NEEDS

KEY OBSERVATIONS AND RECOMMENDATIONS

Higher Education Study Programmes in the Field of Societal Security in the Baltic Sea Region

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Contents

Preface: about the NEEDS project

The 'Needs-based education and studies in societal security' (NEEDS) project addresses the skills gap and mismatch between higher education and the knowledge needs in this field, as well as the fact that there is a lack of structured transnational cooperation and dialogue between higher education institutions, practitioners, and experts in tackling these issues.

The project is co-funded by the EU Erasmus+ Strategic Partnership (project code 2020-1-SE01-KA203-078013) and runs from September 2020 through August 2023. It is led by the Council of the Baltic Sea States (CBSS) Secretariat, an intergovernmental regional organisation with eleven member states. The project partners represent a variety of higher education institutions, regional organisations, and national authorities from Finland, Germany, Norway, Poland, Latvia and Sweden. The objective of NEEDS is to better prepare the next generation working in the field of societal security by boosting their educational experiences with the most relevant, field-specific and up-to-date knowledge and skills. This objective will be achieved through the co-creation of educational materials by cross-sectoral, multi-level and transnational teams, where the input for developing such material is collected directly from those working in practice in the field.

The NEEDS project focuses on the Baltic Sea Region (BSR), made up of eleven countries (i.e., the full members of the CBSS: Denmark, Estonia, Finland, Germany, Iceland, Latvia, Lithuania, Norway, Poland, Russia, and Sweden). Even though the NEEDS project focuses primarily on the BSR, the results may also be relevant for other regions. The project will meet societal security challenges by 1) developing common learning materials for a short online course on societal security for the BSR, as well as 2) establishing a professional networking community and an interface for collaboration. Transnational and cross-sectoral teams will be at the centre of these efforts and will draw upon an innovative pedagogical approach. Nurturing strategic partnerships and cooperation will strengthen trust and deepen understanding between sectors and countries in the BSR, helping to improve common efforts and reduce the risk of conflict and misunderstanding.

The report at hand – using Erasmus+ vocabulary – represents the NEEDS project's Intellectual Output 2 (IO2). In this work package, it is preceded by two reports:

- *Societal Security as Higher Education: The State of the Art in the Baltic Sea Region* (Tasks 2.1 & 2.2, March 2021)[1]
- *Enhancing Societal Security Graduate Employability in the Baltic Sea Region* (Tasks 2.3 & 2.4, August 2021)[2]

The report at hand is the IO2 (Task 2.5) Final Report. It will summarise the key observations and findings of the two previous reports on the current state of the art of societal security higher education in the BSR. Against this backdrop, it drafts some general recommendations to develop this field of higher education in the region.

The author team is indebted to the project partners and other colleagues for their invaluable information and comments, and particularly to the study leaders and students of societal security who were kind enough to use their valuable time to respond to our surveys and inquiries.

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[1] Pursiainen, C., & Abdel-Fattah, D. (2021). *Societal Security as Higher Education: The State of the Art in the Baltic Sea Region.* NEEDS project proceedings. Stockholm: Council of the Baltic Sea States/EUSBSR Secure. http://www.bsr-secure.eu/wp-content/uploads/2021/03/FINALV1-2.pdf.

[2] Young, S., Buzane, G., Zuin, O., & Pursiainen, C. (2021). *Enhancing Societal Security Graduate Employability in the Baltic Sea Region*. Stockholm: Council of the Baltic Sea States. https://cbss.org/publications/enhancing-societal-security-graduate-employability-in-the-baltic-sea-region/

Executive summary

The current report summarises the results of two 2021 desk studies, based on comprehensive literature reviews, online surveys targeted at higher education study programme leaders and students, and NEEDS project group discussions about the state of the art of societal security higher education in the Baltic Sea Region (BSR). The report at hand is structured around five interlinked themes or perspectives, summarising the key observations and respective initial recommendations. The executive summary can best be encapsulated by concisely presenting our main recommendations (R1–R14) concerning each perspective below.

The concept of societal security

R1 Given the abundance of historically developed safety and security concepts, it is not effective to strive for any definitive conceptual solutions.
R2 Academic research benefits from conceptual plurality.
R3 The concept of societal security, however, is appropriate as a common English-language denominator for facilitating practical policy collaboration in the Baltic Sea Region.
R4 According to the definition given by the NEEDS project, societal security provides a satisfactory and inclusive frame for facilitating higher education collaboration and functional approximation in the Baltic Sea Region.

Societal security as higher education

R5 Approximating the related study programme titles would enhance cross-border collaboration.
R6 Technology engineering and social sciences should be better integrated into societal security education.

Societal security curricula

R7 Curricula developers should make better use of the theoretical and methodological plurality of societal security.
R8 Providing study tracks and electives is a solution for diverging needs while still developing a common core for societal security higher education.

Work-life relevance of the societal security degrees

R9 Facilitated internship should become a natural part of societal security study programmes.
R10 Societal security study programmes should build institutionalised partnerships with relevant (internship) employers.
R11 More practice-student interfaces throughout the whole societal security study programme should be added.

Internationalisation of societal security education

R12 Societal security study programmes should create English-language study packages for internationally exchangeable courses.
R13 Societal security programmes for Erasmus+ programme countries should prepare bilateral inter-institutional 'Mobility for learners and staff' agreements in advance to facilitate smooth cross-border educational collaboration.
R14 Societal security curricula should always include cross-border, transnational and global elements within the learning objects.

