World Bank, GEF, Washington, DC; IRI, Columbia Univ., New York [Biro]

Scientific Products of the WP 21.000 Team (2005-2008):

AFES-PRESS has planned so far three major scientific books:

- Hans Günter Brauch, John Grin, Czeslaw Mesjasz, Navnita Chadha Behera, Béchir Chourou, Ursula Oswald Spring, P. H. Liotta, Patricia Kameri-Mbote (Eds.):
Vol. 1: *Globalisation and Environmental Challenges: Reconceptualising Security in the 21st Century* (2006);
Vol. 2: *Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts* (2007);
- Hans Günter Brauch, Czeslaw Mesjasz, John Grin, Ursula, Peter Liotta, Iain Shepherd, Yasemin Biro, Bassam Hayek, Bechir Chourou (Eds.):
Vol. 3: *Security Threats, Challenges, Vulnerabilities and Risks* (2007/2008)

Swisspeace/AFES-PRESS/et al.: *Early Warning and Conflict Prevention* (2008)

Staff List:

WP coordinator: Hans Guenter Brauch

Deputy WP coordinator: Heinz Krummenacher: Swisspeace

AFES-PRESS scientific staff

Senior (funded)

- 1) **PD Dr. Hans Günter Brauch**, Political Science, FU Berlin (Germany)
- 2) **Assoc. Prof. Dr. Czeslaw Mesjasz**, economist, Cracow Economic Univ. (Poland)
- 3) **Prof. Dr. John Grin**, Political scientist, Univ. Amsterdam (Netherlands)

Junior Researchers, Ph.D. candidates (funded)

- 4) **Annabelle Houdret**, FU Berlin, Paris 8, **political scientist** (Germany)
- 5) **Stefan Hintermeier**, FU Berlin, **political scientist** (Germany)
- 6) **Fabien Nathan**, Univ. Geneva, sociologist (France)
- 7) **Mara Tignino**, Univ. Geneva, international lawyer (Italy)

Senior unfunded (entitled to travel reimbursement from overall funding)

- 8) **Bechir Chourou** (Carthage Univ., Tunis, Tunisia)
- 9) **Mohamed El-Sayed Selim** (Univ. of Egypt, on leave to Univ. of Kuwait)

Proposal for new funded senior researchers:

- 10) **Ass. Prof. Dr. Yasemin Biro**, political scientist, environmental economist, ITU Istanbul, GEF, IRI (Turkey), B.A. (Cornell, 1991), M.A. (Tulane, 1992), M.Sc. (Berkeley, 1995), Ph.D. (1998) on energy and natural resources;
- 11) **Assoc. Prof. Dr. Pal Dunay**, international lawyer (Hungary), on leave from Geneva centre for Security Research, at present at SIPRI, Stockholm, Dr. Universitatis, 1992: Ph.D. 2001 from Eötvös Univ., Budapest, Hungary (both summa cum laude);
- 12) **Amb. Assoc. Prof. Dr. Kinnas**, political scientist, Athens (Greece), senior fellow, International Centre for trade and Sustainable Development, .B.A. (1963), M.A. (1964), Dr. (1968), Ph.D. (1974, Univ. of Landon).

Senior unfunded (only if new members are approved)

- 13) **Dr. Bassam Hayek**, Director, Environmental Institute, Royal Science Soc., Amman, Jordan

Proposal for new funded junior researchers

- 14) **Affeltranger, Bastien**, Geographer, UNU-EHS, Bonn. **Degrees:** DESS (Sorbonne, 1998), DEA (Narterre, 2001), Ph.D. candidate at Laval Univ., Quebec; **Languages:** French, English, German, Spanish (basic), Hungarian (basic), Chinese.(basic);
- 15) **Kipping, Martin**, political scientist, DIE, Bonn, later BMU, Bonn; Ph.D. candidate, FU Berlin; **Degrees:** French MA (2003, Science Po, summa com laude), German diplom (2004, FU Berlin, 1,0 or summa cum laude); **Languages:** German, French, English, Spanish (basic) and Russian (basic);
- 16) **Lindemann, Stefan**, political scientist, FU Berlin, intern, DG Dev., South Africa; Ph.D. candidate, FU; French MA (2003, Science Po, summa com laude), German diplom (2004, FU Berlin, 1,0 or summa cum laude); languages: German, French, English, Spanish (basic)

