



Crisis management related research at  
*Information Technology for Security Department*

*Seminar "Interagency Cooperation in Crisis Management and Disaster Response"*  
September 17-28, 2013

# IT for Security Department



- ❧ Institute of Information and Communication Technologies, Bulgarian Academy of Sciences, <http://iict.bas.bg>
- ❧ IT4Sec Department, [www.IT4Sec.org](http://www.IT4Sec.org)
- ❧ Centre for Security and Defence Management
- ❧ Joint Training, Simulation and Analysis Centre
- ❧ Strategic Security and Defence Management site (in construction) - <http://defencemanagement.org>
- ❧ Information and Security: An International Journal, <http://procon.bg/view-volumes>



# Our research point of view and agenda on Crisis Management and Disaster Response (CMDR)

## **How to integrate crisis management and disaster response into national security strategy and policy:**

- i. New trend in security: The increased number of perceived threats, and a broadening in the object requiring security from the state (and national borders) to individuals, societies or critical life sustaining systems. What to include in the scope of crisis management (financial crisis?)
- ii. How to make arrangements:
  - From 'war time' back to 'peace' – 'Civil Defence', militarized;
  - From 'peace' towards 'a war' – 'Civil Protection', civil service;
  - Different philosophy, architecture, focus, resources, ownership, impact on society.

# Research agenda (2)



## ✧ How to build a domestic-international domain?

- What is still 'domestic' in EU and NATO in terms of security;
- This is not only geographical but also political – when we do CM preparations or management at home we **always** have in mind, relay on, and account both NATO and EU.
- Than what will be 'the first order' security – defence or civil protection;
- We may have civil protection problem (second order) that if not managed properly, may lead to a first order security problem for the state and *vice versa*.

# Research agenda (3)



## ❧ Why international co-operation is so important?

- 'Security through interdependence' is related to *regional security complexes (RSC)* - countries which security is so interconnected that they cannot reasonably be analysed or resolved apart from other (like Western Balkans, the Baltics, The South Caucasus)
- Different RSC – different CMDR models and mechanisms;
- More differences, less effectiveness;
- Both NATO and EU do not have their own CMDR assets and depend on what the countries have – they are not able to compensate regional deficits, except through ...
- More co-operation, less differences, higher effectiveness.

# Research agenda (4)



## Why interagency approach is mandatory?:

*Complexity of the Task and Environment*

Multi-dimensional effects

+

*Complexity of 'Self'*

Heterogeneous entities

=

*Complex Endeavor*

Co-ordinated strategic management, joint operations, mutual support, community for CMDR

# Research agenda (5)



## What a CMDR architecture?

- The ministries have more resources than local authorities, but the later are closer to the people.
- What are the effective benchmarks?
- Centralised? – Ministry of emergency?
- Decentralised? – what about resources?
- Balanced, but with focus on local authorities – what role for the Government.

# Research agenda (6)



## ⌘ How to train effectively?

- Leaders,
- Large staff,
- Population,
- Using modeling and simulations



# Our portfolio:



- ❧ Foresight-based strategy and capability planning, with account of the evolving comprehensive approach
- ❧ Capability development in a strategic management framework
- ❧ Support to training
- ❧ Related research activities
- ❧ Knowledge dissemination
- ❧ Maintain competitive advantages

# Foresight



## ☞ Experience:

☞ FOCUS (FP7, 2011-2013) - **Foresight Security Scenarios: Mapping Research to a Comprehensive Approach to Exogenous EU Roles** (with 13 participants from 8 countries) – <http://www.focusproject.eu>

## ☞ Our contribution

- Context Scenarios and Alternative Future EU Roles as a Global Security Actor
- Analytical support to foresight the EU roles as a Global Security Actor
- Evaluating the Cross-impact of EU Functions as a Global Actor and Protector of Critical Infrastructures and Supply Chains

☞ Forthcoming research: **The evolving concept of security: A critical evaluation across four dimensions** (EvoCS, FP7, 2014-2015)

# Crisis Management systems & CIP

## ☞ Experience:

- From National to Societal Security: Scientific Support to Effective Transformation of the Security Sector
- Civil Security – Architectural Approach in Emergency Management Transformation
- Methodology for Modeling, Analysis of Critical Infrastructure, Identification of Interdependencies, Assessment of Vulnerability and Planning of Capabilities for Protection
- Chrishope – a GMF project for consequence management and early recovery reference model development in the GBSA (2011)