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1 Introduction

What is the state of the art of societal security higher education in the Baltic Sea Region (BSR)?[3] What are its challenges and possible solutions to better prepare the next generation of risk and crisis managers that will have to deal with a variety of old and emerging hazards, increasingly characterised by cross-border, transnational and global root causes and consequences?

Such issues constitute the task to be addressed by the current report. We will elaborate on several interlinked perspectives of this task. Each of the perspectives is divided into observations and recommendations. The observations have been discussed, documented and footnoted in more detail in the two preceding reports mentioned in the preface above, while the current report summarises their key findings. The recommendations in turn pinpoint the general future directions and sometimes more concrete actions that are advisable in order to overcome the stumbling blocks to creating a more shared understanding of societal security in the region. They represent and reflect the NEEDS project partners' group discussions and brainstorming.

Chapter 2 outlines the essence and roots of the very concept of societal security as one of the many overlapping and somewhat rivalling safety and security concepts. The status of this particular concept –especially in the BSR – will be emphasised. Chapter 3 focuses on societal security as higher education. It draws a very generic picture of this fragmented and multidisciplinary field, which nonetheless shows some promise in terms of being an emerging academic discipline in its own right. Chapter 4 homes in on the curricula of societal security study programmes, that is, what is taught and learned. Themes such as risk, crisis management, safety management and – as an upcoming subject – resilience are identified as the core learning objects across the differently labelled programmes, in spite of their crucial differences. Chapter 5 looks at the study programmes from the perspective of their working life relevance and thus the employability of societal security graduates. Chapter 6 introduces the perspective of the internationalisation of higher education, such as the increasing demand for student and staff mobility, and what it would entail for societal security education. Finally, Chapter 7 concludes with some brief notes on how the NEEDS project is aiming to facilitate the recommended developments with regard to societal security as higher education in the BSR, thereby contributing to transnational learning and training for the next generation of risk and crisis managers. Figure 1 shows the abovementioned report structure at a glance.
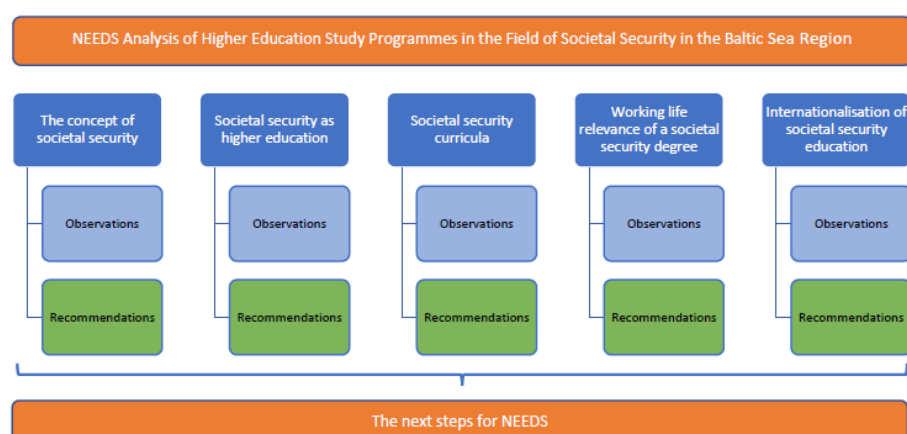

Fig 1. The structure of the summary report

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[3] See the definition of the BSR in the preface. Russia is in the context of the mapping of study programmes limited to the Northwestern Federal District.

2 The concept of societal security

The overall observation when examining the concept of societal security more closely is that it constitutes somewhat a conceptual minefield, both in terms of overlapping but somewhat rivalling conceptions of the generic field dealing with civil contingencies, and in terms of different understandings of the very concept of societal security itself. Our recommendations recognise this plurality, which understandably has historical, political and academic roots. We nevertheless call for some level of conceptual approximation in order to facilitate cross-border collaboration in the BSR when dealing with the common safety and security challenges.

2.1 Observations

O1 There is an abundance of non-military safety and security concepts. Starting as early as the 1970s, but especially after the end of the Cold War, the traditional state-centred military security was challenged by other concepts of safety and security. Both the objects of threat as well as the sources of threat increased, broadening the concept of (safety and) security. All of the different concepts rise and fall in popularity, evolve over time, and include in-built meta-level assumptions and idiosyncrasies.

> *Overlapping but related.* One regularly comes across at least the following concepts (in alphabetical order) that go beyond traditional military security: civil defence, civil protection, civil security, crisis governance, crisis management, comprehensive security, disaster risk management, disaster risk reduction, disaster science, emergency management, homeland security, human security, internal security, public safety, resilience, risk analysis, risk management, risk science, safety management, safety science, security and safety, societal security, soft security, and total defence.

> *Increasingly transnational and hybrid security environment.* The above picture is further challenged by two developments. First, while typical non-military safety and security issues have traditionally been rather nationally, regionally or locally constituted, many current and emerging hazards have become transnationalised either by their origins or consequences. Terrorism, pandemics and climate change-induced hazards are good examples. Second, the concept of (malicious) hybrid threats is further blurring the formerly more clear-cut division between non-military and military security, creating a grey zone between peace and war.

> *Mixed acceptance of societal security as an academic umbrella concept in the BSR.* In a 2021 NEEDS survey of senior-level academics in the BSR dealing with non-military safety and security (N=38), a slight majority of respondents (52.6%) stated that they would accept the concept of societal security as an umbrella concept for their field of activity. The clear 'no' received relatively high support (39.5%), with the rest being undecided.