Swisspeace

Senior (funded and unfunded)

- 1) **Heinz Krummenacher**, political scientist, swisspeace (Switzerland)
- 2) **August Hämmerli**, biologist, swisspeace (Switzerland)
- 3) **Albrecht Schnabel**, political scientist, swisspeace (Switzerland),

Junior Researchers, Ph.D. candidates (funded)

- 1) **Dominic Senn**, Political Scientist, swisspeace / University of Neuchâtel (Switzerland)

Joint Research Centre

- 1) **Clementine Burnley Ewoko (invited)**, partner of Swisspeace on early warning
- 2) **Iain Shepherd (invited)**, partner of AFES-PRESS, co-editor of third book

Joint research and training activities

- Search for synergies: NCCR North-South, Swiss Peace, AFES-PRESS and global partners of editors and authors
- Joint seminar for Ph.D. candidates associated with Swisspeace and AFES-PRESS in Switzerland and South Germany
- Joint research: mainstreaming efforts for early warning of conflicts and natural hazards

Deliverables:

6 months

- 1) Joint planning meeting in Brussels during GMOSS General board meeting in April
- 2) Joint planning meeting in Istanbul during WISC meeting in Istanbul in August 2005;
- 3) Joint participation at the WISC meeting in Istanbul on: Security Threats, Challenges, Vulnerabilities and Risks (AFES-PRESS, Swisspeace)
- 4) Swisspeace: continuation of event based research on early warning
- 5) AFES-PRESS: continuation of editorial work on 2 books
- 6) AFES-PRESS: preparation and implementation of Istanbul workshop
- 7) Greek/Turkish project on Mediterranean environmental security issues in cooperation with colleagues from Egypt, Tunisia and Jordan: e.g. on climate change and hazard impacts on security in the Mediterranean (meeting in Istanbul in August 2005).

12 months

- 1) joint appearance at the 6th open meeting of the IHDP conference in Bonn (AFES-PRESS, Swisspeace, sessions on vulnerability, remote sensing and on early warning);
- 2) joint planning meeting in Bonn on 9/10 October;
- 3) early 2006: joint training workshop for Ph. D. candidates of Swisspeace (NCCR North-South) and AFES-PRESS in Switzerland
- 4) AFES-PRESS: continuation of editorial work on 2 books

18 months

- 1) Early warning meeting in Geneva with UN, humanitarian community;
- 2) Appearance of Swisspeace/AFES-PRESS at IPRA conference in Calgary, June 2006 (Annabelle Houdret is co-convenor of the ecology and peace commission)
- 3) July/August 2006: joint training workshop for Ph. D. candidates of NCCR North-South and AFES-PRESS in Mosbach, Germany

Expected Outcomes

Preparation of the editing of three major international multidisciplinary reference books to be published in the *Hexagon Series on Human and Environmental Security and Peace* (HESP). Hans Günter Brauch, John Grin, Czeslaw Mesjasz, Navnita Chadha Behera, Béchir Chourou, Ursula Oswald Spring, P. H. Liotta, Patricia Kameri-Mbote (Eds.):

Vol. 1: *Globalisation and Environmental Challenges: Reconceptualising Security in the 21st Century* (2006);

Vol. 2: *Environmental Change: Environmental, Human, Energy, Food, Health and Water Security Concepts* (2007);

Hans Günter Brauch, Czeslaw Mesjasz, John Grin, Ursula, Peter Liotta, Iain Shepherd, Yasmine Biro, Bassam Hayek, Bechir Chourou (Eds.):

Vol. 3: *Security Threats, Challenges, Vulnerabilities and Risks* (2007/2008)

Social Science and Remote Sensing

These major reference books should be illustrated with satellite images made available by partners coming from the remote sensing community, thus demonstrating the potential for integration among different disciplines and among GMOSS partners. This will require an integration with the providers of satellite images in the other work packages.