## ☞ Forthcoming: DRIVER – *DRiving InnoVation in crisis management for European Resilience*, aiming to provide:

- European testbed for CM capability development
- well-balanced comprehensive portfolio of CM tools
- shared understanding of Crisis Management, share capabilities and collaborate across Europe
- an evidence-base for CM capability investment decisions
- 38 partners, 4.5 years (starting in early 2014)

# Policy support



- ❧ Awareness of cyber risks and threats
- ❧ Defining capability requirements and assignment of responsibilities
- ❧ Defining 'Rules of Engagement'
  - Including preservation of human rights and freedoms
- ❧ Coordination & Cooperation
  - Operations, Training
  - Capabilities development
- ❧ Allocation of resources
- ❧ Provision of transparency, accountability, integrity

# Capability development



- ❧ Methodology for capability-based planning in defence
- ❧ Advances in application across the security sector, in an interagency setting
- ❧ Implementation of capability development plans in a strategic security and defence management framework
- ❧ Transparency and integrity of decision making and management processes

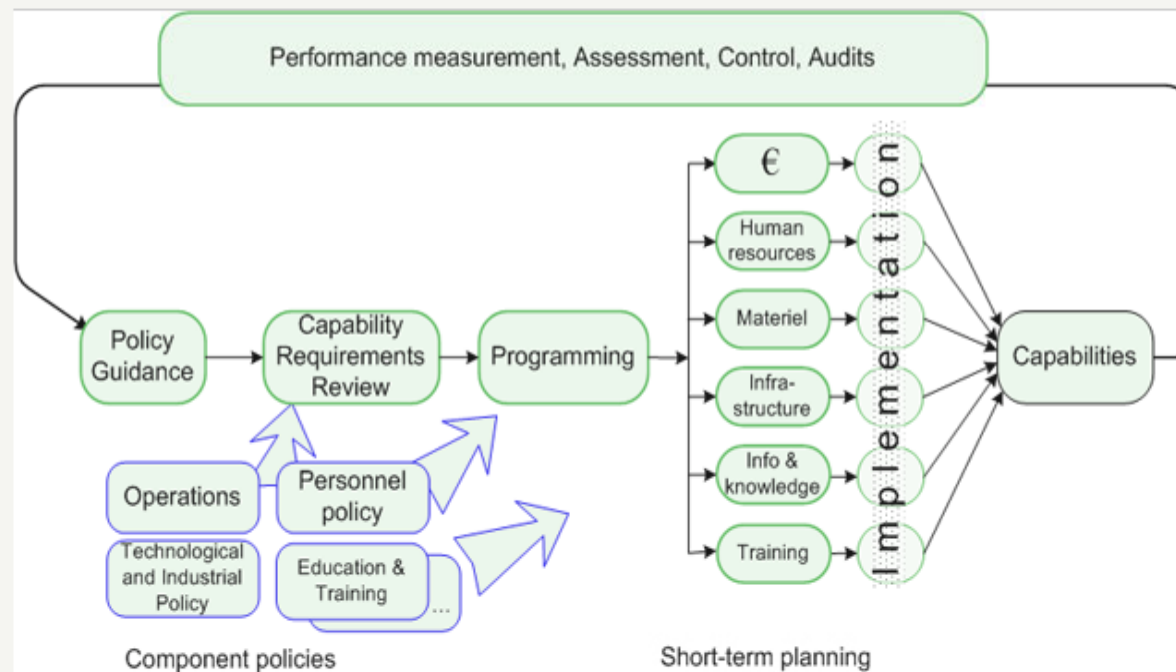
# Security & Defence Management

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*An International Journal*

## Security & Defence Management



# Specific topics



- ❧ Interplay between cyber security and the protection of critical infrastructures
- ❧ Integrity, transparency and accountability in the management of public investments
- ❧ Gaming: training senior and mid-level personnel in policy making and programme-based capability development ('G.S. Rakovski' DSC, Ukraine, South Caucasus, contribution to the EDA game)
- ❧ Complex mathematical models, e.g. forest fires