O2 Three policy and academic origins of the societal security concept. While there is no single understanding and respective umbrella term for non-military safety and security issues, or 'civil contingencies', the very notion of societal security itself draws on several policy and academic traditions that are, or at least were, to some extent at cross-purposes.

Identity-based understanding. Arising from social constructivist debates in the early 1990s in the so-called Copenhagen School within the discipline of International Relations, societal security initially referred to the defence of a community against a perceived threat to its identity, thus challenging the dominance of purely traditional state-centred military security.

Functional understanding. In the early 2000s, efforts were made in Swedish political science circles to use societal security as a practice-oriented and functional approach in terms of dealing with civil contingencies. Emphasising policy-level crisis management and the transnational context of current crises in particular, it was originally presented as a European equivalent of the concept of homeland security, albeit correcting the perceived shortcomings of the latter.

Vital societal functions. In yet another tradition, presented as a Norwegian invention in the mid-2000s, the official Norwegian parliamentary definition of *samfunnssikkerhet* was translated in academic circles as societal *safety*, further elaborated as a society's ability to maintain vital (critical) societal functions, to protect the life and health of its citizens, and to meet citizens' basic requirements in a variety of stress situations. This approach emphasised early on the subsequently popularised concept of resilience.

NEEDS project's compromise solution. The current NEEDS project has adopted a working definition that aims at capturing the most important, relevant and topical elements of the abovementioned, slightly competing, understandings. Thus, societal security is a state of natural and civizational environment which:

> Aims to secure and maintain critical societal values, functions and services (including trust, communication, critical infrastructure, health and medical, financial and economic, governance and civic services, law and order, education, democracy and human rights, national sovereignty, and environment) by focusing efforts on identifying, eliminating and reducing risks, threats, and vulnerabilities, and by promoting meaningful and resilient processes, decisions, strategies, structures, policies and measures.

> Is a responsibility of the individual as well as community and civic groups, national/regional/local governing organisations and authorities, and businesses and companies.

> Is not only local or national in origin, scope, or breadth; it demands transnational and cross-sectoral institutionalised cooperation, despite differences.

O3 From a Nordic to a BSR concept at policy level. In the Nordic countries, the concept of societal security is relatively well-known among academia and safety and security professionals, but is more broadly used by national authorities only in Norway when translated into Norwegian. Within the BSR at large the concept has, however, had some success as the English concept under which multilateral cooperation on safety and security is discussed (despite the domestic or national linguistic versions being quite different). In Europe at large and globally, the concept is not well-known and rarely discussed.

Officially approved by the Baltic Sea Region Civil Protection Network. In its English-language version in the wider BSR, the concept of societal security has some currency in certain regional institutionalised policy settings, most notably connected to the CBSS –

and particularly in its functional meaning. It has been officially accepted as a shared English-language denominator for intergovernmental safety and security cooperation by the BSR Civil Protection Network Directors General Meeting in 2017, under which a 'common societal security culture' can be built to enhance cross-border cooperation.

An established concept within the Nordic research funding institutions. Furthermore, most Nordic national public research funding institutions use the concept of societal security as a funding programme title. This helps particularly to facilitate and coordinate collaboration in the respective field, coordinated by Nordforsk, a regional research council under the Nordic Council of Ministers.

Limited success in the European Union. The EU H2020 part 14 'Secure Societies' funding feature can be seen as an application of the societal security concept, although it does not refer specifically to the Nordic origins of this concept. While the 'societal dimension' of safety and security is also emphasised in many EU documents, the somewhat competing concepts of civil protection (referring to rescue activities) and disaster risk management are mostly used as an umbrella concept when referring to a variety of policy activities typically located within the concept of societal security.

Some success in standardisation organisations. The concept of societal security has also had some success in standardisation organisations in terms of specialised technical committees to that effect. This is the case, for instance, with regard to the European Committee for Standardization, the 'Societal and Citizen Security' technical committee (CEN/TC 391). Moreover, the International Organization for Standardization previously had a technical committee (ISO/TC 223) on 'Societal Security' since 2012, but after some committee mergers it was replaced in 2015 by a new committee called 'Security and Resilience' (ISO/TC 292); the concept of societal security has been dropped from the related official ISO vocabulary.

Not adopted at global policy level. The United Nations policy activities in this field, such as the Sendai Framework for Disaster Risk Reduction 2015–2030, coordinated by the United Nations Office for Disaster Risk Reduction (UNDRR), typically take place under the labels of disaster risk reduction and disaster risk management. Compared to societal security, this concept and the respective activities emphasise the potential external assistance needed for countries and regions to deal with natural and other large-scale disasters, with the focus on natural disasters in particular.

2.2 Recommendations

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Recommendation Box 1: The concept of societal security

R1 Given the abundance of historically developed safety and security concepts, it is not effective to strive for any definitive conceptual solutions. The ever-increasing number of different understandings of the issues and respective concepts in the field of non-military safety and security, as well as the continuous blurring and growing grey zone between non-military (civil) contingencies and traditional military security, do not call for further conceptual fragmentation and rivalry by emphasising the 'societal security school of thought', or any of its variations in this field as the ultimate solution, neither in academia nor in transnational policies.

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R2 Academic research benefits from conceptual plurality. Academics should, and by definition will, continue to use and develop any concepts they regard as fruitful for their research and respective objects of investigation. At the same time, it would be highly beneficial if scholars better understood their favourite conceptual frameworks and their respective ontological, epistemological and normative implications vis-à-vis the other main overlapping concepts.