Part VI: AFES-PRESS GMOSS Conference and Book Projects for 2005 to 2007/2008

**Attachment 14: AFES-PRESS proposal for a planned GMOSS workshop in the framework of the: First Global International Studies Conference at Bilgi University, Istanbul, Turkey, 24- 27 August 2005 on:
Security Threats, Challenges, Vulnerabilities & Risks**

[website: <http://www.essex.ac.uk/ecpr/events/wisc/proposals.aspx>]

Security Threats, Challenges, Vulnerabilities and Risks

Co-chairs:

- 1: PD Dr. Hans Günter Brauch, Free University of Berlin, AFES-PRESS, GMOSS
2. Ass. Prof. Dr. Yasemin Biro, Istanbul Technical University, Turkey.
3. Prof. Dr. Ursula Oswald, UNAM, Mexico
4. Prof. Dr. Bechir Chourou, University of Tunis, AFES-PRESS, GMOSS

Co-editors

Hans Günter Brauch, Czeslaw Mesjasz, John Grin, Ursula Oswald, Mexico, Peter Liotta, Director, Pell Center, USA, Iain Shepherd, UK; Yasemin Biro, Turkey, Bassam Hayek (Jordan) and Bechir Chourou (Tunisia)

**Members of the Advisory and Organising Committee for the
Planned AFES-PRESS GMOSS Workshop in Istanbul**

1. Ass. Prof. Dr. Yasemin Biro, Istanbul Technical University, AFES-PRESS Scientific advisory board, coorganiser, coeditor, Turkey
2. Prof. Dr. Janos Bogardi, Director, UNU Institute on Environment and Human Security
3. PD Dr. Hans Günter Brauch, Free University of Berlin, AFES-PRESS, GMOSS, coorganiser, coeditor, Germany
4. Prof. Dr. Bechir Chourou, Univ. of Tunis, AFES-PRESS, GMOSS, coorganiser, coeditor, Tunisia
5. Prof. Dr. John Grin, University of Amsterdam, AFES-PRESS, GMOSS, The Netherlands
6. Dr. Bassam Hayek, director, environment Institute, coeditor, Jordan
7. Amb. Yannis Kinnas, Athens, Greece, AFES-PRESS Scientific advisory board
8. Assoc. Prof. Dr. Czeslaw Mesjasz, Economic University, Cracow, AFES-PRESS, GMOSS, coeditor, Poland
9. Peter Liotta, Director, Pell Center, USA, Newport, R.I., AFES-PRESS Scientific advisory board, coeditor, USA
10. Prof. Dr. Ursula Oswald, UNAM, Cuernavaca, Morelos, AFES-PRESS Scientific advisory board, coorganiser, coeditor, Mexico
11. Prof. Dr. Francisco Rojas Aravena, Secretary General of FLACSO, San Jose, Costa Rica
12. Prof. Dr. Mohamed El Sayed Selim, AFES-PRESS Scientific advisory board, University of Cairo and Kuwait
13. Dr. Iain Shepherd, Joint Research Centre, ISPRA, Italy, GMOSS research coordinator, co-editor, UK

GMOSS members from regular funds (ca. 6+ of AFES-PRESS team)

1. Prof. Dr. Mathias Schardt, Univ. of Graz, Austria
2. Dr. Peter Zeil, Univ. of Salzburg, Austria
3. Assoc. Prof. Ake Sivertun, Univ. of Linköping, Sweden
4. Antonio de la Cruz, European Satellite Centre (approval of director needed)
5. General Fernando Davara, former director of European Satellite Center (inv.)
6. Dr. Iain Shepherd, JRC (if his professional obligations do permit him to travel)

Attachment 15: AFES-PRESS Panel Outlines for Istanbul

Reception, Tuesday, 23 August 2005

Proposed Keynote Speakers after a reception and before a dinner to be hosted by NATO

Prof. Ursula Oswald Spring, former Minister of Environment, Morelos, Mexico:

Environmental Threats, Challenges, Vulnerabilities and Risks in Latin America: Need of Remote Sensing Contributions on Natural Hazards and Disasters

Mr. Pekka Haavisto, former Minister of Environment and Development, Finland,

Chairman of the UNEP Post-Conflict Assessment Unit, UNEP, Geneva: Remote Sensing Contributions of Environmental Damage Assessments in the Balkans, Palestine, Afghanistan and Iraq

Prof. Mustafa Erdik, Bosphorus University in Istanbul: Contribution of Remote Sensing to Early Warning and Damage Assessment of Earthquakes in Turkey