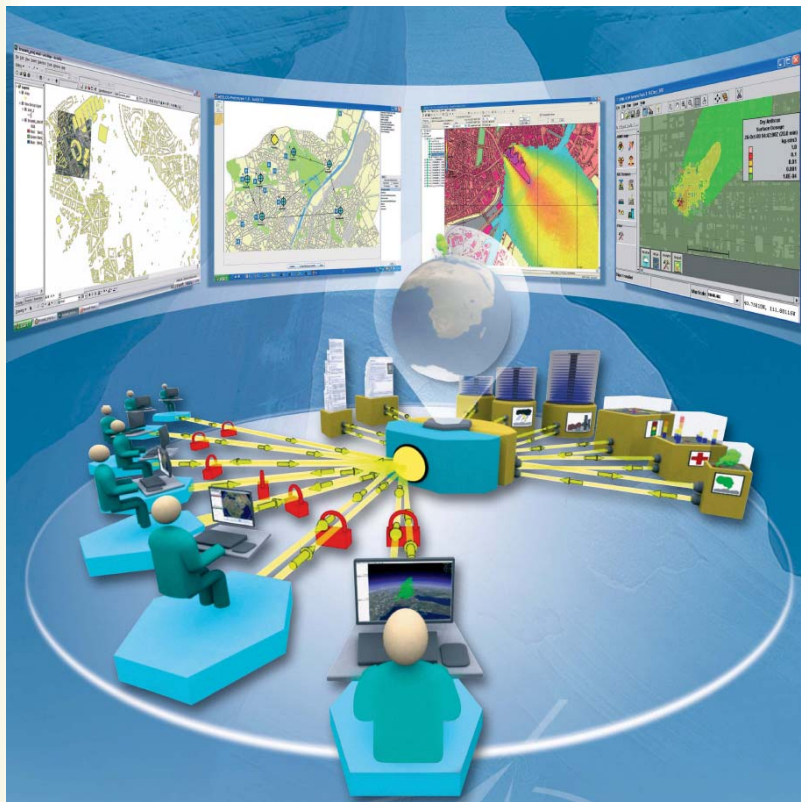
# Illustrations from projects and exercises







# NATO RTO MSG-049



*M&S System for Emergency  
Response Planning & Training*





# SKIPASS

<http://www.civilprotectionskipass.eu/>

Mountain Patrols Safe System for  
Integrated Disaster Management System



- ☐ Best practices IDMS SWOT Analysis;
- ☐ IDMS Handbook;
- ☐ IDMS real system implementation.





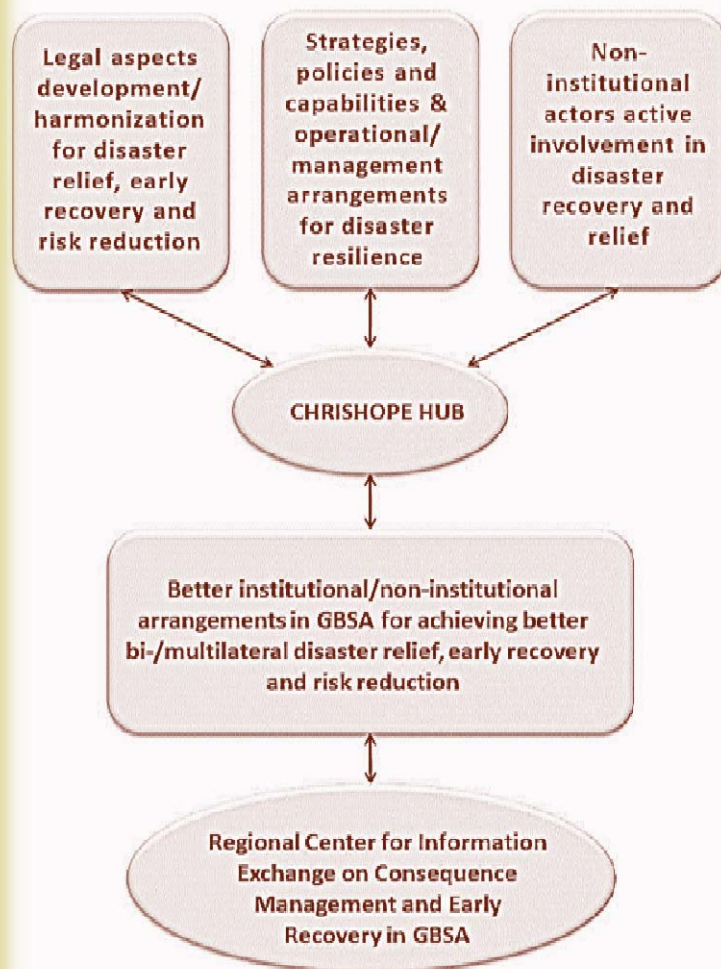


**CRISHOPE**  
Early Recovery and Reconstruction Management  
in the aftermath of Natural or Man-Made Disasters  
in the Greater Black Sea Area (GBSA)  
G.M.F. BLACK SEA TRUST FUND grant R 102