R3 The concept of societal security is appropriate as a common English-language denominator for facilitating practical policy collaboration in the Baltic Sea Region. As far as the policy formulation level of regional cooperation is concerned, the concept captures the main functional elements of the common denominator of non-military safety and security issues, or civil contingencies that could become a constructive and constitutive basis for intergovernmental collaboration in this field. Around this concept, a certain shared basic understanding of the common BSR societal security culture could be established and developed at practical levels, while taking into account the variety of idiosyncratic national interests.

R4 NEEDS definition of societal security provides a satisfactory and inclusive frame for facilitating higher education collaboration and functional approximation in the Baltic Sea Region. The NEEDS definition, as presented above, emphasises the all-hazard approach, the multi-level governance of the safety and security issues, as well as the cross-border and transnational dimensions of risks. This broad compromise and working definition is purposefully inclusive and allows for much variation, while all of its individual elements are open to interpretation. In spite of its extensiveness, the definition functions as the common denominator for the concept of societal security in the BSR. It should however be understood more as a tool, rather than a goal, in aiming for functional and practical collaborative solutions to the current safety and security challenges in the region, particularly in terms of societal security higher education cooperation.

3 Societal security as higher education

In our mapping, we have found a number of study programmes in the BSR that could be classified as related to societal security, although such concept is rarely used in their title. Our observations also acknowledge that this is, however, a very fragmented field in terms of higher education. We recommend approximating the study programme titles to some extent as well as integrating the technology and social sciences more effectively into the study programmes, in order to increase a shared cross-sectoral and cross-border understanding of the societal security challenges and potential solutions in the BSR.

3.1 Observations

O4 Several societal security higher education study programmes can be identified. Between December 2020 and January 2021, a NEEDS project inventory of the societal security study programmes in the BSR was drawn up, taking into account only the first cycle (Bachelor's or equivalent) and second cycle (Master's or equivalent) higher education degrees. Apart from civil protection (rescue services) vocational higher education, other vocational (e.g., military, police) higher education programmes were excluded because they are typically more one-sector-tailored career paths. Moreover, very narrow study programmes (e.g., cyber security) were excluded. Thus, the primary focus of the mapping was on what could be called 'holistic' degree programmes that are clearly associated with the societal security field, under this or another label.

> *27 first cycle societal security degree programmes.* A total of 27 first cycle study programmes (Bachelor's or equivalent) could be identified: Denmark (1), Estonia (2),

Finland (3), Germany (2), Latvia (2), Lithuania (2), Norway (3), Poland (1), (Northwest) Russia (8), and Sweden (3). In Iceland, similar topics were included in at least one civil engineering programme. The majority of the study programmes could be located in engineering and technology, with a smaller number in social sciences. A few had clear elements of a mixed engineering/social science orientation. Both traditional research universities, applied science universities and clearly vocational higher education institutions were represented.

37 second cycle societal security degree programmes. A total of 37 second cycle study programmes (Master's or equivalent) could be identified: Denmark (2), Estonia (2), Finland (3), Germany (3), Latvia (1), Lithuania (4), Norway (8), Poland (1), (Northwest) Russia (6), and Sweden (7). In Iceland, similar topics were included in at least one civil engineering programme. Approximately half of the study programmes could be located in engineering and technology, with the other half having a clear social science orientation. Some could be considered mixed. Furthermore, a few provided two (or more) tracks under the same study programme, with one focusing on engineering and another on social sciences, or different sectoral orientations. Some had clear elements of a mixed engineering/social science orientation. Both traditional research universities, applied science universities and clearly vocational higher education institutions were represented.

O5 Societal security is not an established label in higher education. In the BSR, only in Norway can one find some study programmes embracing in their titles or curricula the concept of societal security or societal safety in their national language and in an English translation. In general, it is not quite clear whether societal security, or the issues it comprises, is understood as an academic field or discipline in its own right and, if so, how it should be labelled.

Mixed understandings as to whether societal security is an academic discipline in its own right. Societal security, whatever nomenclature is used, is clearly a multidisciplinary field, particularly represented by social science and engineering orientations in higher education study programmes, although these perspectives were sometimes combined. At best, it can be characterised as a discipline in the making, but one that is not quite there yet. This was the result of our small-scale NEEDS questionnaire in 2021 (N=38 senior-level academics), which provided mixed results when applying the basic criteria for an academic discipline to societal security. However, most would agree that the field constitutes, at least to some extent, a particular set of objects of research compared to other, established disciplines.

A fragmented higher education field. The above adds to the fact that societal security, no matter under which nomenclature it is taught/learned, is a very fragmented higher education field in the BSR. It is characterised by various national traditions, several disciplinary directions, and different curricula, which makes the degrees difficult to compare with each other. The NEEDS surveys from 2021 show that, when enquiring about the multidisciplinarity of study programmes, the results were strikingly mixed and inconclusive. The students (N=50) did not typically consider multidisciplinarity an important element of societal security higher education. This mirrors the results obtained when the study programme leaders (N=15) were asked about cross-sectoral lectures. Including multidisciplinarity and cross-sectoral approaches, not to mention such concepts as interdisciplinarity or transdisciplinarity, does not seem to be a highly institutionalised

principle in the respective study programmes. The results possibly reflect the large number of engineering and vocational study programmes in our sample.