Wednesday, 24 August 2005

Panel 1: Reconceptualising Security: Security Threats, Challenges, Vulnerability & Risks

Paper 1: **H.G. Brauch:** Concept of security threats, challenges, vulnerabilities and risks (UNU-EHS)

Paper 2: C. Heusgens, EU Council: Security threats in the framework of the European Security Strategy (tbi)

Paper 3: James Miskell, USA: Security threats in the framework of the US National Security Strategy (tbi)

Panel 2: Social Science Concepts of Hard Military and Political Security Threats in the Euro-Mediterranean Region

Paper 4: **Nicola de Santis**, Alberto Bin, NATO: Hard military security threats confronting NATO (tbi)

Paper 5: A. Politi, adviser of Italian Defence Minister: Political security threats confronting the EU (tbi)

Paper 6: **Mohamad Selim**, Egypt/Kuwait: Perception of hard and soft security threats in the Arab world

Thursday, 25 August 2005

Panel 3: Contribution of Remote Sensing to the Recognition of Military Security Threats

Paper 7: Shepherd: Recognising threats: Methods of feature recognition and automatic visualisation

Paper 8: NN, GMOSS: Methods of data integration and visualisation of military threats (tbi)

Paper 9: NN, GMOSS: Change detection and damage assessment

Panel 4: Environmental and Human Security Challenges

Paper 10: **Yasemin Biro:** Global warming and abrupt climate change as environmental security challenges

Paper 11: **Bassam Hayek:** Water degradation as challenges and vulnerabilities to human security

Paper 12: **Abd. Ouassou**, Morocco: Soil degradation as challenges and vulnerabilities to human security

Panel 5: Water Security and River Regimes

Paper 13: **Houdret:** Water security at the local level: governance strategies and participatory ap-proaches

Paper 14: **Affeltranger**, UNU-EHS: Mekong River Regime

Paper 15: **Kipping**, FU Berlin: Water Conflict and Water Cooperation in the Aral Sea basin - Studying Neo-Malthusian Concerns

Paper 16: **Lindemann**, FU Berlin: International Cooperation over water in the Okavango river basin

Panel 6: Contribution of Remote Sensing to Recognising Environmental Security Challenges

Paper 17: **General Fernando Davara**, former director of European Satellite Center, Spain:

Contribution of remote sensing to the analysis environmental conflicts

Paper 18: **Antonio de la Cruz**, European Satellite Centre, Spain: Contribution of remote sensing to the analysis environmental security

Paper 19: Mohammed El Rey, Univ. of Alexandria, Egypt: Contribution of remote sensing to mapping area affected by sea-level rise in the Nile Delta (tbi)

Friday, 26 August 2005

Panel 7: Social Science Concepts of Security Vulnerability

Paper 20: **P.H. Liotta**, Director, Pell Center, USA: Democracy as vulnerability, risk and opportunity

Paper 21: J. Birkmann, UNU-EHS, Germany: Vulnerability indicators (tbi)

Paper 22: Fabien Nathan, Geneva, France: Vulnerabilities to natural hazard

Panel 8: Contribution of Remote Sensing to the Recognition of Security Vulnerabilities

Paper 23: **Peter Zeil, Salzburg**, Austria: Analysis of water managment and conflict prevention or landcover and landuse changes and resource conflicts using Earth observation data

Paper 24: **Ake Sivertun**, Univ. of Linköping, Sweden: Potential Earthquake in Istanbul: Analysis of cascade or domino effects

Paper 25: NN, Algeria, RS specialist on natural hazards: Early warning and damage assessment of earthquakes, floods and drought in Algeria

Paper 26: NN, Turkish RS expert: Damage assessment of the Earthquake in Izmit in Turkey in 1999

Panel 9: Social Science Concepts of Military, Economic and Environm. Security Risks

Paper 27: **J. Grin**: Sociology of Risks

Paper 28: **C. Mesjasz**: Prediction and risk in security theory

Paper 29: **B. Chourou**: Environmental challenges and risks in North Africa

Panel 10: Environmental Security Challenges, Vulnerabilities and Risks in the Middle East

Paper 30: **Tignino**, Geneva, Italy: Coping with water scarcity: The international legal Jordan river regime

