

COMPREHENSIVE SECURITY RESEARCH TO CONTRIBUTE TO CRITICAL INFRASTRUCTURE PROTECTION

A CONTRIBUTION TO SECURITY GOVERNANCE IN DISASTER RISK REDUCTION

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INTRODUCTION

In October 2009 the Austrian Center for Comprehensive Security Research was established at the Sigmund Freud University Vienna. The development of the institute was supported in the context of the KIRAS-Project SFU@SFU aiming to establish a trans-disciplinary national security research institution. This paper aims to point out the comprehensive approach to security research and highlights its character and cross-links, such as technical and economic approaches as well as philosophical, political and ethical considerations. Nature scientific and natural hazard management aspects will be stressed including the variation in scientific approaches and methods. Further, the challenge and mission to contribute to risk and security governance by identifying socio-technical and –nature scientific interfaces for future research topics, risk governance and security-educational politics will be addressed.

THE CONTEXT OF NATIONAL SECURITY RESEARCH

After World War I, the analyses of international conflicts and its response developed to an acknowledged discipline. Nowadays, the scientific analysis of the protection of internal and civil security is a rather juvenile approach. Challenges emerging from cross-linked information and communication technologies transformed research and development of security technologies to a complex matter of inter-disciplinary scientific approaches covering a wide range of topics and disciplines. The operative implementation of security research is strongly affected by practical relevance, applicability and changing requirements. Security research is considered to be multi-dimensional, long-term, multi- and trans-disciplinary and integrative. The aim of security related research is the prevention and removal of primary physical and material damage such as disruption, break downs, emissions etc., but also the prevention and handling of secondary damage such as social, psychological or economic damage. This requires the integration of social scientific research in technological orientated projects.

European concepts address a comprehensive approach and, thus, all disciplines contributing to security related topics. Nowadays security research is based on a comprehensive security concept and is related to non-military, economical, ecological, cultural and societal threats. Referring to OECD specifications, this comprises natural disasters, infectious diseases, criminality, terrorism related risks, technological and industrial accidents. The Austrian strategic paper for “National Crisis and Disaster Protection Management” specifies risks emerging from natural hazards, border zone power plants, infectious diseases, international terrorism, growth in traffic volume and critical infrastructure breakdown. In the light of such considerations, security comprises all measures of public authorities to preserve and improve public security including prevention of and defence from hazards as well as rapid and efficient response to incidents affecting public security.

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In Austria, the national funding program for security research, KIRAS, is run by the Federal Ministry for Transport, Innovation and Technology. The program was released in 2007 pioneering other European national attempts such as from Germany, Sweden, Finland, the Netherlands, Great Britain and France. The program supports research activities in Austria to permanently raise security and guarantee a high level of livelihood for all members of society. The KIRAS-focus is put on the improvement of crisis and disaster management in any of the four stages of the crisis management cycle (mitigation, planning, response, and recovery) and on the protection of critical infrastructures. It seeks for research results and development support comprising a broad spectrum of topics such as security- and risk analyses, ready to go products, service and consulting offers etc. Temporal, regional, gender specific and socio-cultural threats, and risk dimensions and scenarios are meant to be identified, addressed and compensated. The obligatory involvement of public agencies and stakeholders in consortia projects allows for application and implementation orientated research.

SFI@SFU – A COMPREHENSIVE APPROACH TO CONTRIBUTE TO DISASTER MANAGEMENT AND RISK REDUCTION

SFI@SFU (Sicherheitsforschungsinstitut at Sigmund Freud University) is a pioneer project in Austria funded by the national security research program KIRAS in order to establish and develop the Austrian Center for Comprehensive Security Research. Its character is to assemble expertise and to implement interdisciplinary knowledge and transform it to both applicable fundamental research and applied research and analyses. Research based generation of security topics and their plausibility check contribute to the improvement of national security research and the advancement of the KIRAS-program. Special focus is put on the consolidation of the human, social and cultural scientific aspects and components of security research in research conception and practice.

Thematic focus is put on human factors in terms of definition, security perception and intervention effects, in critical infrastructure vulnerability and resilience analyses, in comprehensive civil security approaches, according decision analyses, and in crisis and disaster research. To improve public discussion and raise awareness of social security risks research dialogues between public authorities, stakeholders, critical infrastructure stakeholders and the scientific community are organised and encouraged and are supported by structured expert inquiries. A further critical concern is to actively deduce and integrate security research results in security related education and training programs.

SFI@SFU-project related core studies are including:

- Socio-political effects from critical infrastructure break down to derive according authority protection measures
- Systematisation of integrated risk assessment and assessment of subjective protection requirements for critical infrastructures
- Cataloguing of socio-technical interfaces to deduce gaps in the state of the art and demands in future research
- Civil security research methodologies including Disaster sociological contextualisation
- Comparison of international disaster management policies of selected European member states and practices focussing on co-ordination and cross-linking of competences and emergency organisations
- Citizen communication and information in mitigation, preparedness and response

The full version-paper will address specific results from these studies and will present considerations and recommendations relevant to general disaster and natural hazard management politics.

Keywords: security research, crisis and disaster management, risk communication and governance