3.2 Recommendations

> ## Recommendation Box 2: Societal security as higher education
>
> **R5 Approximating the related study programme titles would enhance cross-border collaboration.** While several first cycle and second cycle societal security degree programmes can be identified in the BSR, the general picture remains highly fragmented. This is due in part to the very vagueness of the concept of societal security, and the respective field as such not being yet established as a discipline in its own right, but also to the differences between national traditions and higher education regulations at large. Although higher education institutions, such as research universities and more applied forms of education, have considerable autonomy to determine their study programmes and degrees, it would be advisable, where applicable, to start using the English-language concept of societal security (whatever national-language nomenclature they use), to create better conditions for cross-border and transnational cooperation, gradually building more shared understandings of the common regional safety and security concerns, and ways of dealing with them.
>
> **R6 Technology engineering and social sciences should be better integrated into societal security education.** The field, which in practice should be fundamentally interdisciplinary, is however sharply divided between technology engineering and social sciences in particular. Yet it is just as important for reliability or resilience engineers to understand the societal context in which they work, as it is for any risk or crisis manager to understand the technological opportunities and consequences of technology for societal security. Thus, it is highly recommendable that the study programmes should become truly interdisciplinary, in order for them to overcome the existing disciplinary borders, at least to some extent.

4 Societal security curricula

At first glance, the study programmes considered within the NEEDS project do not seem to have very much in common. However, a closer inspection reveals that they have a certain common core of items, albeit approached from different disciplinary perspectives. This concerns in particular the second cycle (Master's or equivalent). Our recommendation is to build on this core, while simultaneously including tracks for different disciplinary-sectoral-professional orientations, as well as provide individual elective study paths around this core.

4.1 Observations

O6 The core of the curricula consists of four to five overlapping conceptual approaches. In spite of the fragmented nature of societal security higher education, looking at the curricula of the degree programmes from a comparative perspective, it is revealed that a few mandatory course subjects stand out as seemingly common. A closer look at these concepts, however, indicates that they overlap considerably, which may lead to the duplication of learning outcomes as they often discuss the same issues but from a slightly different perspective using different vocabulary.

Risk. This is the concept that can be found in most societal security degree programmes in one form or another. The concept of risk, in its various applications and representations, is a well-established multidisciplinary but still rather engineering-oriented academic subject, informed by numerous peer-reviewed journals and textbooks. Risk is a sum of two elements: technology engineering and outrage. The concept of outrage reflects subjective perception of risk (by individuals or by society) and their emotional state connected with this risk. Both kinds of risk assessment, i.e. engineering and outrage are equal. *Risk management*, although variously conceptualised by scholars, is usually understood as comprising risk assessment and risk treatment. Risk assessment, in turn, includes concepts and processes such as risk identification, risk analysis, and risk evaluation. For all of these, one can find a number of well-developed quantitative, semi-quantitative and qualitative techniques and methodologies. Risk treatment, for its part, can be seen as a systematised approach to the prevention and mitigation of risks. This organisational management approach is challenged by, and sometimes coexists with, the broader *risk governance* approach, which is rather different from risk management as an academic field. The governance approach can be understood as a constructivist-normative social science school within societal security, having its roots in the older risk society discourse and being a spill-over from the multilevel governance discourse in European studies. It emphasises a broader understanding of risks, including all of the stakeholders and societal-administrative levels and the respective, often contradictory, risk perceptions.

Safety management. A further concept that is present in different variations in most societal security degree programmes is safety management. Simply put, safety management is an organisational function which ensures that all safety risks have been identified, assessed and satisfactorily mitigated. Safety management as a field of study hosts some of the most powerful theoretical schools and key texts within societal security. A strong tendency is to emphasise why things go wrong in complex systems. Another school differentiates between approaches that focus on mostly pre-emptively avoidable failures and malfunctions, on the one hand, and everyday performance in terms of the adaptations that are needed to respond to varying conditions, and hence is the reason why things go right. As is already clear from the above definition, risk analysis is an essential element of safety management, and therefore also of such issues as reliability engineering.

Crisis management. The concept of crisis management (for example disaster management) can be found, with different variations, in most societal security degree programmes, within their mandatory curricula. These courses are typically more social science-oriented and are influenced by the respective literature, even if the concept also includes many socio-technical elements. As a whole, crisis management is a broad multidisciplinary field, and is sometimes understood as being at the core of societal security. While there is no one theory of crisis management, there are several middle-range theories of one or more elements of crisis management. In terms of textbooks, the field has several must-read classics, as well as several more recent textbooks, especially in the field of public policy and political decision-making related to crises. Often, the so-called *crisis management cycle* is used for educational purposes, distinguishing between different before-the-crisis, during-the-crisis, and after-the-crisis phases. This in turn means that crisis management, like the recently popularised concept of resilience (see below), easily becomes some kind of umbrella concept for societal security education as a whole.

Resilience. The concept of resilience has rapidly become a new catchword in a number of academic fields, and a firm part of the related political jargon. While it is still an up-and-coming part of the curricula in mandatory societal security degree programmes, we can already find it in some universities in the BSR, both in terms of being included in the very label of the degree programme and in individual courses. Should one take a look at the elective or optional courses, resilience as a study object can easily be found in one form or another. In academic terms, the concept is increasingly used as a theoretical research paradigm in political science, sociology, economics, psychology, organisation studies, business studies, ecological studies, engineering and so forth. The more practical and political applications of the resilience concept include fields such as disaster risk management, safety management, environmental protection, climate change adaptation, critical infrastructure policies, business continuity, spatial development, urban planning, public management, health policies, national security, and psychology, to mention but a few. Consequently, one can distinguish a number of resilience domains that have developed their own approaches, and that have their own ontological, epistemological and normative assumptions and respective methodologies: societal/community resilience; organisational resilience; technological/engineering resilience; team resilience; psychological resilience; economic/regional resilience; and ecological and related environmental resilience. If brought together, the field becomes truly interdisciplinary, providing a clear opportunity for cross-domain comparison and learning. In contrast to the pre-event character of risk management, the concept of resilience also covers during-the-event and after-the-event phases. In so doing, it considerably overlaps with the crisis management concept.