Paper 31: Marwad Haddad, Univ. of Nablus, Palestine: Water scarcity and degradation in Palestine as challenges, vulnerabilities and risks for environmental security

Paper 32: Uri Safriel, Hebrew Univ. Jerusalem, Israel: Soil erosion, desertification and drought as challen-ges, vulnerabilities and risks for environmental security: contribution of remote sensing to early warning

Attachment 16: Confirmed AFES-PRESS panels for the proposed Fifth AFES-PRESS GMOSS workshop at the Sixth Open Meeting of the Global Environmental Change Research Community, Bonn, October 9-13, 2005 on: “Global Environmental Change, Globalization and International Security”

In relation to the above publications, AFES-PRESS herewith submits a proposal for four consecutive panels that will all be organised by Hans Günter Brauch of AFES-PRESS:

1. **Panel 1: Vulnerability: Social and Legal Dimensions**
Co-Chairs: Hans Günter Brauch and Czeslaw Mesjasz, Cracow Economic University
2. **Panel 2: Remote Sensing and GMES as tools for environmental and human security**
Co-Chairs: John Grin, University of Amsterdam, AFES-PRESS and Hans Günter Brauch
3. **Panel 3: Early Warning of Natural Hazards and Disasters**
Co-Chairs: Ursula Oswald, UNAM and P. H. Liotta, Executive Director of the Pell Center for International Relations and Public Policy, Newport, R.I. USA

Each panel of 90 Minutes should have about 5-6 presentations, thus we have a total of up to 18 presentations in our mini workshop. Thus we can accommodate all 15 presentations in 3 panels with 5 to 6 presentations per panel, we were totally successful.

Please note you must register by submitting the abstract for your paper between 1 February and 10 March to: <http://openmeeting.homelinux.org>. Please send a copy of your submission the same day to: brauch@onlinehome.de. I will handle all correspondence for all three panels and will make the decisions with the co-organiser on acceptance or rejection of the papers.

Final Programme

Panel 1: Vulnerability: Social and Legal Dimensions and Early Warning

Co-Chair: Hans Günter Brauch, Free University of Berlin and Czeslaw Mesjasz, Cracow Economic University, both AFES-PRESS, GMOSS senior team

- Paper 1: **Fabien Nathan (France)**, Geneva, GMOS junior team: Sociological concepts of vulnerability for interpreting flash floods (**abstract submitted, confirmed**)
- Paper 2: **Bastien Affeltranger (France)**, UNU-EHS: “Reducing vulnerability through participation? Involving users in the design of flood warning systems” (**abstract submitted, confirmed**)
- Paper 3: **Martin Kipping, Free University of Berlin**: Water security in the Senegal River (**abstract submitted, confirmed**)
- Paper 4: **Stefan Lindemann, Free University of Berlin**: Water basin regimes in Africa (**abstract submitted, confirmed**)
- Paper 5: **Annabelle Houdret, Free University of Berlin and Université Paris 8**, GMOS junior team: Conflict or cooperation? Exploring the Links between Environmental Security and Governance (**abstract submitted, confirmed**)
- Paper 6: **Mara Tignino (Italy)**, IHE, Geneva, GMOS junior team: Relationship between environmental protection and Human Rights Law: developing the legal dimension of environmental security issues (**abstract submitted, confirmed**)
- Discussant:** Ursula Oswald, UNAM, Mexico, former minister of environment, State of Morelos, Mexico, co-chair of AFES-PRESS Scientific Advisory Council (**confirmed**)

Panel 2: Remote Sensing and GMES as tools for environmental and human security

Co-Chairs: John Grin, University of Amsterdam and Hans Günter Brauch, Free University of Berlin, AFES-PRESS, GMOSS senior team

Paper 7: Daniele Ehrlich, Support for External Security Unit, Institute for the Protection and Security of the Citizen. European Commission, DG Joint Research Centre: The security dimension of GMES: A case study on the Tsunami **(confirmed)**

Paper 8: Ursula Oswald, Prof. UNAM, Mexico, former Minister of Environment, Morelos: Vulnerability mapping in hazard prone Mexico **(confirmed)**

Paper 9: Dusan Sakulski, scientific adviser, UNU-EHS, Bonn: *Vulnerability mapping* – the case of flood prone areas in South Africa **(confirmed)**

