

OBJECTIVES

Assess research currently underway with partners and elsewhere in assessing damage specifically in urban areas and for infrastructure such as traffic lines or power lines; develop a road map for future co-ordinated research to bringing together a variety of disparate techniques for rapid mapping and damage assessment. Initiate, and stimulate, and carry out research for new concepts and techniques for rapid mapping and damage assessment.

DESCRIPTION OF WORK

- 1) Identify the areas of research expertise relevant to rapid mapping and (urban) damage assessment amongst the GMOSS member and agree to a rationalised approach to research .
- 2) Assess the user requirements, available methods and tools for rapid mapping and damage assessment and develop concepts to deal with the available data and scenarios.
- 3) Encourage and network the development of concepts and technologies that are relevant for rapid mapping and damage assessment. More specifically the application of:
 - change detection (WP20300);
 - automated feature extraction (WP20100), with emphasis on 3-D features;
 - concepts and tools that have been developed for damage assessment caused by natural disaster;
 - and the concepts and tools for monitoring infrastructure (WP20700).
- 4) Create a road map for appropriate use of the relevant technologies to direct future research.
- 5) Choice of test sites and data sets to reflect different geographic regions and scenarios.
- 6) Collaborative working meetings.

*DELIVERABLES**6 months*

- 1) Report on initial assessment of GMOSS research expertise, deficiencies, progress on agreements on a common research data set or complementary data sets. (TNO, QinetiQ)
- 2) Report of methods and tools developed to analyse imagery in terms of natural changes (CEA).
- 3) First progress reports on user requirements, comparison of nomenclature, state-of-the art and developments in spaceborne remote sensing relevant to the objectives (CEA, Joanneum, TNO).

- 4) Reporting on status of scientific and integration objectives (TNO).
- 5) summary of experience in Former Yugoslav Republic of Macedonia, the West Bank and Iraq (JRC)

12 months

- 1) Road map for appropriate use and fusion of relevant techniques to direct future research (All)
- 2) Integrated proposal; coordination with workshop coordinator, standards coordinator; report on status of scientific and integration objectives (TNO)

18 months

- 1) Report on user requirements, comparison of nomenclature, state-of-the art and developments in spaceborne remote sensing relevant to the objectives, including a detailed requirement definition (CEA, Joanneum, RMA).
- 2) Report on results of work on common data set and complementary data sets (All).
- 3) Update of and agreement on road map.
- 4) Reporting on status of scientific and integration objectives (TNO).

EXPECTED OUTCOME

- 1) Sharing of knowledge and data within the network and the wider (GMES) user community.
- 2) For each partner the possibility to direct its future research with help of the assessment of the state-of-the-art methods, and deficiencies and challenges that have been identified in the network.
- 3) Agreement and initiation of a co-ordinated research road map between the partners.
- 4) Better interaction of research community and users of rapid mapping and damage assessment results because of better visibility through the Network of Excellence.

RESPONSIBLE SCIENTISTS

Philippe Steeghs (TNO); work package leader
 Heinz Gallaun, Ursula Schmitt (Joanneum)
 Dirk Borghys (RMA)
 Steve Wallace (QinetiQ)
 Renaud Binet, Rémi Michel (CEA)

21000 security concepts and threats

- work package leader – AFES-PRESS
- other partners involved – FOI

OBJECTIVES

The objectives are to:

- 1) review and assess past conceptualisation by the scientific and the political community since the end of the East-West conflict (1990) (AFES-PRESS);
- 2) offer specific proposals for a reconceptualisation in an era of globalisation and of global environmental change (AFES-PRESS);
- 3) assess the concepts of threat, challenges, vulnerabilities and risks in the security realm (FOI, AFES-PRESS);
- 4) catalogue the specific security threats, challenges, vulnerabilities and risks as seen by analysts and policy makers in Europe, North America, East Asia as well as in Third World Countries (FOI, AFES-PRESS);
- 5) make threat assessments in the field of WMD and rogue states/terrorism (FOI).

*DESCRIPTION OF WORK**Widening of Security Concepts (AFES-PRESS)*

In order to clarify the conceptualization of the new security reality and distinguish between different actors, workshops will be organised at:

- 1) 45th Convention of the International Studies Association (ISA) in Montreal (17-20 March 2004) including: three panels with 11 speakers (of which 7 represent GMOSS)
- 2) several panels at the 20th Conference of the International Peace Research Association in Sopron, Hungary (5-9 July 2004).
- 3) the fifth Pan-European Conference on International Relations in The Hague (9-11 September 2004) with up to 10 panels and up to 30 speakers representing both GMOSS participants and the global social science community.

Additional meetings will be held in 2004 and 2005 between members of AFES, FOI and other GMOSS members.

The scholarly papers to be submitted to these meetings will be peer-reviewed and it is planned to publish the accepted papers as a major international scientific study handbook. In addition, a website on AFES-PRESS-GMOSS activities with reports on events of the AFES-PRESS GMOSS team members and links to the main GMOSS website is planned.