O7 Study programmes are most often tailorable. Depending on the individual needs and opportunities of the students, most of the degree programmes are tailorable to some extent.

Tracks. Study programmes themselves might be tailored in terms of two or more tracks, while sharing some basic courses. In many cases, the tracks follow a rather clear social sciences versus engineering/technological division. In other cases, the tracks follow more professional orientations, such as different tracks for generic crisis managers, rescue officers, police officers, and so on.

Electives. Many of the degree programmes also include electives – courses that students are free to choose providing they accumulate a certain predefined number of ECTS. In some cases, the available electives are predefined, while at other times students can themselves propose a course that is best suited to their expected learning outcomes and special interests.

4.2 Recommendations

Recommendation Box 3: Societal security curricula

R7 Curriculum developers should make better use of the theoretical and methodological plurality of societal security. While fragmented and multidisciplinary, the concepts of risk, crisis management, safety management, and resilience seem to constitute the core of the societal security study programmes. These concepts provide some specific, but also overlapping and rival perspectives on the very issues that societal security deals with. Conceptual, theoretical and methodological plurality is vital for academic research, teaching, and learning. Rival

conceptualisations are the key to challenging established beliefs and approaches, and creating something new. However, a holistic view of how these conceptual frameworks are related to each other would appear to be lacking. This is reflected not only in the fragmentation of study programmes, making their comparison difficult, but also in the fragmentation within the very courses in these programmes. To avoid unnecessary overlaps, duplications and confusion, any societal security study programme should start with a comprehensive and holistic overview of the whole theoretical and methodological field. While this poses a knowledge and recruitment challenge for the higher education institutions, keeping this task in mind and gradually developing study programmes towards such an orientation would be advisable.

R8 Providing study tracks and electives is the solution for diverging needs, while still developing a common core for societal security higher education. We recognise the tailorability of some of the study programmes that we have identified on societal security in the BSR. This approach can be understood as an effective and recommended practice that could be applied more broadly. Based on a core set of common introductory courses, students can develop a shared understanding of societal security while still becoming specialised. Further dividing the study programme into two or more tracks is a smart solution for preserving sectoral and professional variety, for instance between technology and social sciences, or between civil protection and law enforcement, while having this same societal security core in the background. This approach could considerably facilitate the future working life and cross-sectoral cooperation of graduates, as understanding the linkages between disciplines and sectors would be a core part of their education and training. Including electives, that is, choosing theoretical or methodological courses from other disciplines, departments and faculties, the programme automatically enhances the interdisciplinary perspectives of the students and provides them with some individual academic freedom and individualised study paths that reflect their interests and motivation.

5 Working life relevance of the societal security degrees

The working life relevance of societal security study programmes is related to, and basically constitutive of, an issue that is currently very high on the research and policy agenda where higher education is discussed, namely the employability of graduates. Our observations emphasise that the needs of future employers, students, and their higher education institutions do not necessarily coincide. Our recommendations generally call for more institutionalised partnerships between higher education institutions and the potential employers of graduates. These should be used to create and facilitate meaningful practice-student interfaces that would enhance their future employability.

5.1 Observations

O8 There are several ways to enhance the working life relevance of study programmes. Working life relevance and graduate employability have become one of the major issues within higher education, which in turn is related to the working life relevance of study programmes. There are of course several ways to increase the relevance of HE in terms of employability. The traditions, preconditions, resources, goals, strategies, approaches and results vary from country to country, even in the BSR. However, creating more practice-student interfaces is the basic approach to achieving this goal. There are ostensibly at least two ways to do this, either through an internship or through practice-oriented pedagogical and training methods.

A variety of needs from different perspectives. There is no unambiguous definition of employability in the relevant literature. What exactly is needed for employability varies

depending on the perspective from which one examines the issue. Such a perspective can be that of the employer, the students, and the society, for instance, and there may well be a number of sub-perspectives and related perceptions. The issue then is whether and how the higher education institutions are able to balance these different needs and perceptions when educating societal security students.

Specific knowledge and soft skills. Obviously, typical profession-specific technological know-how and basic knowledge and related skills are required by employers when they consider employing societal security graduates. The core courses in the study programmes provide a rather comprehensive knowledge of issue areas such as risk management, crisis management, safety management, and resilience. All of these can then naturally be divided into many more specific knowledge areas such as risk analysis techniques, crisis communication, safety investigation methods, or resilience assessment. However, many employer surveys show that more generic, so-called soft skills or key competences are even more important, irrespective of the field. These include oral communication skills, written communication skills, non-verbal communication skills, teamwork skills, positive attitude skills, interpersonal skills, motivational skills, problem-solving skills, critical thinking skills, self-management skills, presentation skills, digital tool handling skills and, perhaps most importantly, the ability to learn. Yet literature reviews suggest that there is little consensus on what employability skills actually comprise, and how to measure them.