Paper 10: P. H. Liotta (USA), Executive Director of the Pell Center for International Relations and Public Policy, Newport, R.I.: The Meaning of Long-Term Vulnerabilities and Its Impact on Strategic Planning **(confirmed)**

Paper 11: Czeslaw Mesjasz, Economic University Cracow: Vulnerability and Economic Security **(confirmed)**

Paper 12: Prof. Anand Patwardhan: Crop Damage Assessment using Remotely Sensed Data

Discussant: Hans Günter Brauch, Free University of Bonn, AFES-PRESS, GMOSS

Panel 3: Early Warning of Natural Hazards and Disasters

Co-Chairs: P. H. Liotta, Executive Director of the Pell Center for International Relations and Public Policy, Newport, R.I. USA; **Ursula Oswald**, Mexico

Paper 13: Peter Billing (Germany), European Commission, DG Environment, Civil Protection: Early Warning needs: from an operational perspective **(confirmed)**

Paper 14: Reid Basher (New Zealand), UNISDR, Platform for the Promotion of Early Warning, Bonn: The International Early Warning Programme: Systematic people-centered early warning systems **(confirmed)**

Paper 15: Juan Carlos Villagran de Leon (Guatemala), Scientific Adviser, Risk Assessment & Early Warning, UNU-EHS, Bonn **(confirmed)**

Paper 16: Yannis Kinnas (Greece): Early Warning of hazards after Kobe – Tasks for the Mediterranean Region **(confirmed)**

Paper 17: Heinz Krummenacher (Switzerland), Swisspeace, Bern: Early warning of environmental conflicts **(confirmed)**

Paper 18: Hans Günter Brauch (Germany): Towards a mainstreaming of early warning of hazards and Conflicts **(confirmed)**

Discussant: Ursula Oswald, UNAM, Mexico, former minister of environment, State of Morelos, Mexico, co-chair of AFES-PRESS Science Advisory Council **(confirmed)**

Attachment 17: AFES-PRESS Outline for Third GMOSS Publication

Hans Günter Brauch, Czeslaw Mesjasz, John Grin, Ursula Oswald, Peter Liotta, Iain Shepherd , Yasemin Biro, Bassam Hayek, Jordan and Bechir Chourou (Eds.)

Security Threats, Challenges, Vulnerabilities and Risks

Part I: Introduction: Concepts of security threats, challenges, vulnerabilities and risks

Chap. 1: **Co-editors**: Introduction

Chap. 2: **Brauch**: Defining concepts of security threats, challenges, vulnerabilities and risks

Chap. 3: **NN**: Security threats, challenges, vulnerabilities and risks for five security dimensions

Chap. 4: **NN**: Referents of security threats, challenges, vulnerabilities and risks

Part II: Military and political security threats, challenges, vulnerabilities and risks

Chap. 5: Graf Einsiedel: UN Secretary General's High Level Panel on threats, challenges and change and its implications for UN reform (tbi)

Chap. 6: Gwyn Prins: Hard military security threats confronting the European Union (tbi)

Chap. 7: Paul Rogers: International terrorism as a security threat for EU and its members (tbi)

Chap. 8: **Liotta, P.H.**; James Miskel, USA: Security threats in the framework of the US National Security Strategy (2002)

Chap. 9: Magnus Ekengren: Results of EU assessments of security threats in the 21st century (tbi)

Chap.10: C. Heusgens: Security threats in the framework of the European Security Strategy (2003)

Part III: Hard Military and Political Security Threats in the Euro-Mediterranean Region

Chap. 11: Alessandro Politi: Political security threats confronting the European Union

Chap. 12: **Nicola de Santis**, Alberto Bin: Hard military security threats confronting NATO (tbi)

Chap. 13: **Mohamed El-Sayed Selim**, Egypt/Kuwait: Perception of hard and soft security threats in the Arab world

Part IV: Contribution of Remote Sensing to Recognition of Military Security Threats

Chap. 14: **NN**: Recognising threats: Methods of feature recognition and automatic visualisation

Chap. 15: **NN**: Methods of data integration and visualisation of military threats

Chap. 16: **Bert van den Broek**, TNO, the Netherlands: Methods of change detection and damage assessment