Hierarchy of threats (AFES, FOI)

Analysis of the classical military threats confronting Europe (and especially Northern Europe) during the 21st century, including the proliferation of weapons of mass destruction, will be discussed. This will include a special focus on the role of non-state actors (e.g. terrorists).

*DELIVERABLES**6 months*

- 1) Progress report on the results of the first meeting of the senior and junior team of AFES-PRESS in November 2003 and on the presentations at the Convention of the International Studies Associations (ISA) in Montreal, Canada (AFES-PRESS).
- 2) Progress report on defining security threats for Europe in the early 21st century and identifying a hierarchy of threats, new and old (FOI).

12 months

- 1) Progress report on the results of the presentations and debate at the panels organised during the 20th International Peace Research Association (IPRA) conference in Sopron (5-9 July 2004) with 8 AFES-PRESS GMOSS speakers and report on the Workshop on Reconceptualising of Security during the Fifth Pan-European Conference on International Relations in The Hague (9-11 September 2004) (AFES-PRESS).
- 2) Case studies on the missile threat to Europe (FOI).
- 3) Depending on the preferences of the network partners, a preliminary assessment of the terrorist WMD threat (FOI). (this is an alternative to the FOI 12-month deliverable in WP21100)

18 months

- 1) Progress report on the beginning of the editorial process of the peer reviewed papers emerging from the three conference participations during 2004 on Reconceptualisation of Security in an Era of Globalisation and Global Environmental Change. Report on a small workshop among the members of the junior team on the progress of their doctoral theses (AFES-PRESS).
- 2) Report. Setting priorities. What method for what threat? (FOI).

EXPECTED OUTCOME

Preparation of the editing of a major international multidisciplinary reference book on: *Reconceptualisation*

of Security in an Era of Globalisation and Global Environmental Change to be published in 2006 in the *Hexagon Series on Human and Environmental Security and Peace* (HESP). This major reference book could 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 GMOSS partners.

RESPONSIBLE SCIENTISTS

Hans Guenter Brauch (AFES-PRESS) work package leader

Wilhelm Unge, Ingemar Dörfer (FOI)

21100 Reducing Threats

- work package leader – FOI, Sweden
- other partners involved – OD, Salzburg

OBJECTIVES

- 1) Bring together important actors working in the field of security of citizens, and in particular disarmament and non proliferation (FOI).
- 2) Establish recommendations for an appropriate organisational network capable to absorb information for improved decision making to mitigate threats to the security of the citizen (Salzburg).
- 3) Promote the future creation of verifiable international arms- control and disarmament treaties and other international agreements to promote European and Global Security (OD).
- 4) To analyse strategies aimed at countering the threat of use and proliferation of weapons of mass-destruction (WMD) (FOI).

DESCRIPTION OF WORK

- 1) In the framework of policies and regulations, users communicate with the NoE about their requirements and receive expert advice for problem solving as well as policy options. Establish recommendations for an appropriate organisational network capable to absorb information for improved decision making to mitigate threats to the security of the citizen by providing a navigator for security indicators approved by users (Salzburg).
- 2) Collect experience from the implementation of the verification system of the Comprehensive Test Ban Treaty (CTBT) by chairing the CTBT Organisation Prepcom working group on verification. A group of senior international

verification experts has been created to analyse the verification systems of a number of existing treaties. Establish common generic features and apply this knowledge to develop proposals for systems to verify other security or confidence building measures (OD).

- 3) A key element in the process of enhancing European Security will be the effective transfer of the researchers' results to decision makers on different levels. The possibilities of gaming should be explored as a means to bridge the gap between the research and the decision making communities (All). Gaming can also be used as a tool to structure analysis and reach beyond desktop analysis. Of particular relevance is WP 10500 Scenarios through gaming (OD).

DELIVERABLES

Compile guidelines and requirements; define threats to security of the citizen; seek consensus on indicators; analyse decision making process for focus topics (non-proliferation, humanitarian aid, reconstruction, policing); create forum for exchange with users; develop concept for capacity building; seek consensus on network objectives for first 18 months (Salzburg).

6 months

- 1) Operational plan for remaining Salzburg project period (Salzburg).
- 2) Conduct a workshop to discuss the matters in depth (together with WP 10200) (FOI).
- 3) Report by a group of recognized international experts on generic structure of existing treaties. Preliminary report on a possible system to verify a revised treaty on Container Security (OD).

12 months

- 1) Definition of threats; communication platform for users and NoE. Specific network activities: Contact the members of European Forum on the use of Earth Observation for Environment and Security (EUFOREO); network workshop with users (together with WP 10200) (Salzburg).
- 2) Preliminary Report. Comparison and analysis of the US and EU strategies against the proliferation of WMD, their benefits and their drawbacks. (this is an alternative to FOI's 12-month deliverable of wp21000)
- 3) Comprehensive report by the Group on a possible system to verify a revised treaty on Container Security. Preliminary reports on issues to be selected such as; the use of on-site inspections for arms control and confidence