Internship as a part of study programmes. In the NEEDS 2021 surveys on internships, targeted at both students and study leaders, we can see that some societal security study programmes in the BSR include a mandatory, and some a voluntary but still somewhat facilitated, internship period. This indicates that there is great variety, and sometimes flexibility, in the way that the internship has been or can be combined with and integrated into the curricula. The duration of internships can differ, ranging from very short-term periods to a whole semester. Some higher education institutions and their respective societal security degrees, typically research universities, do not include any facilitated internship in their curricula. The typical internship fields for societal security students include governance and policy institutions, education and research, private security companies, non-governmental institutions, international non-governmental institutions, operational fields such as fire and hazard response services, search and rescue services, health and medical services, law enforcement, and critical infrastructures. It appears that in the case of more vocational higher education institutions, their institutionalised cooperation with the respective practical stakeholders clearly directs the internships to some fields (e.g., fire and rescue), whereas in social science-oriented research universities the students tend to lean towards a more varied number of sectors.

Satisfaction with internships. Generic literature on higher education internships shows that students would generally prefer more internships (and other forms of traineeships) to be available; however, when they are, student satisfaction seems to vary considerably in relation to the materialised experience, both during the training and depending on the cycle, university or programme. Furthermore, it seems that the expectations of students, employers and higher education institutions also vary considerably as to internships, and there are sometimes difficulties in striking the right balance between these different expectations. In the NEEDS survey from 2021, the societal security students who had participated in an internship programme generally rated their satisfaction as 'pretty good'. The internship was considered particularly useful in terms of learning soft skills, rather

than the purely professional-sectoral ones. In their respective survey, study programme leaders also responded that they were moderately satisfied with regard to the materialised internships.

Practice-related pedagogical and training methods are provided to some extent. Pedagogical approaches may also enhance employability, by focusing in particular on practical skills development and adding interactive student-practice interfaces. These may include such elements as exercises within the course or in the field; media training; game simulations; conferences with expert academics or practitioners; study visits nationally or abroad in relevant facilities and environments; recruitment fairs; and student competitions. The NEEDS surveys from 2021 show that there seems to be a general division between institutes which do require or offer the possibility for students to engage in a number of activities within many or some of their courses, and institutes which generally provide fewer of these kinds of activities. A generally wider interest in skill-based exercises compared to study visits or student competitions was also apparent. Conferences with experts are a provided option, but are generally not considered a mandatory activity, whilst game simulations and media training reveal a variety of approaches depending on the institution.

Mixed student satisfaction with practice-related pedagogical and training methods. The 2021 NEEDS student survey shows that an overwhelming number of respondents, more than 75%, expressed dissatisfaction with the availability of more practice-related pedagogical methods. However, when asked about their perceptions of whether such practice-oriented methods and activities had prepared them for their future working life, while 60% were positive, a considerable number, namely about one-third, did not see them as useful for that purpose.

5.2 Recommendations

Recommendation Box 4: The working life relevance of societal security degrees

R9 Facilitated internship should become a natural part of societal security study programmes. Internships should become an institutionalised part of societal security studies. This is often a missing element, especially in traditional research universities. While the duration could range from weeks to months, the expected learning outcome could be detailed as in any study programme, and a proper plan established. It should include both specific professional skills as well as more general soft skills. The implemented internship should be documented by the student through some kind of project work or experience description, and acknowledged according to the respective ECTS. Added to this, the employment experience and student satisfaction with individual internships should be routinely surveyed via questionnaires or interviews to identify opportunities for development.

R10 Societal security study programmes should build institutionalised partnerships with relevant (internship) employers. The empirical analyses and surveys show that prior to the internship period, a proper discussion between the three parties – higher education institution, employer and student – should be conducted. According to the so-called triangular internship design framework, this is best managed if there is some level of institutionalisation or partnership regarding the higher education institution-internship employer relationship, duly adding students

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to that framework. This would lead to more carefully planned and organised internships and would also assist in tailoring societal security education more closely to the needs of working life.

R11 More practice-student interfaces should be added throughout the whole societal security study programme. Besides internships, employability activities could include awards and programmes, involving employers in the design and delivery of courses, and in committees and policy on employability. Practice-oriented guest lectures, workshop meetings with practitioners, participation in employment fairs and so forth, could be used more. One often-used practice-student interface is to connect the thesis or other project work to a real working life need of a public authority, industry, or non-profit organisation. This is highly recommendable and should be facilitated. However, with regard to research universities in particular, one should not allow research-problem development as such to become 'outsourced' and then offered to the students; the very development of a meaningful research problem, including identifying/developing a suitable theoretical-methodological framework, are core issues to be learned in higher education. As in the case of internships in general, finding a balanced combination of needs, and working as an institutionalised system calls for the purposeful development of higher education-employer partnerships, which is a challenging but plausible task.

6 Internationalisation of societal security education

The internationalisation of higher education has already been a much-debated policy and academic theme for some three decades, and is closely related to employability. In the case of societal security, our observations led us to consider issues, such as whether approaches or tools do exist to this effect, and how efficiently they are used. Our recommendations highlight how to overcome some of the obstacles on the path to equipping graduates with an international mindset and experience.

6.1 Observations

O9 International and cross-border dimension of societal security higher education. While societal security often deals with national and local hazards, it also covers fundamentally transnational or even global phenomena, with pandemics and climate change-induced hazards as the best examples. This would intuitively call for taking this cross-border, transnational or global dimension seriously in societal security study programmes as well, and educating students to become more internationalised or open to these perspectives. At present, the main tool or element for this purpose is international exchange or student mobility. Besides physical exchanges and student internships, adding other international elements to the curricula is also a key step towards internationalisation.