Part V: Concepts of Environmental and Water and Soil Security Challenges

Chap. 17: **Yasemin Biro**, Turkey: Global warming and abrupt climate change as environmental security challenges

Chap. 18: Abd El Galil, Desert Research Centre, Egypt: Soil degradation as human security challenges

Chap. 19: Bassam Hayek, Jordan: Water degradation as human security challenges

Part VI: Social Science Concepts Water Security Challenges and Vulnerabilities

Chap. 20: **Houdret**, Germany: Water security at the local level: governance strategies and participatory approaches

Chap. 21: **Tignino**, Italy: Coping with water scarcity: The international legal Jordan river regime

Chap. 22: **Affeltranger**, UNU-EHS, France: Mekong River Regime

Chap. 23: **Kipping**, FU Berlin: Water Conflict and Water Cooperation in the Aral Sea Basin - Studying Neo-Malthusian Concerns

Chap. 24: Lindemann, FU Berlin: International Cooperation over water in the Okavango river basin

Part VII: Remote Sensing for Recognition of Environmental Security Challenges

Chap. 25: **NN**: Recognising climate change: contribution of remote sensing

- Chap. 26: Mohammed El Rey, Univ. of Alexandria, Egypt: Contribution of remote sensing to mapping area affected by sea-level rise in the Nile Delta
- Chap. 27: NN: Recognising changes in precipitation: contribution of RS
- Chap. 28: **Peter Zeil, Salzburg**: Recognising land-use changes: contribution of remote sensing
- Chap. 29: **General Fernando Davara**, former director of European Satellite Center, Spain: Contribution of remote sensing to the analysis environmental conflicts
- Chap. 30: **Antonio de la Cruz**, European Satellite Centre, Spain: Contribution of remote sensing to the analysis environmental security

Part VIII: Social Science Concepts of Security Vulnerability

- Chap. 31: NN: Political and military vulnerabilities
- Chap. 32: **P.H. Liotta**, Director, Pell Center, USA: Democracy as vulnerability, risk and opportunity
- Chap. 33: NN: Economic and societal vulnerabilities
- Chap. 33: NN: Environmental vulnerabilities
- Chap. 35: J. Birkmann, UNU-EHS: Environmental Vulnerability indicators (tbi)
- Chap. 36: **Fabien Nathan**, Geneva: Vulnerabilities to natural hazards
- Chap. 37: **Ake Sivertun**, Univ. of Linköping, Sweden: Potential Earthquake in Istanbul: Analysis of cascade or domino effects

Part IX: Contribution of Remote Sensing to the Recognition of Security Vulnerabilities

- Chap. 38: NN: Vulnerability mapping: population monitoring
- Chap. 39: NN: Vulnerability mapping: damage assessment of cities
- Chap. 40: NN: Vulnerability mapping: infrastructure monitoring

Part X: Social Science Concepts of Military and Environmental Security Risks

- Chap. 41: **Grin**: Sociology of Risks
- Chap. 42: **Mesjasz**: Prediction and risk in security theory
- Chap. 43: NN: methods of Risk Assessment
- Chap. 44: **B. Chourou**: Environmental challenges and risks in North Africa

Part XI: Contribution of Remote Sensing to the Recognition of Security Risks

- Chap. 45: NN: Mapping political and military risks?
- Chap. 46: NN: Mapping economic and societal risks?
- Chap. 47: NN: Mapping environmental risks?

Part XII: Towards an Improved Early Warning: Prospective Contributions of GMES

- Chap. 48: NN, Swisspeace. Concepts of early warning of conflicts (tbi)
- Chap. 49: Reid Basher, UNISDR, Early Warning Platform: Concepts early warning of hazards (tbi)
- Chap. 50: **Brauch**: The need for mainstreaming early warning of conflicts and hazards
- Chap. 51: NN: Remote Sensing Potential for Early Warning of Conflicts
- Chap. 52: NN: Remote Sensing Potential for Early Warning of hazards for EU stakeholders
- Chap. 53: Peter Billing, ECHO; Data needs for early warning of conflicts and hazards (tbi)

Part XIII: Summary and Conclusions

- Chap. 54: Summary of the results of this book
- Chap. 55: Co-editors: Policy conclusions for European foreign, security and defence policy