# CHRISHOPE

<http://www.cseea.ro/crishope/>

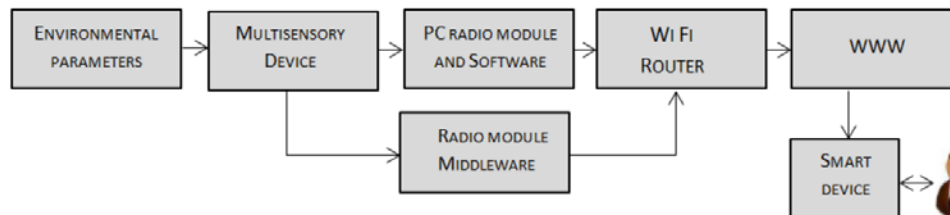
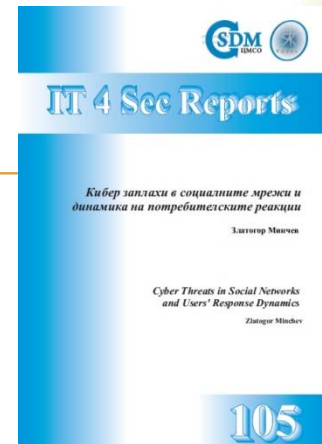
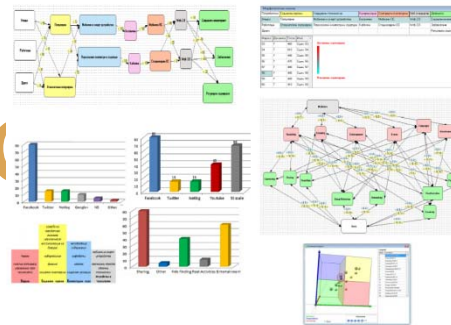


CHRISHOPE Reference Model





# SOME CYBERSECURITY ACTIVITIES



syssec+



# Knowledge Dissemination



❧ **Information & Security: An International Journal,**

<http://procon.bg/view-volumes>

❧ v.28: Critical Infrastructures Safety and Security

❧ v.27: C4ISR in the Comprehensive Approach, Guest Editor:  
George D'holander, NC3A (NCIA) General manager

❧ v.17: Homeland/ Societal Security, etc.

❧ Interested in cooperating with the CMDR CoE and  
publishing original research and policy papers in special  
issues of I&S

# Competitive advantages



- ❧ Combination of sound research with decision-making and management experience at most senior governmental levels
- ❧ Solid network of national and international partners, both in research and high-tech business

# Conclusion: a common set of questions



- ❧ What should a holistic crisis management concept consist of? What institutions, structures and processes are needed to ensure effective coordination and cooperation in the case of crisis at national level?
- ❧ - What current challenges and emerging questions do crisis organizations face in case of strategic crisis where national inter-agency crisis management is needed?
- ❧ - What are the new approaches to crisis preparation and crisis responses regarding inter-agency crisis management concepts?
- ❧ - Is there a need to establish international principles for country crisis management?



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Professional career: Army officer (32 years, colonel, res.), including National Security Studies Center deputy, Defence Planning Directorate deputy, Rakovski Defence and Staff College deputy and dean of National Security and Defence Faculty; Ambassador to Iraq (since 2005 and recently); Chief of Staff of Defence Minister; Chief of Staff of Foreign Minister; expert at the Center for Security and Defence Management (Bulgarian Academy of Sciences).

Expertise: national and international security, defence management, civil-military relations, integrity and defence institution building, parliamentary control of security sector organisations, security sector reform, geopolitical studies of EE and Black Sea.

Education & qualification: Artillery Academy (5 years); Artillery War College, (3 years), George C. Marshall Center, G-P (6 months), Istituto Affari Internazionali, Rome (3 months), Institute for Social Science, Ann Arbor (45 days).