International exchange typically offered. In the 2021 NEEDS survey targeted at societal security study leaders (N=15), the majority of respondents confirmed that international exchanges are offered at least as an option and that in almost three quarters of materialised cases, they take place within Europe. It is noteworthy that more than half of the respondents also stressed that exchanges are conducted within the BSR, which reflects the importance of collaboration with neighbouring countries. The collaboration with countries outside Europe is also worth highlighting, an opportunity provided by most of the higher education institutions that responded.

Low utilisation of international exchange. In the 2021 NEEDS survey conducted among societal security study leaders (N=15), around 75% of respondents reported that no

students had undertaken their internship abroad during the past two years. There is, however, considerable variation among the higher education institutions and respective countries surveyed, as well as between the study years (2019 vs. 2020) in this respect, with the poor record in 2020 obviously due to the difficulties caused by Covid-19.

Other internationalisation efforts largely absent. Among the study leaders in the same NEEDS survey, half of the respondents reported that elements such as detecting transnational risks and crises, or inviting foreign guest lecturers, are never part of their classes, whilst the rest include them in only a few courses.

6.2 Recommendations

> ## Recommendation Box 5: Internationalisation of societal security education
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> **R12 Societal study programmes should create English-language study packages for internationally exchangeable courses.** International mobility is typically encouraged and to some extent facilitated. This can take the form of 'electives', for example, as discussed above – offered by the higher education institutions that provide societal security study programmes. Evidence collected by the NEEDS project shows that these international exchange opportunities in the BSR have a poor uptake by students on societal security study programmes, even if there are plenty of funding opportunities, such as the Erasmus+ programme. One of the challenges is the lack of knowledge, another the language of instruction, and a third probably the diverging nature of the variety of societal safety study programmes in the BSR. The current project calls for each study programme, potentially with other departments and faculties of their home institution, to identify attractive English-language study packages for exchange students, with established ECTS. In order for this to work, these should be duly communicated to other countries' relevant study programmes, and mutual acceptance of these packages should be put in place. This would then create a ready-made menu of multiple relevant exchange courses and mobility alternatives that students could select from, and which would be fully compensated with ECTS in their home universities.
>
> **R13 Societal security programmes in Erasmus+ programme countries should prepare bilateral inter-institutional 'Mobility for learners and staff' agreements in advance to facilitate smooth cross-border educational collaboration.** While learners can become exchange students, teachers from other countries can deliver lectures and other forms of teaching either online or in person. The Erasmus+ staff mobility system makes this financially possible for most of the countries in the BSR, should other sources be unavailable. However, the system typically works on the basis of schemes prepared in advance, based on an agreement. All visits are duly agreed and budgeted beforehand, and reported afterwards. While it does not take too much time and effort for the higher education institutions and respective professors and other staff to prepare these agreements, the typical cycle does not facilitate spontaneous visiting guest lecturing within this scheme. One should therefore create these agreements in good time, taking both them and the respective desired guest lectures into account in the early planning stage of courses. As a rule, higher education institutions have a dedicated department to deal with international exchange matters, and which can help individual academic staff members to organise this.
>
> **R14 Societal security curricula should always include cross-border, transnational and global elements within the learning objects.** As amply demonstrated, societal security is a fundamentally cross-border, transnational and often global issue, both in terms of hazard sources and their

R15 The innovative working methods and digital tools developed and utilized during the Covid-19 pandemic should be used to improve the internationalisation dimension of societal security education. The challenges posed by the global pandemic, including travel restrictions, forced us to find new ways to communicate and work. The experiences of this transition have demonstrated that we are indeed able to work collaboratively and effectively using virtual teams. Furthermore, several of these new tools (virtual meetings, video recordings, shared documents, livestreaming lectures, etc.) have increased the access and range to experts from around the world, with which we would not be able to otherwise interact. Thus, educators can draw upon a wealth of resources and increase the amount of knowledge and number of perspectives integrated into educational activities.

7 The next steps for NEEDS

The current final report of what in Erasmus+, and hence NEEDS project parlance, is called Intellectual Output (IO2) has summarised our observations and recommendations thus far. The NEEDS project strives to further facilitate developments in the direction detailed above.

The project's Intellectual Output 1 has already developed a multilingual Glossary that is designed to serve as a living document of the most relevant concepts pertaining to societal security in the BSR, providing a good basis for enhancing the possibility of shared understandings of what societal security amounts to, embracing the variety in this field, and providing food for thought for new innovative openings at the same time. The remaining six Intellectual Outputs (3–8), to be implemented by 2023, will develop a set of relevant case studies for learning purposes; a joint pedagogical approach that could constitute a baseline, or at least clarify the conditions for further collaboration in societal security education in the BSR; an online course module that might serve as low-hanging fruit to create interfaces in this field, incorporating students and their teachers, as well as practitioners; a comprehensive *Handbook for Societal Security Education in the BSR*; as well as clear-cut policy recommendations, utilising the project's close relationship with some of the main policy networks in the BSR that have societal security issues on their agenda.

Furthermore, the NEEDS project will organise three transnational Intensive Study Programmes, bringing together teachers, students, and practitioners from all of the participating countries for one week to jointly enhance mutual understandings of the fundamentals of societal security and related regional challenges, to acquire the specific and soft skills needed to analyse and deal with these challenges, and to generally facilitate the establishment of a more shared regional societal security culture.

NEEDS

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More information on bsr-secure.eu